APPENDIX M.2
Baseline Radar/Acoustic Reports

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ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

strum

CONSULTING

BASELINE RADAR/ACOUSTIC REPORT, BOTWOOD WIND FARM PROJECT AREA
EVREC Green Energy Hub
Near Botwood, NL

May 11, 2026

EXECUTIVE SUMMARY

Exploits Valley Renewable Energy Corporation (EVREC), is proposing to develop, construct, and operate a wind to green ammonia project near Botwood, in central Newfoundland (the "Project"). EVREC will develop a wind project consisting of up to 534 wind turbines, a 150 megawatt (MW) solar project area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an industrial facility. For the purposes of this baseline study, only the Wind Project Area (WPA) was assessed.

A full year of avian radar and acoustic monitoring was completed beginning in fall of 2023 to fall of 2024 to assess target movements and species presence within the WPA and to support the assessment of the potential effects of the Project on avifauna. Four avian radar systems and four acoustic recording units were deployed within and near the Botwood Wind Project Area (BWPA). Based on desktop reviews of the appropriate habitat and coverage of the PA, monitors were deployed at the following locations:

- Lewis Lake (2023) / Crow Valley (2024)
- Nanny Bag
- Rocks Pond
- New Bay

The results of the avian radar program showed varying levels of target detections within the WPA, with most detections occurring in mid-April and early to mid September. Target detected within the radar also primarily occurred above the rotor swept area where avian species will interact with the WPA infrastructures. A variety of environmental and climatic factors were investigated to determine any influences on migration timing, which results demonstrated some variability in influences between the external factors. Similarly, the results of the avian acoustic program showed high detections in peak migratory periods, with April, May, September and October seeing high positive identifications of species within the WPA. No Species at Risk (SAR) was identified within the dataset.

The results above provided an overview of baseline conditions within the WPA, including number of target detections, migration timing, and species presence and diversity. The TLWPA is primarily located inland, therefore occurrences of shorebirds and seabirds within the WPA were low. Despite some level of data gaps in-between the monitoring period, the results of the avian radar and acoustic monitoring help to predict potential migration timing that may occur within the WPA when infrastructures are operational.

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 REGULATORY CONTEXT 2
3.0 AVIAN RADAR SYSTEM 3
3.1 Radar Methodology 3
3.1.1 Acoustic Radar System Deployment 3
3.1.1.1 Habitat Description 4
3.1.1.2 Avian Radar Assessment 5
3.1.1.3 Discussion of Migration Cues in Migratory Birds 5
3.1.1.4 Discussion of Migratory Bird Density 6
3.1.1.5 Avian Interaction Model 6
3.2 Avian Radar Assessment 7
3.2.1 Cues for Avian Migration 13
3.2.2 Migratory Bird Density 22
3.2.3 Migratory Bird Interaction Index 25
4.0 ACOUSTIC RECORDING UNIT 28
4.1 Avian Acoustic Methodology 28
4.1.1 Avian Acoustic Monitor Deployment 28
4.1.1.1 Avian Acoustic Habitat Descriptions 29
4.1.2 Avian Acoustic Data Processing 29
4.1.2.1 Nighthawk 29
4.1.2.2 Raven Pro 30
4.2 Acoustic Monitoring Results 30
4.2.1 2023 Nighthawk Results 31
4.2.2 2024 Nighthawk Results 37
5.0 DISCUSSION 43
5.1 Radar 43
5.1.1 Cues for Avian Migration 43
5.1.2 Migratory Bird Density 44
5.1.3 Avian Interaction Model 44
5.2 Acoustics 44
5.2.1 Detection of Vocalizations 45
5.2.2 Species Richness 45
5.3 General Avian Migration Trends 46
6.0 SUMMARY 47
6.1 Radar 47
6.2 Acoustics 47
6.3 Notable Migration Times 47
7.0 LIMITATIONS 48
7.1 Radar Data 48
7.2 Nighthawk 49

8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY 50
9.0 REFERENCES 52

LIST OF FIGURES

Figure 3.1: Number of BTs Detected Throughout the 2024 Monitoring Period at Crow Valley ... 8
Figure 3.2: Number of BTs Detected Throughout the 2024 Monitoring Period at Nanny Bag 9
Figure 3.3: Number of BTs Detected Throughout the 2024 Monitoring Period at New Bay 11
Figure 3.4: Number of BTs Detected Throughout the 2024 Monitoring Period at Rocks Pond 12
Figure 3.5: Wind Direction by Number of BTs Detected, Spring 2024 14
Figure 3.6: Wind Direction by Number of BTs Detected, Fall 2024 15
Figure 3.7: Wind Speed (km/h) by Number of BTs detected, Spring 2024 15
Figure 3.8: Wind Speed (km/h) by Number of BTs Detected, Spring 2024 16
Figure 3.9: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Average Temperatures (°C) 17
Figure 3.10: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Average Temperatures (°C) 18
Figure 3.11: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Moonlight Exposure (%) 20
Figure 3.12: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Moonlight Exposure (%) 21
Figure 3.13: Number of Targets Detected within Height Bins – Spring 2024 across the ARS Locations 23
Figure 3.14: Target Density within Height Bins – Spring 2024 across the ARS Locations 23
Figure 3.15: Number of Targets Detected within Height Bins – Fall 2024 across the ARS Locations 24
Figure 3.16: Target Density within Height Bins – Fall 2024 across the ARS Locations 24
Figure 3.17: Migratory Bird Interaction Index – Spring 2024 across the ARS Locations 26
..... 27
Figure 3.18: Migratory Bird Interaction Index – Fall 2024 across the ARS Locations 27
Figure 4.1: Total Number of Detections made by Nighthawk across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period 31
Figure 4.2: Nighthawk Detections across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period 35
Figure 4.3: Nighthawk Species Richness across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period 37
Figure 4.4: Total Number of Detections made by Nighthawk across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period 37
Figure 4.5: Nighthawk Detections across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period 41
Figure 4.6: Nighthawk Species Richness across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period 43

LIST OF TABLES

Table 3.1: Date Range when the ARS was Active at Each Location within the BWPA 3
Table 3.2: Monitor Locations within the BWPA and their Surrounding Habitats 4
Table 3.3: Airspace Scanned (km^3) within the ARS' Height Bins 6
Table 3.4: Turbine – Avifauna Interaction Volume Calculation Information..... 7
Table 3.5: Number of BTs Detected in the Crow Valley ARS Height Bins in the 2024 Monitoring Period..... 8
Table 3.6: Number of BTs Detected in the Nanny Bag ARS Height Bins in the 2024 Monitoring Period..... 10
Table 3.7: Number of BTs Detected in the New Bay ARS Height Bins in the 2024 Monitoring Period..... 11
Table 3.8: Number of BTs Detected in the Rocks Pond ARS Height Bins in the 2024 Monitoring Period..... 12
Table 3.9: Target Density – Spring 2024 22
Table 3.10: Target Density – Fall 2024 22
Table 4.1: Date Range when the ARU was Active at Each Location within the BWPA 28
Table 4.2: ARU Locations within the BWPA and their Surrounding Habitats 29
Table 4.3: Summary of 2023/January 2024 Combined BWPA Acoustic Monitors' Results 32
Table 4.4: Summary of Species Confirmed across the ARU Monitoring Locations during the 2023/January 2024 BWPA Monitoring Period 35
Table 4.5: Summary of 2024 Combined BWPA Acoustic Monitors' Results 38
Table 4.6: Summary of Species Confirmed across the ARU Monitoring Locations During the 2024 BWPA Monitoring Period..... 41

LIST OF APPENDICES

Appendix A: Drawings
Appendix B: Tables

LIST OF ACRONYMS

ARS	Avian radar system
ARU	Autonomous recording unit
BWPA	Botwood Wind Project Area
BT	Biological Targets
CEPA	*Canadian Environmental Protection Act*
CWS	Canadian Wildlife Service
EIS	Environmental Impact Statement
ECCC	Environment and Climate Change Canada
EVREC	Exploits Valley Renewable Energy Corporation
GW	Gigawatt
ha	Hectare
Hz	Hertz
km	kilometre
LTWPA	Leading Tickles Wind Project Area
MW	Megawatt
MBCA	*Migratory Bird Convention Act*
MBR	Migratory Bird Regulations
MBII	Migratory Bird Interaction Index
MW	Megawatt
m	Metre
mm	millimetre
nBTs	Number of biological targets
NFC	Nocturnal flight calls
NL ESA	Newfoundland and Labrador *Endangered Species Act*
SAR	Species at risk
SARA	*Species at Risk Act*
SLWPA	Seabrights Lakes Wind Project Area
SOCC	Species of conservation concern
TLWPA	Twin Lakes Wind Project Area
TLWPA	Twin Lakes Wind Farm Project Area
V	Volts
WTG	Wind turbine generator

1.0 INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC, the "Proponent"), is proposing to develop, construct, and operate a wind to green ammonia project on the brownfield, former Abitibi lands, near Botwood in central Newfoundland, Canada (the "Project") (Drawing 1, Appendix A). EVREC will develop an onshore wind project area consisting of up to 534 wind turbines, a 150-megawatt (MW) Solar Area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an Industrial Facility comprised of 2.6 gigawatt (GW) of electrolysers utilizing a combination of proton exchange membrane and aqueous solution units, air separation plants, ammonia plant, electrical energy storage facilities, molecular storage, water purification systems, warehousing, administrative buildings, and other associated utility infrastructure (switchyards, transformers, pipelines, emergency generators, and cooling systems) including an electrical grid connection for critical loads.

The Project nameplate capacity will be up to 3.5 GW of electrical power and produce 925,000 to 1,000,000 tons per year of certified green ammonia. The Project is considered an undertaking under Section 34 (1f) of the Newfoundland and Labrador Environmental Assessment Regulations, (2003), where electrical power generation that has a capacity greater than 1 MW and engages in the manufacturing of green hydrogen and ammonia, which requires the submission of an Environmental Impact Statement (EIS). The Project will involve development, construction, operations, decommissioning, and reclamation of wind farms, a solar farm, an industrial facility, and water supply for green hydrogen production and ammonia synthesis, including air separation, water treatment, and ammonia storage.

The Project will use the existing Port of Botwood for its shipping needs, which has historically served various clients across industrial sectors for over 100 years. The Project is proposed on land parcels totaling 35,833 hectares (ha) in central Newfoundland (defined hereafter as the Project Area). The Project is centered at 49.161441° N, 55.486669° W.

Within the Project Area (PA), siting of wind turbine generators (WTGs) will be within four areas: Botwood, Seabrights Lake, Twin Lakes, and Leading Tickles (Drawing 1, Appendix A). The Industrial Facility and Solar Farm, along with associated infrastructure, are co-located on a parcel southwest of the Town of Botwood. For the purposes of the EIS, the Project consists of three components: (i) Wind Project Area and transmission line; (ii) Solar Area; and (iii) hydrogen and ammonia production facilities (defined hereafter as the Industrial Facility).

The Proponent has retained Strum Consulting to provide avian radar and acoustic assessment services within the Project Area of the WTGs. Avian radar systems (ARS) and autonomous recording units (ARU) were deployed throughout the Project Area of the WTGs throughout varying monitoring period.

- Botwood Wind Project Area (BWPA)
    - Four ARS deployed in 2024
    - Four ARU deployed in 2023 and 2024

- Twin Lake Wind Project Area (TLWPA)
    - One ARS deployed in 2024
    - One ARU deployed in 2023 and 2024
- Leading Tickles Wind Project Area (LTWPA)
    - One ARS and one ARU deployed in 2025

This report summarizes the findings for the radar and acoustic monitoring periods at BWPA.

2.0 REGULATORY CONTEXT

This Report has been developed in accordance with applicable laws and regulations relating to the protection of avian species, including the following:

- *Canadian Environmental Protection Act* (CEPA) (1999)
- *Canada Wildlife Act* (2000)
- *Environment Act* (2002)
- *Migratory Birds Convention Act* (MBCA) (2018)
- *Species at Risk Act* (SARA) (2002)
- Newfoundland and Labrador *Endangered Species Act* (NL ESA) (2001)

CEPA (1999) provides protection of the federal environment through pollution prevention, toxic substance control, waste management, and emissions management. Similarly, the *Environment Act* (2002) supports and promotes the protection, enhancement, and use of the provincial environment while maintaining ecosystem integrity and sustainable development, along with pollution prevention and reduction.

The *Canada Wildlife Act* (2000) provides a framework at the federal level for the creation of protected wildlife areas. In May 2018, Canadian Wildlife Services (CWS), a division of Environment and Climate Change Canada (ECCC) responsible for enforcing the MBCA (2018), updated guidance stipulating that two years of radar monitoring should be completed for projects that propose the installation of wind turbines that are greater than 150 m tall. This guidance suggests that migrating birds travel in an airspace between 150 m and 600 m above the ground as they migrate, which would put them at risk of interacting with tall turbines that extend into this corridor. As this corridor is too high for traditional survey methods (e.g., ground-based ornithological studies), the guidance requires the use of avian radar assessments to characterize high altitude migratory bird movements to provide regulators a means for evaluating risk associated with the proposed development to migrating birds.

The MBCA (2018) prohibits the deposit of harmful substances into waters or areas frequented by migratory birds, along with the disturbance, destruction, or possession of migratory birds, their occupied nests, and/or eggs. The new Migratory Bird Regulations (MBR) became effective as of July 30, 2022. Under the new regulations, occupied nests (and parts of the nests) of migratory birds are protected until they no longer provide high conservation value for migratory birds. Nests are not considered high conservation value if they no longer contain a living bird or eggs. Year-round protection is only provided for nests of migratory birds known to

reuse nesting areas as listed under Schedule 1 of the regulations.

For species designated as rare or at risk, their dwellings are provided protection provincially, under the provincial ESA, and federally, under SARA. The provincial ESA and SARA prohibit harm to listed species at risk (SAR) along with their habitually occupied space and core/critical habitat.

3.0 AVIAN RADAR SYSTEM

This section outlines methodologies that were followed during the 2024 radar and acoustic monitoring programs. Data collection and analysis were determined following the ECCC-CWS guidance for passive bird monitoring programs (2022).

The guidance recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

3.1 Radar Methodology

3.1.1 Acoustic Radar System Deployment

Avian radar assessments were undertaken during the 2024 spring and fall migratory periods. Four ARS were deployed throughout the Botwood site, deployed at varying times in 2024 (Table 3.1; Drawing 2, Appendix A).

- Crow Valley: April 3 to November 27
- Nanny Bag: April 3 to December 12
- New Bay: April 4 to November 27
- Rocks Pond: April 9 to November 18

Sensitive equipment in harsh, remote environments is prone to malfunction and difficult to monitor and maintain in remote areas. Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARS experienced interruptions during monitoring periods. Inclement weather events near the PA, particularly in July and August, also affected the ARS' outputs. Ultimately, the periods when the ARS were active are as followed:

Table 3.1: Date Range when the ARS was Active at Each Location within the BWPA

ARS Location	Active Periods
Crow Valley	April 3 - April 24 May 10 – May 29 June 9 – June 30 August 16 – August 18* October 1 – October 3 November 5 to November 27

ARS Location	Active Periods
Nanny Bag	April 3 – April 22 May 9 – May 29 June 9 – June 30 July 16* October 7 – October 22
New Bay	April 4 – April 25 May 10 – May 29 August 16* October 7 – October 22
Rocks Pond	April 9 – April 29 May 8 – May 25

*The ARS was active during these dates, but a combination of inclement weather and internal malfunction had resulted in unreadable data.

During the deployment period, a Simrad Halo20 pulse compression marine surveillance radar was used at each location and was angled diagonally at 45° above the horizon. The ARS consists of two x-band pulse-compression surveillance radars oriented specifically to scan the airspace approximately 50 m to 3,000 m above the Project. The diagonal orientation allowed for a 150° scan of the airspace above the radar, while the 210° below the radar is blanked. The diagonal orientation also allows for the calculation of the height of any potential avian target.

Each ARS was deployed with an off grid 12V system that was designed for optimal active monitoring and flexibility in deployment. The 12V systems charged and stored energy using solar panels and battery banks powered the radar and associated equipment for data collection and remote communications. The system in its entirety was mobile, so the movement of the ARS was possible throughout a season, if desired.

Each ARS was placed in an open area at four corners of the PA (Drawing 2, Appendix A). These locations provided a good line of sight (relatively few trees in the immediate area) into the airspace above the Project; southern exposure for solar charging; sufficient cellular and satellite coverage for remote communications; and accessibility for spot checks. The ARS were mounted off the ground to minimize ground noise interference and lessen the impacts of local microtopography on data collection and quality.

3.1.1.1 Habitat Description

The locations of the ARS were chosen to account for a variety of habitat present in the BWPA. The habitat for each ARS is detailed in Table 3.2 below.

Table 3.2: Monitor Locations within the BWPA and their Surrounding Habitats

ARS ID	Habitat Characteristics
Crow Valley	ARS positioned at the end of an open road surrounded by mostly softwood forest.
Nanny Bag	ARS positioned on an open road surrounded by mixedwood forest approximately 100 m north of BWP.

ARS ID	Habitat Characteristics
New Bay	ARS positioned at the western portion of the BWP and west of New Bay Lake. ARS placed on an open clearing away from the forest edge.
Rocks Pond	ARS positioned at the south-central portion of the BWP and is on a hill surrounded by softwood forest.

3.1.1.2 Avian Radar Assessment

Avian radar assessment results were processed using radR, an open-source platform designed for the processing of radar data for biological applications (Taylor et al., 2010). Outputs from radR were then analyzed using Microsoft Excel. Standard settings for the identification of biological targets (BTs), such as birds and bats, were used. Targets reflected by the radar generated blips in the image of the radar scan. The radR platform helps filter sequential images of radar scans to identify blips that occur in the same area over at least four out of five scans. Should these constraints be met, a BT is generated. BTs are most likely generated by birds, but could also be bats and insects, or even drones and planes. Weather occurrences, such as fog, rain, and low cloud cover, may cause interference with the radar (similarly to weather radar), which lowers the effectiveness of the system and reduces the reliability of the system's ability to detect birds. As such, data was excluded from the analysis when the minimum hourly rainfall was ≥ 0.5 mm. Rainfall data was obtained from ECCC's Badger (AUT) Weather Station (ECCC, 2025).

3.1.1.3 Discussion of Migration Cues in Migratory Birds

Migratory bird activity tends to be stochastic in nature, which is attributable in large part to weather, as it is well established that weather, atmospheric, and environmental conditions influence bird migration activity, especially wind speed and direction (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Conditions when tailwinds assist the migration objective are often exploited by migrating birds to travel farther with less energy (Nussbaumer et al., 2022). As such, birds migrating into North Atlantic Canada during the spring likely proceed in a northeasterly direction and likely proceed in a south-westerly direction during the fall.

Migratory birds can also take advantage of favourable wind speed to expedite their migration or to fight against unfavourable headwinds (Nussbaumer et al., 2022). Other environmental and climatic cues are theorized to play a role in migratory bird activity(Brisson-Curadeau et al., 2020; Korpach et al., 2024). The list of cues that are theorized and studied to play a role in avian migration include the following:

- Wind speed and direction (Gudmundsson et al., 2011; La Sorte & Fink, 2017; Nussbaumer et al., 2022)
- Photoperiod (Assadi & Fraser, 2021; Helm & Liedvogel, 2024; Robart et al., 2018; Sockman & Hurlbert, 2020)
- Temperature (Brisson-Curadeau et al., 2020; Burnside et al., 2021)
- Changes in migration cohort or population sizes (Miller-Rushing et al., 2008)
- Food Availability (Robart et al., 2019)
- Lunar cycle (Bonnet-Lebrun et al., 2021; Korpach et al., 2024; Norevik et al., 2019; Pyle et al., 1993)

These cues may affect internal avian migration clock; hence, helping to determine the migration timing of birds traveling in and out of the province. Correlating the role of internal avian migration clocks with radar monitoring data proves challenging (Helm & Liedvogel, 2024; Korpach et al., 2024).

3.1.1.4 Discussion of Migratory Bird Density

The Halo 20 radar emits a beam that is angled 12.5° upward and downward from the radar's antenna. The volume of airspace that the radar scans increase with range as the radar beam extends outwards; therefore, the number of BTs detected by the ARS generally increases with range, until such a point that the radar becomes limited by range and the number of BTs detected drops. To correct the distortions in BT detection counts at different ranges, it is necessary to correct the airspace volume scanned by the radar at each height bin.

Based on the geometry of the radar's beam angle, the volume of airspace scanned in each of the height bins was determined using CAD software. These volumes are shown for each height bin in Table 3.3.and were used to determine the target density (i.e., the number of targets detected per cubic km of airspace) based on number of BTs detected in each height bin (seen in Section 4.1.2). Birds per km^3 has been used as a metric of bird migration in avifauna for other studies (Farnsworth, 2013). Target density is representative of, and likely proportional to, the migratory bird activity in the airspace above the Project for the cumulative monitoring period (in this case, for the 2024 avian radar monitoring campaign).

Table 3.3: Airspace Scanned (km^3) within the ARS' Height Bins

Range bin (m)	Airspace Scanned (km^3)
0-25	0
25-50	0.1015
50-100	0.2036
100-150	0.2043
150-200	0.2052
200-250	0.2063
250-500	1.052
500-1000	2.226
1000-1500	2.337
1500-2000	2.426
2000-3000	3.774
Total	**12.8375**

3.1.1.5 Avian Interaction Model

The level of interaction between migratory birds and the Project turbines can be estimated using data collected from the radar monitoring in 2023 and 2024. Interactions may include sensory disturbance to birds passing near the turbines, requiring birds to maneuver around the turbines and thus forcing migratory birds to expend additional energy; bird collisions with the turbine components; or blade strikes (for operating turbines).

The Migratory Bird Interaction Index (MBII, M) is an estimate of the level of risk that aerial infrastructure for a Project poses to migratory birds. This index is calculated using the following expression.

Equation 1: $M = D \div I$

Where D is the migratory bird density, and I is the volume of airspace that the infrastructure being assessed would occupy.

The volume of airspace where avifauna would interact with the turbines (I) was estimated using CAD software that is based on design of the proposed turbines. The volume of airspace was calculated based on specifications from an example turbine model that over-estimates the volume of the turbine's physical components to provide the largest volume or airspace where the turbines would influence avifauna. Table 3.4 shows the turbine dimensions for this Project and the parameters used to calculate the interaction airspace volume for the turbine model. It is noted that each monitor location has a different number of turbines provided, which is based on a conservative number of turbines within proximity to each monitor. The differences in turbines per monitor demonstrated the difference in interaction levels if, for instance, a monitor with a higher number of turbines nearby also projected higher interaction levels.

Table 3.4: Turbine – Avifauna Interaction Volume Calculation Information

Turbine Model Information	
Component	**Description**
Turbine Model	Unspecified Model
Number of Turbines (site dependent) *	Crow Valley: 11 Nanny Bay: 3 New Bay: 3 Rocks Pond: 7
Hub Height	135 m
Total Height	226 m
Rotor Diameter	182 m
Blade Length	91 m
Rotor Sweep Area	26,015 m^2

*Number of turbines used for the application of statistical analysis. Actual turbine number varies.

3.2 Avian Radar Assessment

Data collected by the ARSs for the 2024 radar monitoring campaign were analysed to provide the number of BTs by date, possible migration cues, and height (Tables 2, 3, 4, 5, Appendix B). Data was divided into two monitoring periods in accordance with the ECCC-CWS guidance (2022): spring (March 15 to June 6) and fall (July 16 to November 30).

Crow Valley

The ARS identified 11,582 BTs during the 2024 spring monitoring period. Peak days where high numbers of BTs were detected occurred on April 18 (number of Biological Targets [nBTs] =

1,382), May 21 (nBTs = 1,133), May 24 (nBTs = 1,676), and May 25 (nBTs = 2,244) (Figure 3.1). The highest portion of BTs were detected at heights between 500 m to 2,000 m and the largest number of BTs occurred between 1,000 m to 1,500m (nBTs = 5,457) (Table 3.5).

The ARS identified 5,667 BTs during the 2024 summer monitoring period. Peak days where high numbers of BTs were detected occurred on June 10 (nBTs = 1,048), June 12 (nBTs = 1,130), and June 13 (nBTs = 1,338) (Figure 4.1). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs occurred between 1,000 m to 1,500 m (nBTs = 2,907) (Table 3.5).

The ARS identified 6,991 BTs during the 2024 fall monitoring period. Peak days where high numbers of BTs were detected occurred on November 5 (nBTs = 697), November 17 (nBTs = 1,790), and November 19 (nBTs = 806) (Figure 3.1). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs occurred between 1,000 m to 1,500 m (nBTs = 3,479) (Table 3.5).

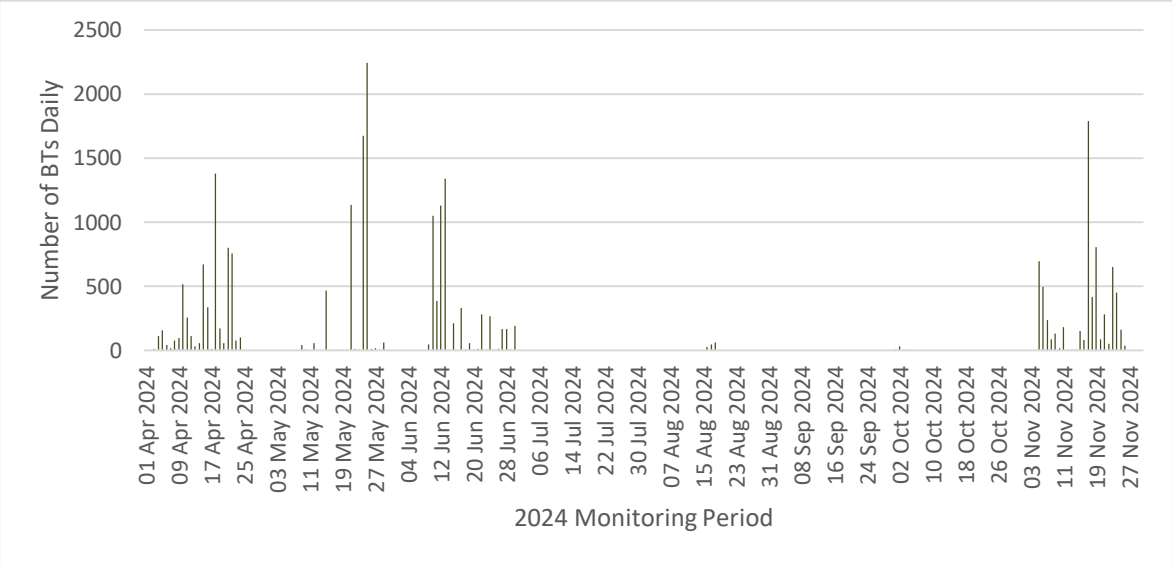

Figure 3.1: Number of BTs Detected Throughout the 2024 Monitoring Period at Crow Valley

Table 3.5: Number of BTs Detected in the Crow Valley ARS Height Bins in the 2024 Monitoring Period

Range bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
0-25	0	0	0
25-50	0	0	0
50-100	0	0	0
100-150	0	0	0
150-200	0	0	0
200-250	0	0	0

Range bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
250-500	22	52	9
500-1000	4811	1796	2407
1000-1500	5457	2907	3479
1500-2000	1292	912	1096
2000-3000	0	0	0
Total	**11582**	**5667**	**6991**

Nanny Bag

The ARS identified 4,041 BTs during the 2024 spring monitoring campaign. Peak days where high BTs were detected occurred on May 24 and 25, 2024 (nBTs = 1,398 and 1,123) (Figure 3.2). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs were detected between 1,000 m to 1,500m height bin (nBTs = 2,434) (Table 3.6).

The ARS identified 2,306 BTs during the 2024 summer monitoring period. Peak days where high BTs were detected occurred on June 13 (nBTs = 337), June 17 (nBTs = 823) and June 22 (nBTs = 565) (Figure 3.2). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs were detected between 1,000 m to 1,500 m (nBTs = 1,236) (Table 3.6).

The ARS identified 134 BTs during the 2024 fall monitoring period. Peak days where high BTs were detected occurred on October 11 (nBTs = 47) (Figure 3.2). The highest portion of BTs were detected at heights between 1,000 m to 3,000 m and the largest number of BTs occurred between 1,500 m to 2,000 m (Table 3.6).

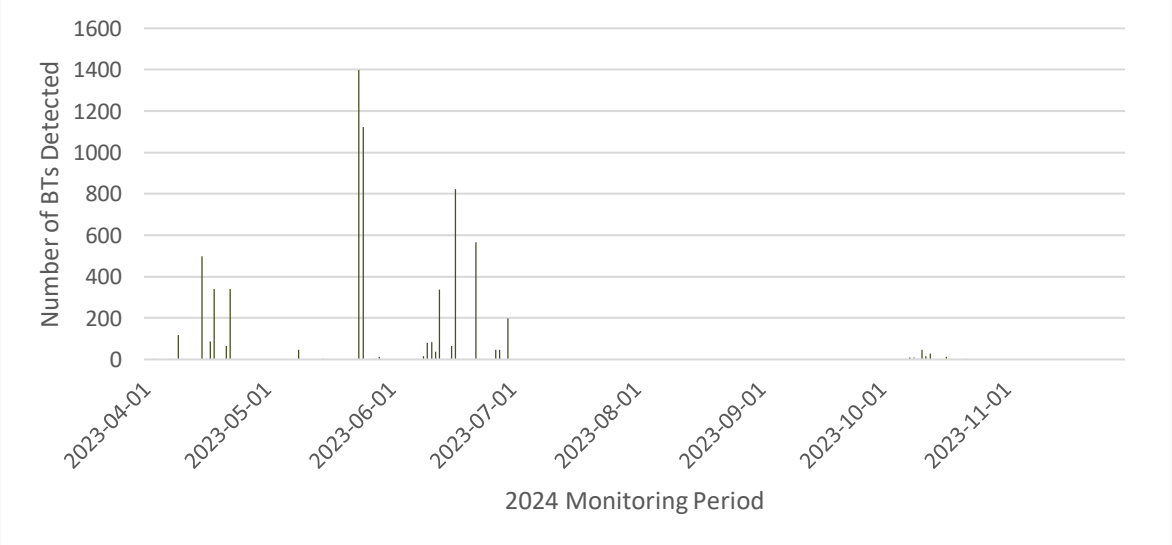

Figure 3.2: Number of BTs Detected Throughout the 2024 Monitoring Period at Nanny Bag

Table 3.6: Number of BTs Detected in the Nanny Bag ARS Height Bins in the 2024 Monitoring Period

Range bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
0-25	0	**0**	0
25-50	0	**0**	0
50-100	0	**0**	0
100-150	0	**0**	0
150-200	0	**1**	0
200-250	0	**5**	0
250-500	7	**36**	0
500-1000	1002	**550**	12
1000-1500	2434	**1236**	35
1500-2000	598	**478**	47
2000-3000	0	**0**	40
Total	**4041**	**2306**	**134**

New Bay

The ARS identified 3,491 BTs during the 2024 spring monitoring period. Peak days where high BTs were detected occurred on April 15 (nBTs = 509), April 18 (nBTs = 746), and April 24 (nBTs = 771) (Figure 3.3). The highest portion of BTs were detected at heights between 500 m to 2,000 m and the largest number of BTs occurred between 1,000 m to 1,500m (nBTs = 2,128) (Table 3.7).

The ARS identified 4,072 BTs during the 2024 fall monitoring period. Peak days occurred on October 9 (nBTs = 728), October 15 (nBTs = 1,539), and October 22 (nBTs = 514) (Figure 3.3). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs occurred between 1,000 m to 1,500 m (nBTs = 2,456) (Table 3.7).

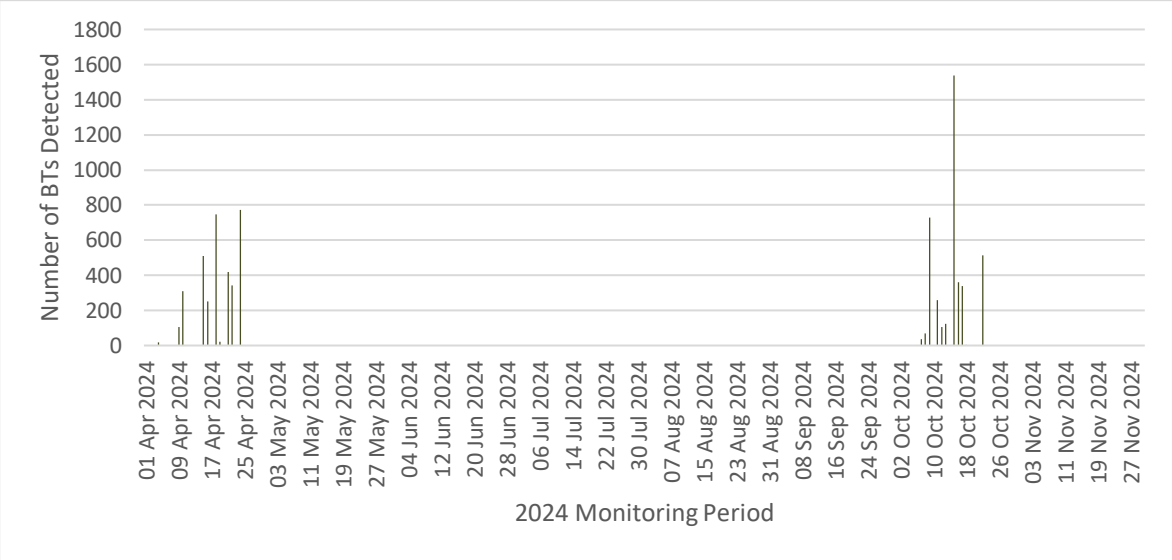

Figure 3.3: Number of BTs Detected Throughout the 2024 Monitoring Period at New Bay

Table 3.7: Number of BTs Detected in the New Bay ARS Height Bins in the 2024 Monitoring Period

Range Bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Fall)
0-25	0	0
25-50	0	0
50-100	0	0
100-150	0	0
150-200	0	0
200-250	0	0
250-500	1	2
500-1000	846	614
1000-1500	2128	2456
1500-2000	516	1000
2000-3000	0	0
Total	**3491**	**4072**

Rocks Pond

The ARS identified 4,788 BTs during the 2024 spring monitoring period. Peak days where high BTs were detected occurred on May 8 (nBTs = 845), May 12 (nBTs = 865), and May 25 (nBTs = 1109) (Figure 3.4). The highest portion of BTs were detected at heights between 500 m to 2,000 m and the largest number of BTs occurred between 1,000 m to 1,500m (nBTs = 2,830) (Table 3.7).

Due to an internal malfunction, the ARS at Rocks Pond did not record past May, and no data was collected for the remainder of the year.

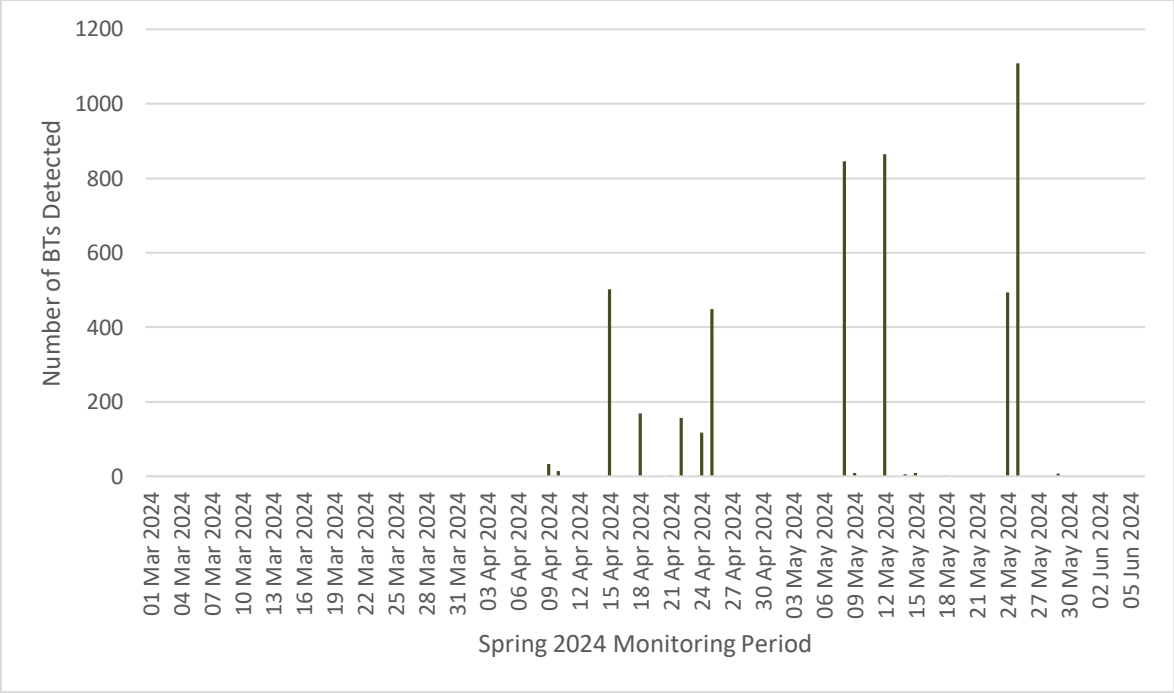

Figure 3.4: Number of BTs Detected Throughout the 2024 Monitoring Period at Rocks Pond

Table 3.8: Number of BTs Detected in the Rocks Pond ARS Height Bins in the 2024 Monitoring Period

Range Bin (m)	Number of Targets Detected (Rocks Pond)
0-25	0
25-50	0
50-100	0
100-150	0
150-200	0
200-250	0
250-500	1
500-1000	1121
1000-1500	2830
1500-2000	836
2000-3000	0
Total	**4788**

Results Summary Among Avian Radar Monitoring Locations

The four ARS within the BWP were deployed within a 9 km radius of one another. As a result, the timing and nature of migratory movements detected by each ARS observed similar trends:

- Most BTs observed throughout the 2024 monitoring period by all ARS were detected at heights above 500 m.
- The ARS observed the largest number of BTs within the 1,000 m to 1,500 m height bins throughout the monitoring period.

- There were consistent spring migration trends across all ARS, with moderate numbers of BTs detected in mid to late April and the highest migratory movements on May 24 and 25.
- During the summer monitoring period, ARS that were active detected most BTs in early to mid June.
- There was a consistent fall migration trend across the active ARS during the fall monitoring period, with moderate number of BTs detected in early to mid October.

There are visible differences in the migratory movements detected by each ARS, most of which were due to the differences in the inactive periods of each radar as a result of unit malfunctions. For example, the Crow Valley ARS detected a large migratory movement in mid to late November when the Nanny Bag and New Bay ARS were both offline. It is assumed that these ARS would have detected this November movement if they were functional during that period.

The results of the 2024 monitoring campaign suggest that avian migration activity occurred consistently throughout the monitoring periods. Each ARS detected large migration events that occurred over the course of three to five consecutive days in the spring and fall. It is likely that migration conditions were favourable during these relatively short mass migration events.

Overall, the daily total of BTs detected were variable across the four ARS monitoring campaigns, however, there were consistent peaks in the spring monitoring period and detections in the fall that indicated potential migratory movements throughout the BWPA.

3.2.1 Cues for Avian Migration

The list of environmental and climatic cues that were used to compare with the data collected by the avian radar systems included the following:

- Wind direction
- Wind speed
- Temperature
- Lunar cycle

A variety of migration cues not discussed above (e.g., tidal phases) may have also affected bird migration timing. Data analysis was conducted to test the correlation between these cues and migration timing; however, the relationships were deemed too weak to support evidence of these cues affecting migration timing.

Wind Direction and Wind Speed

the BTs detected by the four ARS monitors during the spring 2024 monitoring campaign primarily occurred when the winds were blowing from the north, northeast, and east with some BTs also detected when the winds were blowing from the southwest (Figure 3.5). This result is expected as birds will often take advantage of north-easterly tailwinds to aid migratory movements in the spring (Gudmundsson et al., 2011).

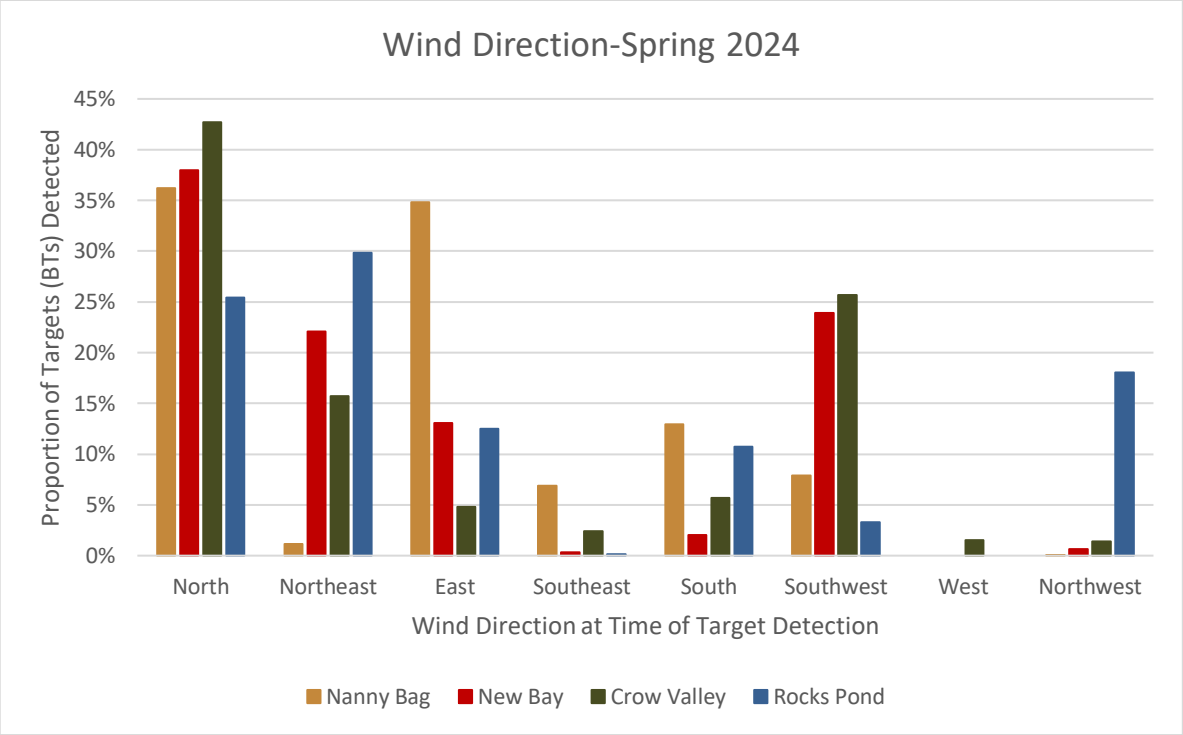

Figure 3.5: Wind Direction by Number of BTs Detected, Spring 2024

The largest proportion of BT detections in the fall 2024 monitoring period were not strongly correlated with any wind direction (Figure 3.6). The detections associated with winds from the south and southwest were expected as southerly winds would assist birds during fall migration; however, overall BT detections across the ARS monitors did not strongly correlate with any wind direction during the fall monitoring period. Wind direction does not appear to influence bird movement at any site. Birds may show no wind selectivity during migration depending on their energy cost of travel and their need for migratory stopovers (Thorup et al., 2006). In these cases, migration cues may be related to other factors such as wind speed, temperature, and lunar cycle (Brisson-Curadeau et al., 2020; Korpach et al., 2024; La Sorte & Fink, 2017).

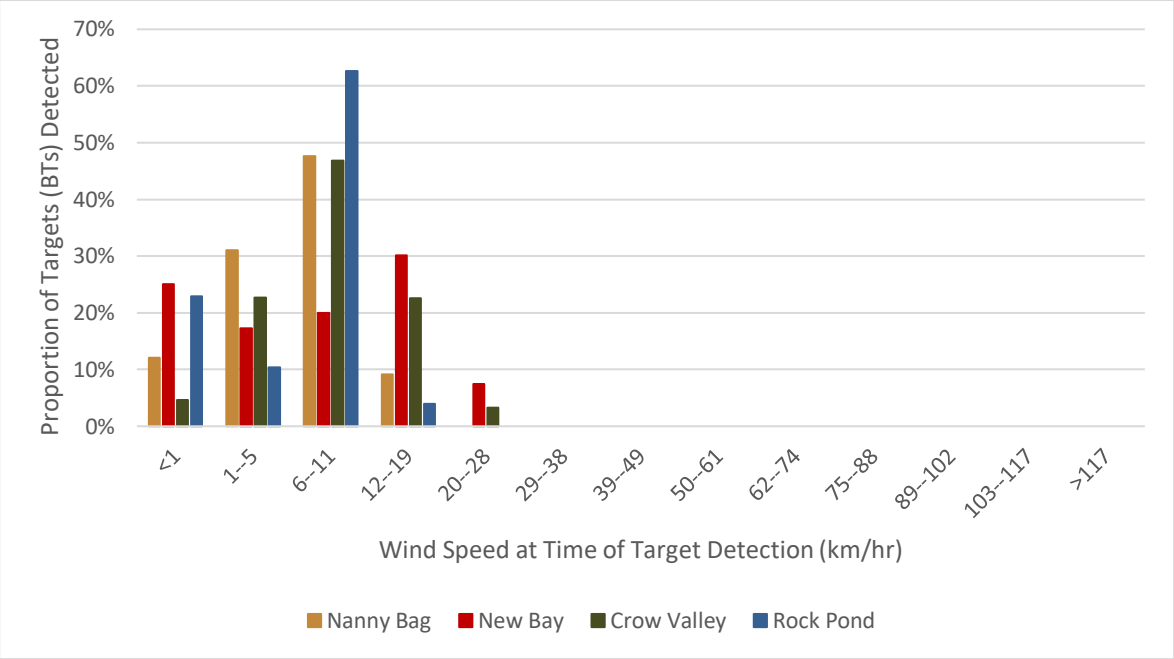

Figure 3.6: Wind Direction by Number of BTs Detected, Fall 2024

Most BTs detected during the spring 2024 monitoring period were detected when wind speeds were between 6 to 11 km/hr (Figure 3.7). This result is not unexpected as birds prefer to fly during favorable wind conditions (Dossman et al., 2016). Higher wind speeds increase the flight speeds of migrating birds but would not be so powerful as to shift birds off their migratory course (Alerstam, 2011; Dossman et al., 2016; Nussbaumer et al., 2022). Wind speed, along with favourable wind direction during this period, may have potentially aided migration movements; thus, explaining the distinct peaks seen in April and May across the four ARS.

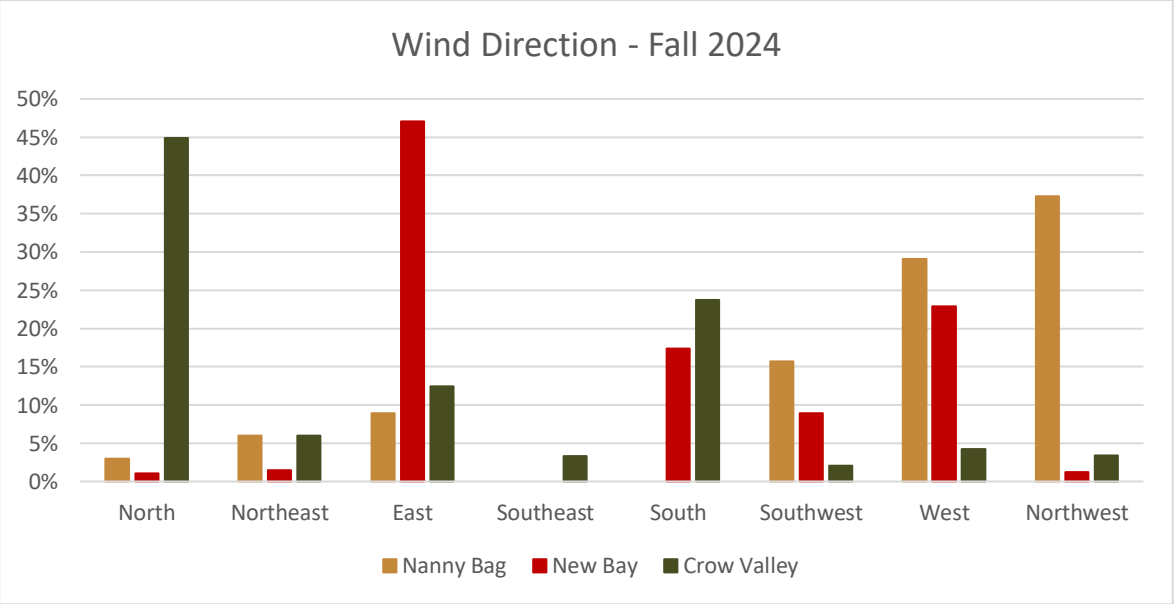

Figure 3.7: Wind Speed (km/h) by Number of BTs detected, Spring 2024

The highest proportion of BTs were detected when wind speeds were between 6 to 11 km/hr during fall migration (Figure 3.8). During fall migration there were greater proportions of BTs detected when wind speeds were under 1 km/hr compared to the spring migration period.

Overall, birds migrating through the Project appear to be more dependent on favourable wind conditions during spring migration than during fall migration. These results are not unexpected as fall migration is often longer than spring migration, and is less influenced by wind than by temperature shifts (Brisson-Curadeau et al., 2020; Nussbaumer et al., 2022).

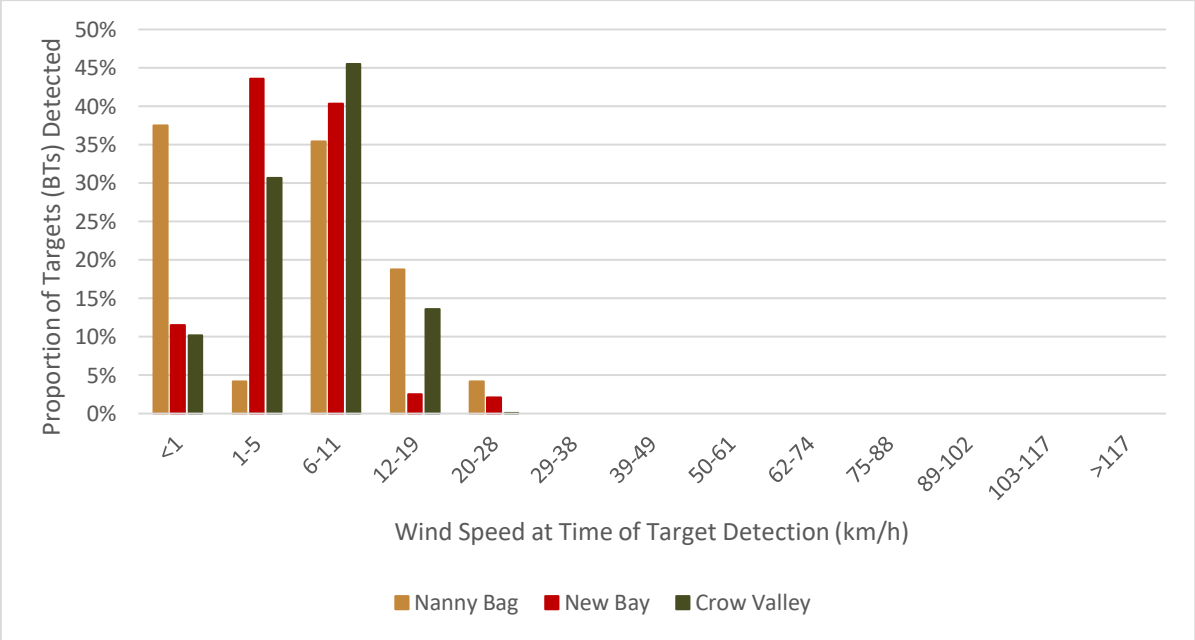

Figure 3.8: Wind Speed (km/h) by Number of BTs Detected, Spring 2024

Temperature

The most noticeable migration events observed across each of the ARS monitors during the spring monitoring campaign occurred when average daily temperatures were rising towards the seasonal high (Figure 3.9). These results were expected as birds take advantage of warming weather to predict migration timings and forage during peak breeding season (Brisson-Curadeau et al., 2020; La Sorte et al., 2015). Similarly, the most noticeable migration events observed during fall migration occurred shortly before temperatures were dropping below zero (Figure 3.10), which is consistent with findings that birds will often use decreasing temperatures as trigger to begin the fall migration south (Brisson-Curadeau et al., 2020).

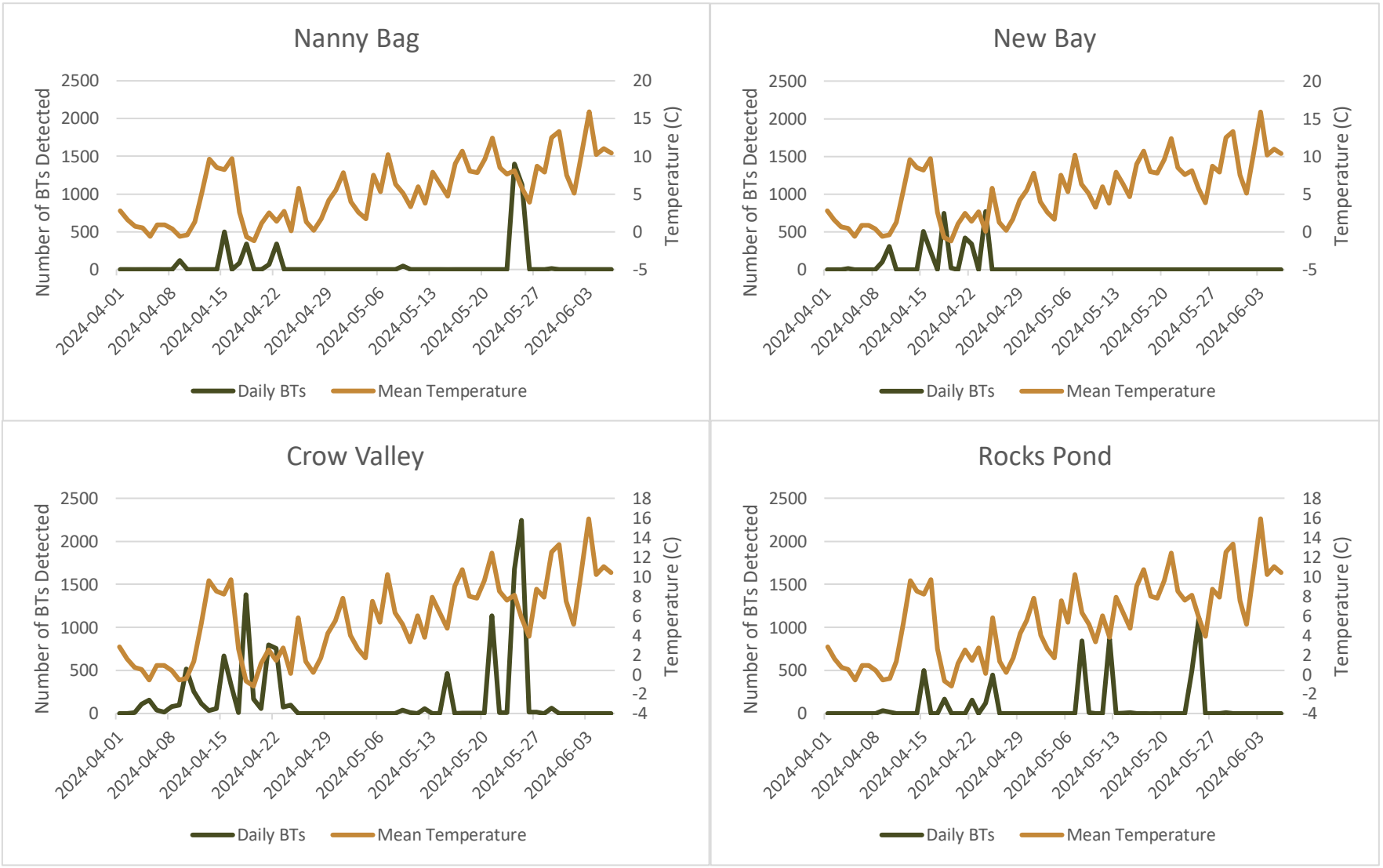

Figure 3.9: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Average Temperatures (°C)

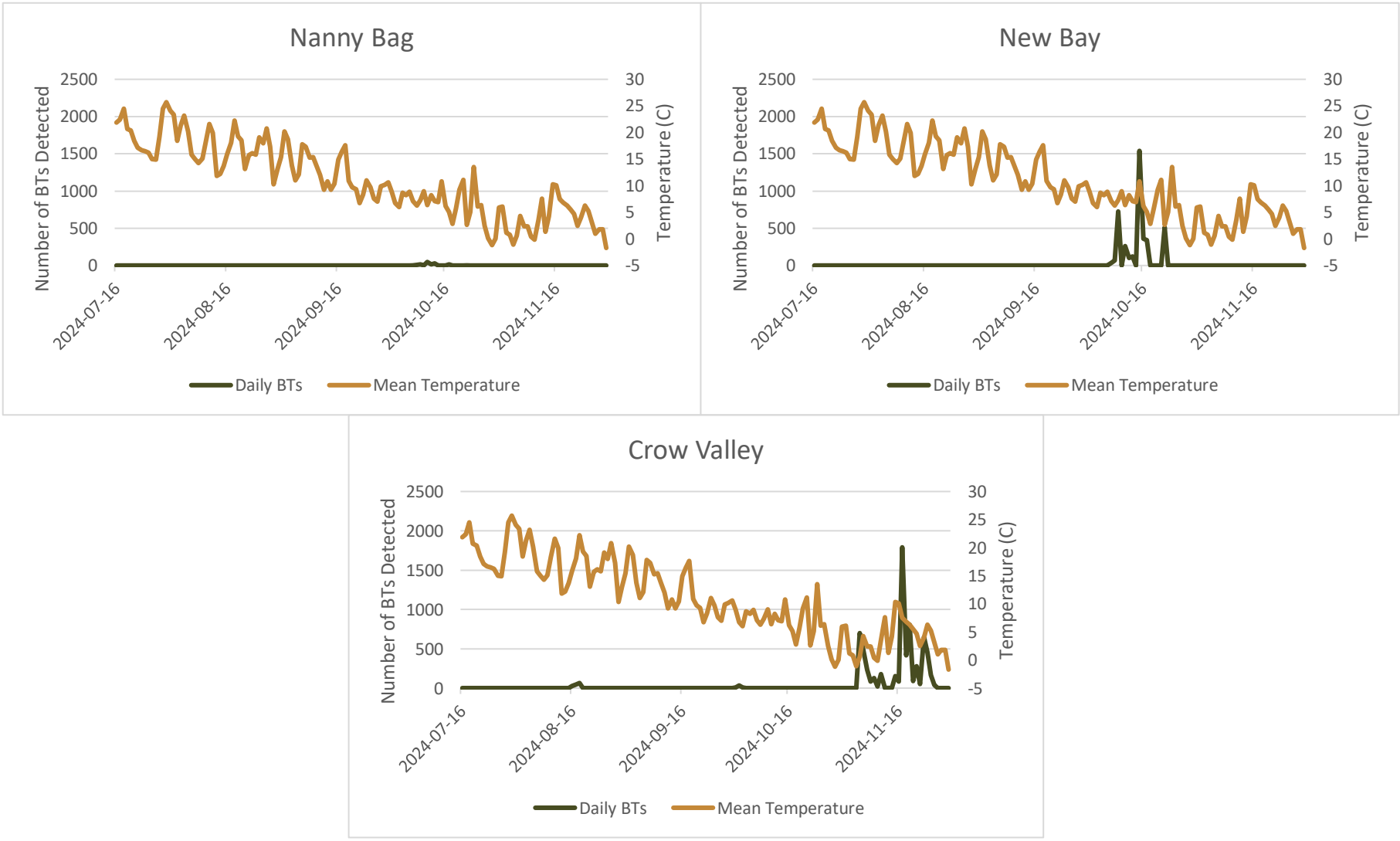

Figure 3.10: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Average Temperatures (°C)

Lunar Cycle

The relationship between lunar cycles and daily number of BTs detected by each of the avian radars during the 2024 monitoring period was quantified according to the percentage of exposed moonlight during each of moon's phases (i.e., new moon = 0%, first quarter = 50%, full moon = 100%, last quarter = 50%).Most of BTs detected by each of the radars occurred during lunar phases where the percentage of exposed moonlight was greater than 50% visible during spring migration (Figure 3.11). A similar result occurred during fall migration where all the large migration events detected by each of the radars occurred during periods with elevated levels of moonlight (Figure 3.12). These results support that nocturnal birds may have taken advantage of the higher visibility provided by increased moonlight to forage in preparation for migration following periods of full moon (Norevik et al., 2019).

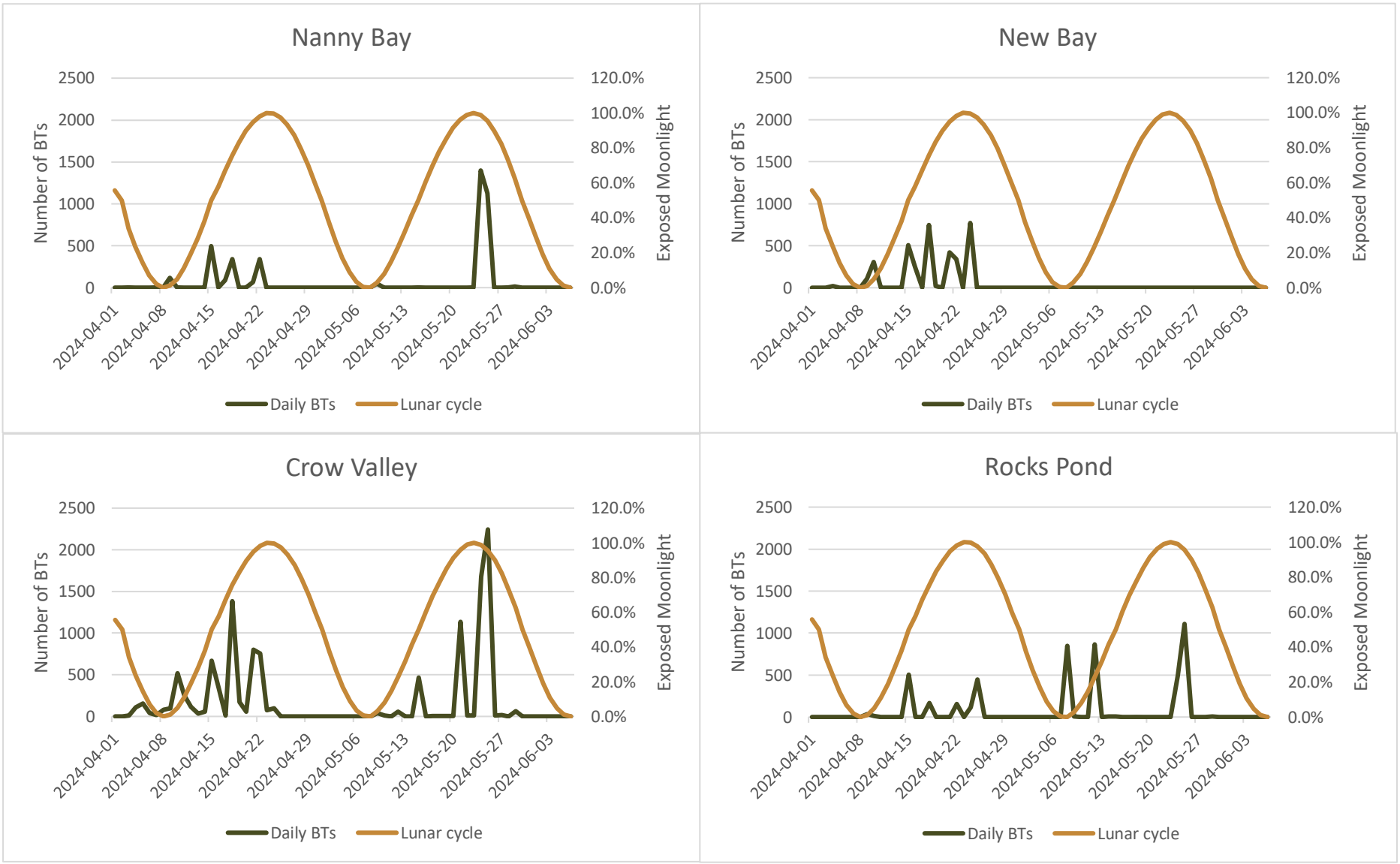

Figure 3.11: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Moonlight Exposure (%)

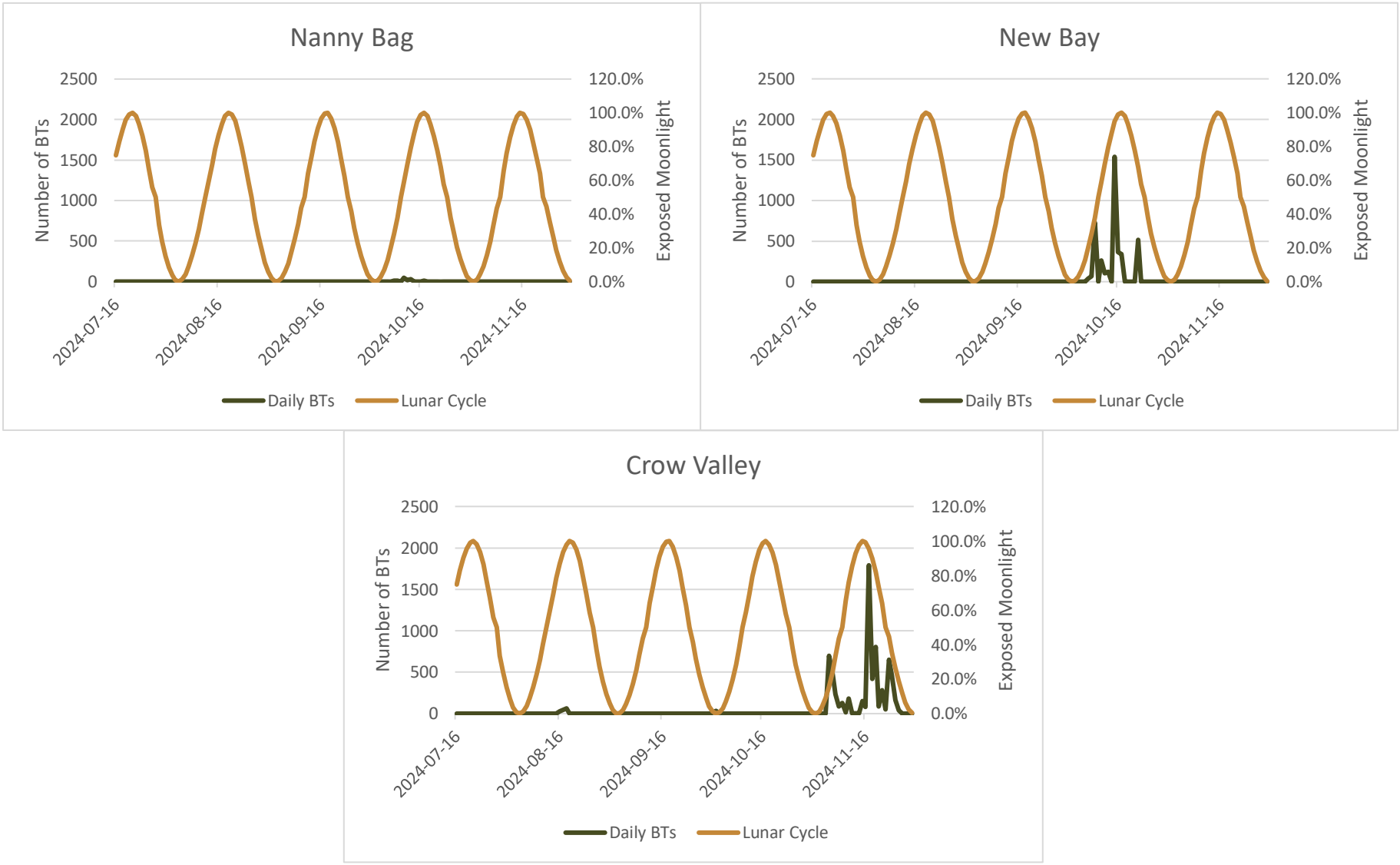

Figure 3.12: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Moonlight Exposure (%)

3.2.2 Migratory Bird Density

Table 3.9 and 3.10 detail the target density of each radar location calculated using the volume of airspace scanned (Table 3.3) and the number of BTs detected at each height (Tables 3.5, 3.6, 3.7, 3.8) during the spring and fall monitoring period.

Table 3.9: Target Density – Spring 2024

Range bin (m)	Target Density (Crow Valley)	Target Density (Nanny Bag)	Target Density (New Bay)	Target Density (Rocks Pond)
0-25	0	0	0	0
25-50	0	0	0	0
50-100	0	0	0	0
100-150	0	0	0	0
150-200	0	0	0	0
200-250	0	0	0	0
250-500	20.91255	6.653992	0.95057	0.95057
500-1000	2161.276	450.1348	380.0539	503.5939
1000-1500	2335.045	1041.506	910.5691	1210.954
1500-2000	532.5639	246.4963	212.6958	344.6002
2000-3000	0	0	0	0
Total	**5049.797**	**1744.791**	**1504.269**	**2060.099**

Table 3.10: Target Density – Fall 2024

Range bin (m)	Target Density (Crow Valley)	Target Density (Nanny Bag)	Target Density (New Bay)
0-25	0	0	0
25-50	0	0	0
50-100	0	0	0
100-150	0	0	0
150-200	0	0	0
200-250	0	0	0
250-500	8.555133	0	1.901141
500-1000	1081.312	5.390836	275.8311
1000-1500	1488.661	14.97647	1050.92
1500-2000	451.7725	19.37345	412.2012
2000-3000	0	10.59883	0
Total	**3030.3**	**50.33959**	**1740.853**

The ARS detected most targets in the height range between 500 m to 2,000 m, with the highest peak detected within the 1,000 m to 1,500 m height bin across the radar locations during the spring monitoring period (Figure 3.13). Most BTs that were detected within this height range occurred in mid to late April (Crow Valley, Nanny Bag, New Bay, and Rocks Pond) and late May, particularly from May 24 to 26 (Crow Valley, Nanny Bag, and Rocks Pond). Approximately 54% of BTs were detected in this height bin across the four locations.

Similar to the findings for mean temperature (Figure 3.9), target densities calculated using ARS spring data across the four locations were highest in the bins (Table 3.9). The target density for that 1,000 m to 1,500 m height bin show no variation to target counts, with target density peaking at the 1,000 m to 1,500 m range before decreasing (Figure 3.14).

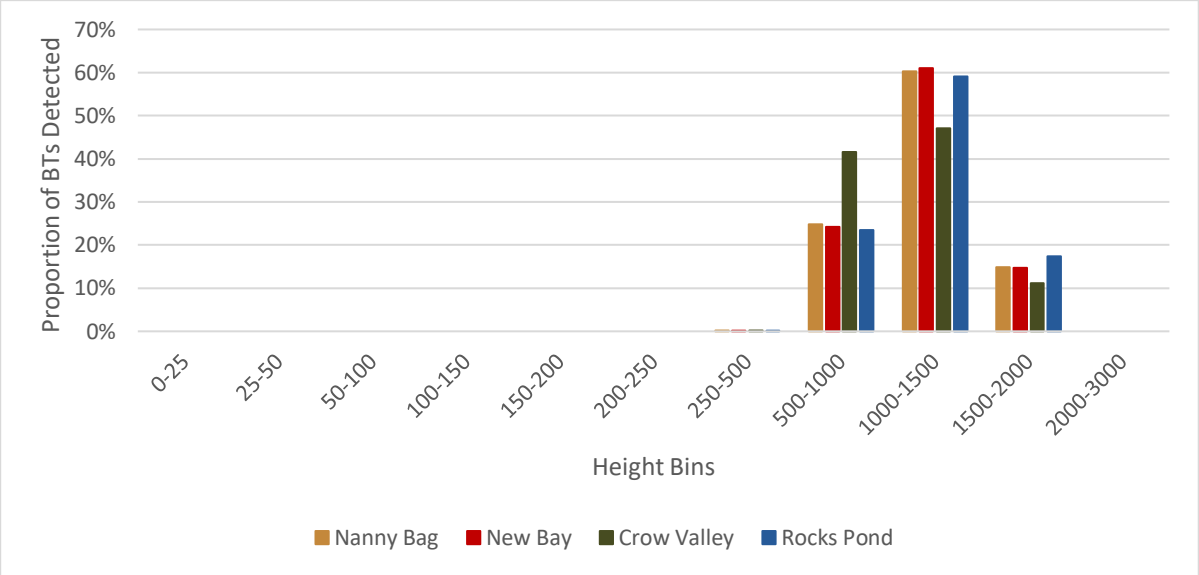

Figure 3.13: Number of Targets Detected within Height Bins – Spring 2024 across the ARS Locations

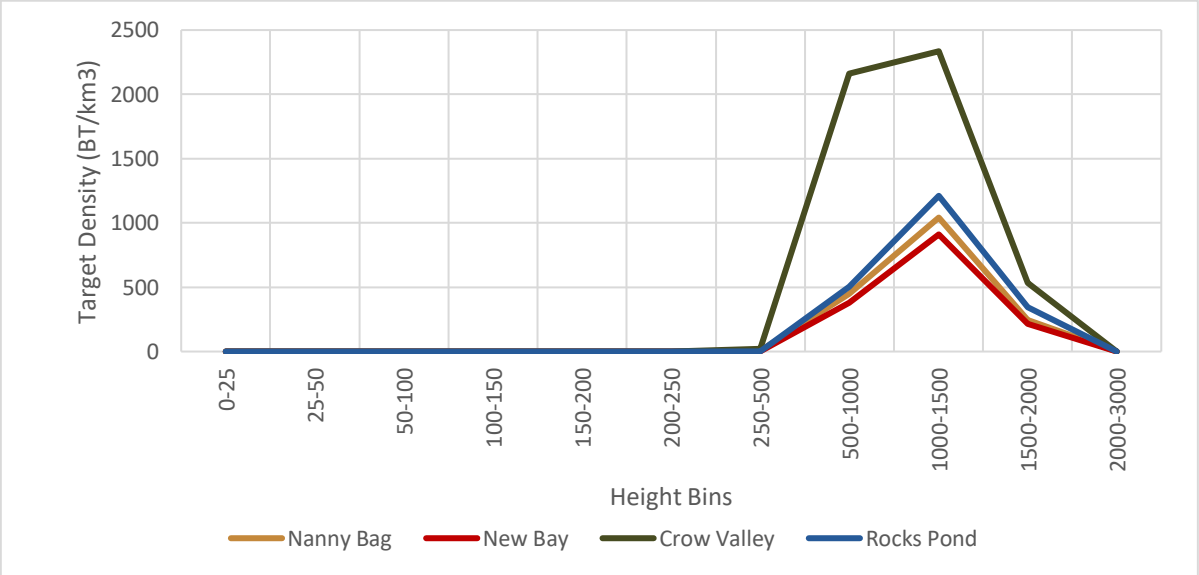

Figure 3.14: Target Density within Height Bins – Spring 2024 across the ARS Locations

The ARS detected most targets in height range between 500 m and 3,000 m, with most ARS observing the highest detections within the 1,000 m to 1,500 m height bin during the fall monitoring period (Figure 3.15). Notably, Nanny Bag detected the highest target detections within the 1,500 m to 2,000 m height bin; although the ARS at that location detected the lowest number of BTs during the fall monitoring period. Most BTs that were detected in these height

bins occurred in mid-October (Nanny Bag and New Bay) and November (Crow Valley). Approximately 25% of BTs were detected within the 1,000 m to 1,500m height bin across the ARS locations (Table 3.10). Similar to the findings in for the relationship between BTs and lunar cycle in the spring (Figure 3.11), target density calculated using the ARS fall data across the locations were highest in the 1,000 m to 1,500 m height bin (Table 3.10). The target density for the 1,000 m to 1,500 m height bin show no variation to target counts, with target density peaking with the 1,000 m to 1,500 m height bin before decreasing (Figure 3.16).

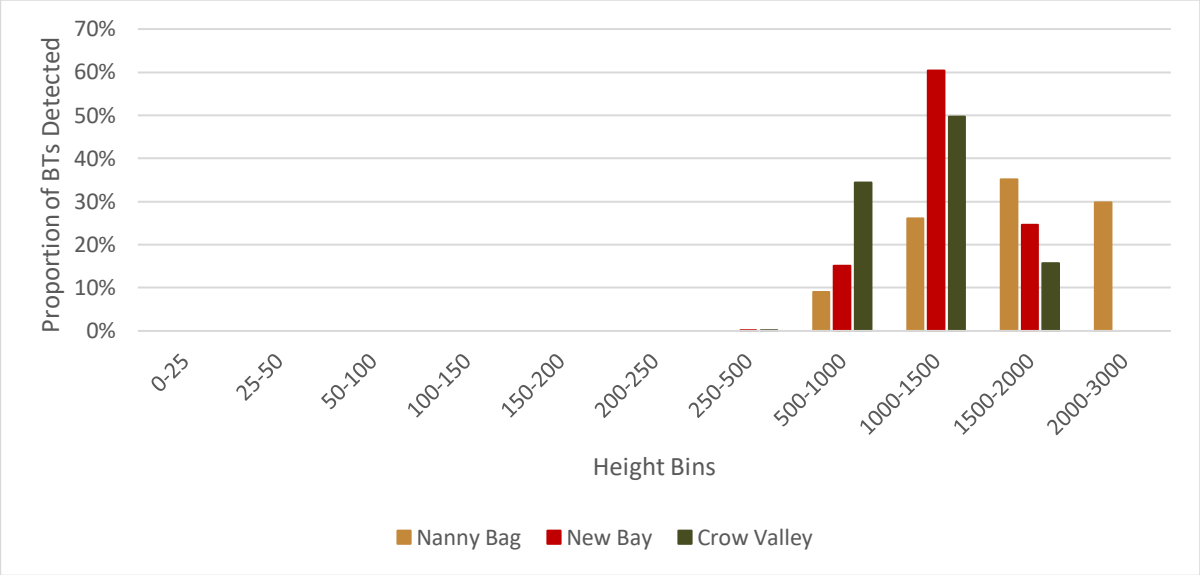

Figure 3.15: Number of Targets Detected within Height Bins – Fall 2024 across the ARS Locations

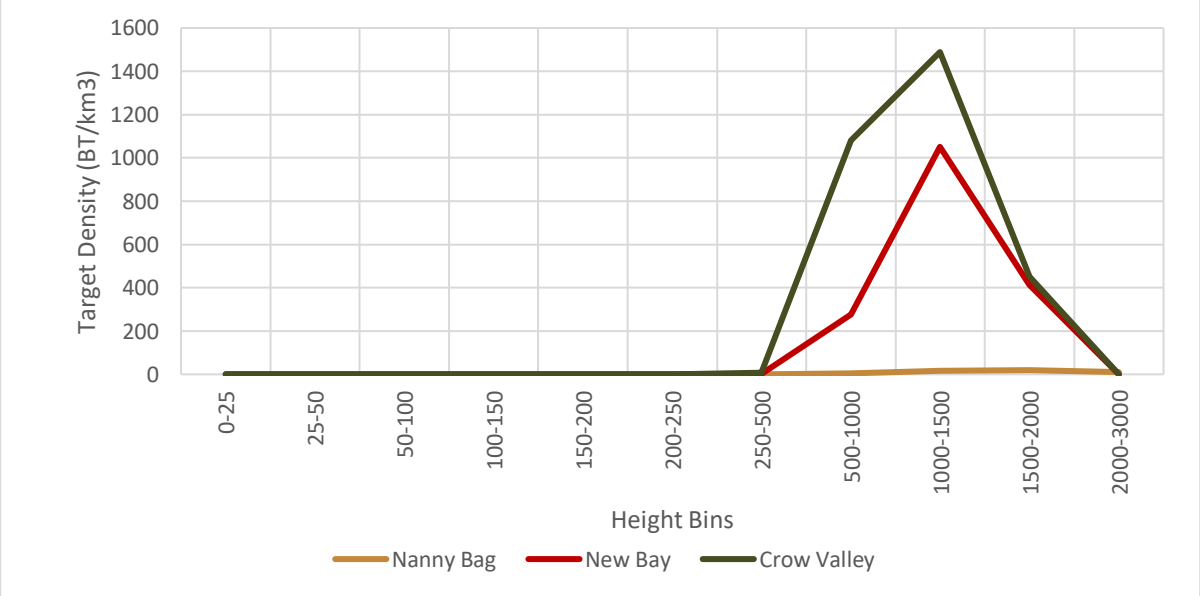

Figure 3.16: Target Density within Height Bins – Fall 2024 across the ARS Locations

BT detections were highest above 500 m throughout the entirety of the 2024 radar monitoring period, with target density peaking in the 1000 m to 1500 m height bin (Figures 3.14 and 3.16). Birds flying at heights between 44 m and 226 m, also referred to as the rotor swept zone, would be at potential risk of interacting with the turbines based on the height of the proposed turbines and diameter of the turbine blades (Table 3.4); however, 0% of observed BTs were detected in the rotor swept zone during the entirety of the 2024 monitoring period (Figures 3.13, 3.14, 3.15, and 3.16).

3.2.3 Migratory Bird Interaction Index

The ARS data across the four locations was used to determine target density for each day of the monitoring program (calculated from Tables 2, 3, 4, 5, Appendix B) and the interaction airspace volume (Table 3.4) was used to calculate and project the MBII (Figures 3.17 and 3.18) over the 2024 monitoring periods.

The MBII values were active in mid to late April, with New Bay recording the highest peak during the spring monitoring period across the four ARS locations (Figure 3.17). MBII values were highest in late May, with Nanny Bag, Crow Valley, and Rocks Pond observing the highest MBII peaks between May 24 to 26 (Figure 3.17). This suggests that spring migration may have occurred rapidly in two pulses to facilitate birds competing for forage and breeding opportunities in the area. Both the ARS at Nanny Bag and New Bay saw high peaks in early to mid October during the fall monitoring period (Figure 3.18). By contrast, the ARS at Crow Valley detected high MBII values in November (Figure 3.18), suggesting that there might be a difference in migration timing at the different sites, with more late migrants at Crow Valley compared to the other ARS locations.

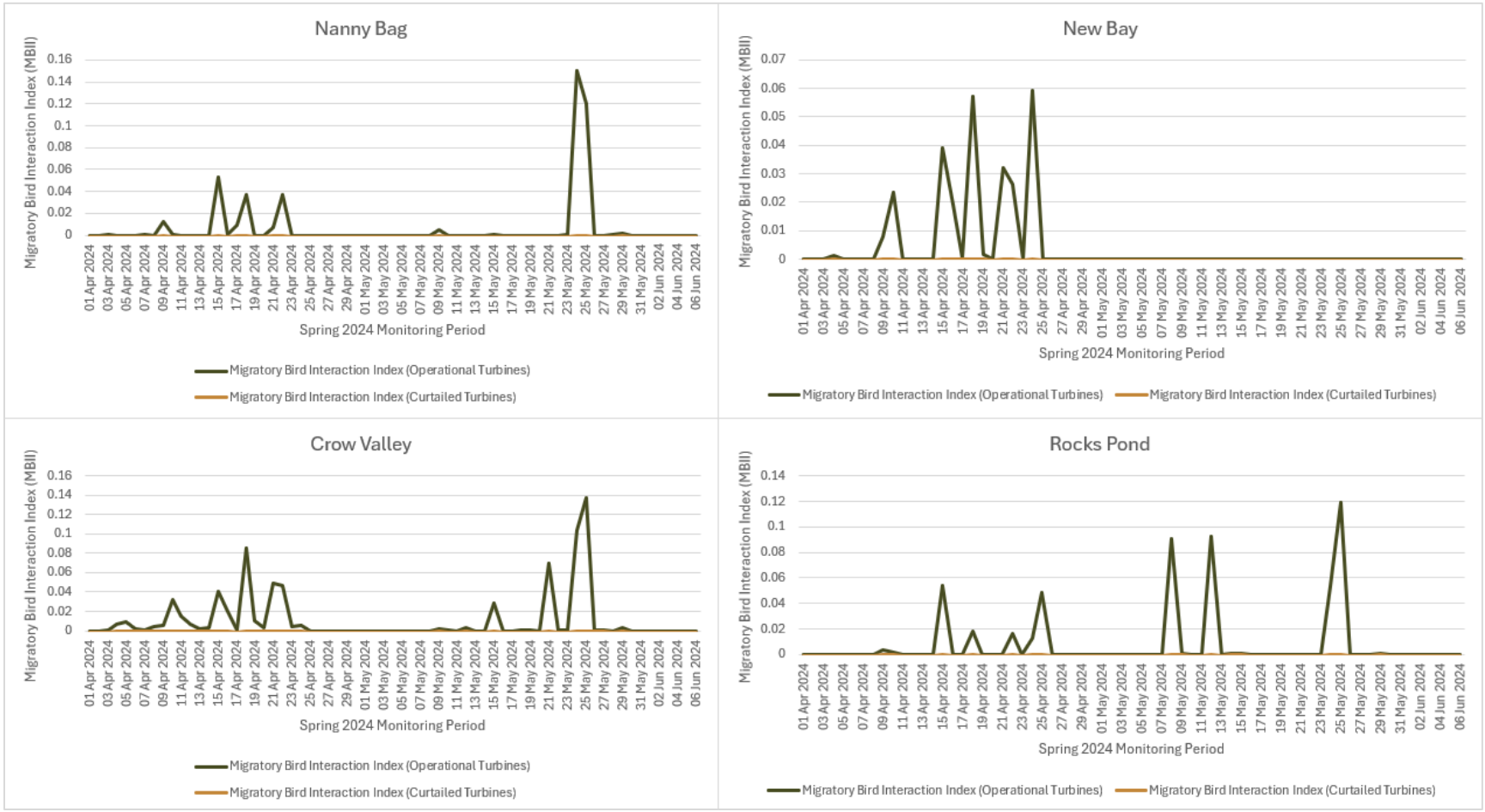

Figure 3.17: Migratory Bird Interaction Index – Spring 2024 across the ARS Locations

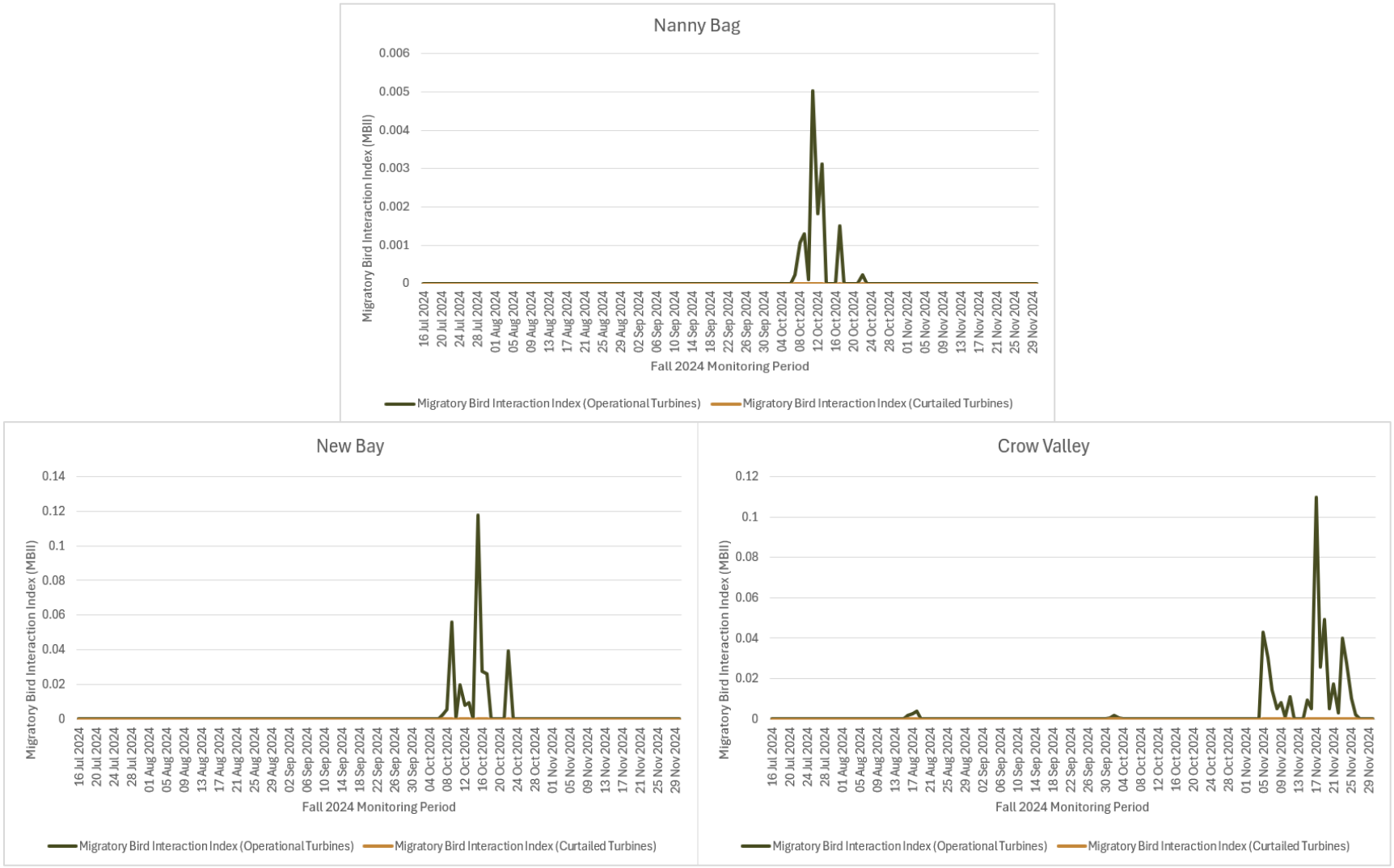

Figure 3.18: Migratory Bird Interaction Index – Fall 2024 across the ARS Locations

4.0 ACOUSTIC RECORDING UNIT

4.1 Avian Acoustic Methodology

4.1.1 Avian Acoustic Monitor Deployment

Four ARUs, each a Wildlife Acoustic Song Meter 4, were deployed within the PA in 2023 and 2024 in tandem with the ARS. There was a location change in 2024 resulting in five ARU monitoring locations total at the BWPA (Drawing 2, Appendix A). The ARUs were deployed at varying time throughout the 2023 and 2024 monitoring periods to cover different seasons.

The 2023 monitoring period included the following locations:

- Lewis Lake ARU: September 22, 2023, to January 25, 2024
- Nanny Bay ARU: September 22, 2023, to January 13, 2024
- New Bay ARU: September 19 to December 22
- Rocks Pond ARU: September 20 to October 22

The 2024 monitoring period included the following locations:

- Crow Valley ARU: April 3 to May 23
- Nanny Bag ARU: April 3 to December 12
- New Bag ARU: April 4 to November 14
- Rocks Pond ARU: April 4 to November 18

Each monitor was programmed to record from 19:00 to 6:00 with the intention of capturing the nocturnal flight calls (NFCs) of migrating birds during spring, summer, fall, and winter. ARU data for the breeding season was trimmed to only include data starting at sunset up until sunrise to maintain consistent data records and avoid confusing the machine learning model used to process avian NFCs. This time constraint was set since breeding calls for avian species are concentrated to dusk and dawn during the spring.

Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARUs experienced interruptions during their monitoring periods. Inclement weather events near the PA also affected the ARUs' outputs. Ultimately, the periods when the ARU were active are as followed:

Table 4.1: Date Range when the ARU was Active at Each Location within the BWPA

ARS Location	Active Periods
Lewis Lake	September 21 – November 20, 2023 December 5, 2023 – January 25, 2024
Crow Valley	April 3 – May 23, 2024

ARS Location	Active Periods
Nanny Bag	September 22 – November 20, 2023 December 12, 2023 – January 13, 2024 April 3 – May 15, 2024 June 12 – June 27, 2024 October 2 – December 12, 2024
New Bay	September 19 – November 11, 2023 December 4 – December 22, 2023 August 14 – November 14, 2024
Rocks Pond	September 20 – October 22, 2023 April 4 – April 12, 2024 May 16 – June 5, 2024 October 2 – November 18, 2024*

*The ARU was active during these dates, but a combination of inclement weather and internal malfunction had resulted in unreadable data.

4.1.1.1 Avian Acoustic Habitat Descriptions

The locations of the ARUs were chosen to account for a variety of habitat present in the BWP. The habitat for each ARU is detailed in Table 4.2 below.

Table 4.2: ARU Locations within the BWPA and their Surrounding Habitats

ARU ID	Habitat Characteristics
Crow Valley	ARU positioned directly adjacent to ARS.
Lewis Lake	ARU positioned on a human-made infrastructure on a road adjacent to a river. Monitor was removed in 2024 due to accessibility issue.
Nanny Bag	ARU positioned directly adjacent to ARS.
New Bay	ARU positioned at the western portion of the BWP and west of New Bay Lake. ARU positioned directly adjacent to ARS.
Rocks Pond	ARU positioned directly adjacent to ARS.

4.1.2 Avian Acoustic Data Processing

The acoustic data collected by the ARUs were ran through Nighthawk, a machine learning model that specialize in the detection and classification of avian NFCs. The output files from these models were then brought into Raven Pro (2022), a computer program specializing in visualization and analysis of sounds, for manual analysis.

4.1.2.1 Nighthawk

Nighthawk is a deep learning model designed by researchers at the Cornell Lab of Ornithology (Van Doren et al., 2023). The Nighthawk model was designed to detect and identify vocalizations made by nocturnally migrating birds and was trained using recordings of NFCs from throughout the Americas. For the purposes of this analysis, Nighthawk was run on its own computer programming environment using Python programming language, and was set using the following default parameters:

- Model sample rate: 22,050 Hz
- Model input duration: 1 s
- Hop size: 20% (percentage of the model input duration)
- Length of detections: 0.2 s

Nighthawk is capable of assigning a probability score to each detection it makes, which represents the likelihood of the model making a correct prediction. For this analysis, only detections with a probability score of 0.8 (80%) or above were considered for further analysis in Raven Pro.

Nighthawk is capable of identifying 82 bird species (Table 6, Appendix B), although a species-level identification is not always possible (Van Doren et al., 2023). In instances where a species-level identification cannot be achieved, the model may identify vocalizations to the order, family, or group level. Order and family refer to the taxonomic levels, whereas group level refers to a subset of species with similar sounding NFCs. For example, the 'ZEEP' group consists of several similar-sounding warbler species that can be exceptionally difficult to vocally separate from one another. Nighthawk was fed a list containing only species that are likely to occur in this region to limit false species-level identifications.

Nighthawk produced a series of text files containing all detections and predictions for a given audio file input. The text files and audio files were then brought into Raven Pro (version 1.6) for manual verification.

4.1.2.2 Raven Pro

Raven Pro is a software program that specializes in the visualization and analysis of sounds. Environmental scientists with experience in bird identification brought raw audio files recorded by the ARU and the text files containing the detections made by Nighthawk into Raven Pro. The scientists were then able to manually verify the detections and assess the accuracy of the Nighthawk results by listening to sound clips and visually analyzing the spectrograms of NFCs. The scientists listened to 30 vocalizations (or all vocalizations if fewer than 30 were detected) for each species identified by Nighthawk. The vocalizations were annotated 'Y' if the species-level identification made by the model was correct, or 'N' if the identification was incorrect.

4.2 Acoustic Monitoring Results

Data collected by the ARUs across the four locations within the PA was analyzed and manually verified to produce a list of species present within the Project during the 2023 and 2024 monitoring seasons. Results included avian vocalizations identified by Nighthawk.

The 2023 monitoring period include the following locations:

- Lewis Lake
- Nanny Bag
- New Bay
- Rocks Pond

The 2024 monitoring period include the following locations:

- Crow Valley
- Nanny Bag
- New Bay
- Rocks Pond

4.2.1 2023 Nighthawk Results

The Nighthawk model made a total of 46,964 detections for the four ARU deployed in 2023, most of which occurred in September and October across all ARUs (Tables 7, 8, 9, and 10, Appendix B; Figure 4.1). The datasets for the ARUs at Lewis Lake and Nanny Bag were included in the 2023/2024 monitoring period to capture the first acoustic monitoring period at BWP since these ARUs recorded until January 2024.

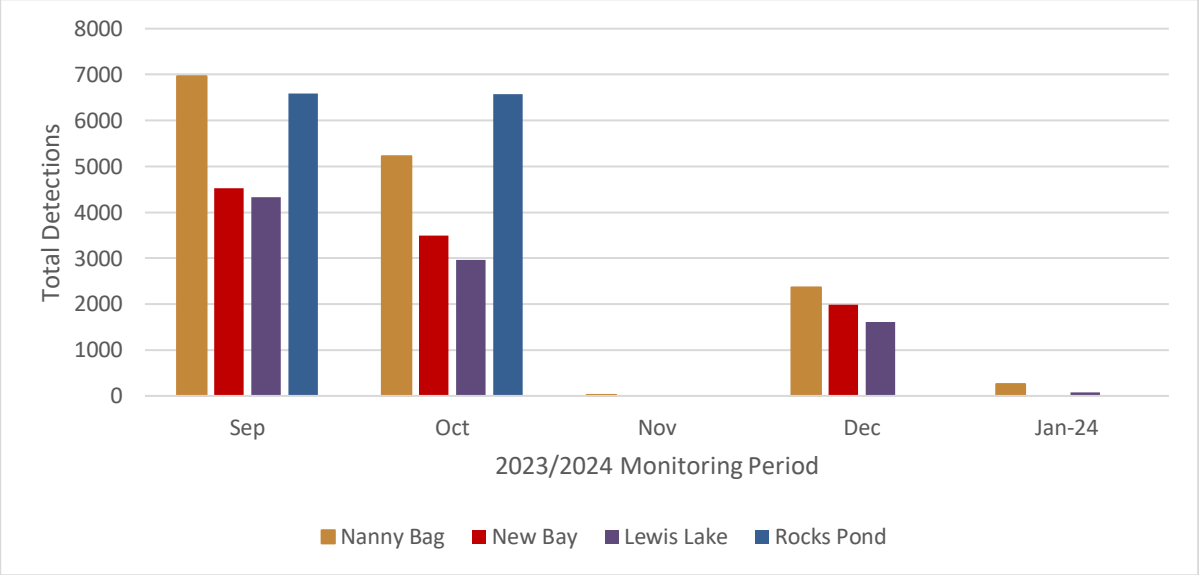

Figure 4.1: Total Number of Detections made by Nighthawk across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period

A subset of 1,973 detections were manually verified by Strum environmental scientists, and of those, 842 (43%) were correctly identified by Nighthawk (Table 7, 8, 9, and 10, Appendix B). Nighthawk was most successful at detecting American robin (*Turdus americanus*), common yellowthroat (*Geothlypis trichas*), greater yellowlegs (*Tringa melanoleuca*), Lincoln's sparrow (*Melispiza lincolnii*), white-throated sparrow (*Zonotrichia albicollis*), veery (*Catharus fuscescens*), and Wilson's snipe (*Gallinago delicata*); all of which had a success rate of 90% or higher when a sample of detections were manually verified. Nighthawk also made 8,029 detections at the group level, 13,684 detections at the family level, and 14,322 detections at the order level, which are included in Table 4.3. Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Table 4.3: Summary of 2023/January 2024 Combined BWPA Acoustic Monitors' Results

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American pipit	17	17	41%	0.94
American redstart	158	147	3%	0.88
American robin	26	26	100%	1.00
American tree sparrow	27	27	19%	0.99
Black-and-white warbler	70	67	82%	1.00
Black-billed cuckoo	3	3	0%	0.96
Black-throated blue warbler	149	139	0%	0.89
Cape May warbler	3	3	67%	1.00
Canada warbler	6	6	0%	0.99
Chipping sparrow	149	112	2%	0.92
Chestnut-sided warbler	47	45	2%	0.94
Common yellowthroat	74	73	59%	1.00
Dark-eyed junco	171	133	93%	0.99
Dickcissel	6	6	0%	1.00
Grasshopper sparrow	65	65	0%	0.99
Greater yellowlegs	46	46	100%	0.99
Green heron	8	8	0%	0.98
Grey-cheeked thrush	2	2	50%	1.00
Hermit thrush	257	150	81%	1.00
Hooded warbler	11	11	0%	0.90
Indigo bunting	2	2	0%	0.95
Killdeer	1	1	0%	0.50
Lapland longspur	8	8	0%	0.98
Least sandpiper	69	69	4%	1.00
Lesser yellowlegs	1	1	0%	1.00
Lincoln's sparrow	14	14	43%	0.96
Mourning warbler	7	7	100%	0.95
Northern parula	7	7	86%	0.99
Northern waterthrush	11	11	0%	0.99
Ovenbird	14	14	21%	0.93
Palm warbler	26	26	88%	1.00
Red-breasted nuthatch	52	52	0%	0.99
Rose-breasted grosbeak	5	5	0%	1.00
Savannah sparrow	228	152	77%	0.99
Semipalmated plover	1	1	0%	0.89
Short-billed dowitcher	72	72	28%	0.99
Solitary sandpiper	44	41	0%	0.94

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Spotted sandpiper	24	24	54%	1.00
Swainson's thrush	52	50	48%	0.87
Upland sandpiper	11	10	0%	1.00
Veery	1	1	100%	1.00
White-crowned sparrow	12	12	8%	0.98
White-throated sparrow	1957	159	96%	0.99
Wilson's snipe	3	3	100%	0.98
Wilson's warbler	20	20	60%	0.98
Wood thrush	19	18	78%	1.00
Yellow-billed cuckoo	174	107	0%	0.98
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	10	0	N/A	N/A
BZWA	660	0	N/A	N/A
CUPS	172	0	N/A	N/A
DBUP	643	0	N/A	N/A
DESP	282	0	N/A	N/A
DEWA	1	0	N/A	N/A
HSSP	42	0	N/A	N/A
MWAR	13	0	N/A	N/A
SBUF	1499	0	N/A	N/A
SFHS	2057	0	N/A	N/A
SWLI	870	0	N/A	N/A
THSH	62	0	N/A	N/A
ZEEP	1718	0	N/A	N/A
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	54	0	N/A	N/A
Bombycillidae	26	0	N/A	N/A
Calcariidae	294	0	N/A	N/A
Cardinalidae	9	0	N/A	N/A
Charadriidae	18	0	N/A	N/A
Cuculidae	150	0	N/A	N/A
Haematopodidae	15	0	N/A	N/A
Icteridae	3	0	N/A	N/A
Laridae	5	0	N/A	N/A

Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Motacillidae	13	0	N/A	N/A
Parulidae	8502	0	N/A	N/A
Passerellidae	3179	0	N/A	N/A
Scolopacidae	1186	0	N/A	N/A
Sittidae	22	0	N/A	N/A
Turdidae	208	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	490	0	N/A	N/A
Cuculiformes	38	0	N/A	N/A
Passeriformes	13792	0	N/A	N/A
Pelecaniformes	2	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.5 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

[2] Groupings of birds with similar NFCs.

False positive detections can be attributed to an oversensitivity of the model in conjunction with noise interference from wind, vegetation, frogs, insects, and other environmental factors. Spring peeper frogs (*Pseudacris crucifer*) were noted as being a common source of error, since their calls closely resemble the nocturnal flight calls of avian species like the Swainson's thrush.

Most of the confirmed positive vocalizations were detected in September (58%) and October (38%), which represent peak fall migration for many species that leave Newfoundland (Figure 4.2). While there were detections present in the winter months, only one monitor (Nanny Bag) detected positive species detections during this time and are representative of winter bird activity. Notably, the ARU at Nanny Bag recorded the highest number of detections throughout the 2023 monitoring period. The peaks in fall migration movement in September and October are expected as birds are anticipated to leave for the south during fall migratory period before temperatures and environmental conditions worsened (Brisson-Curadeau et al., 2020).

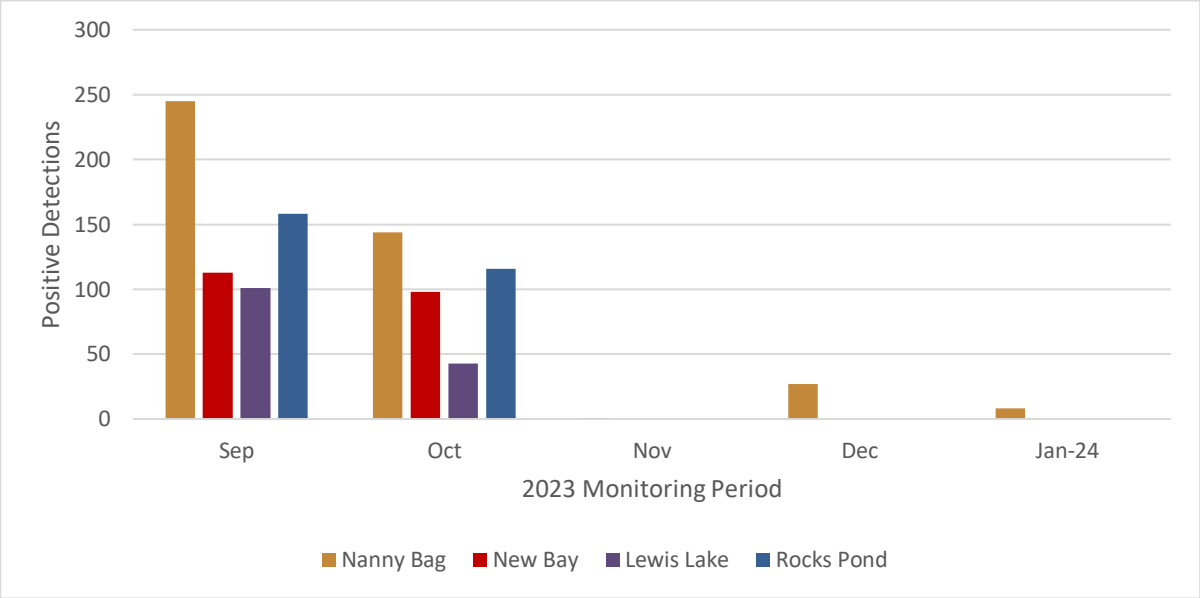

Figure 4.2: Nighthawk Detections across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period

There were 41 species confirmed to have been positively detected by the model across all seasons (Table 4.4). Of these species, the most detected species were white-throated sparrow (153), hermit thrush (*Catharus guttatus*) (133), dark-eyed junco (*Junco hyemalis*) (128), and savannah sparrow (*Passerculus sandwichensis*) (124). Newfoundland grey-cheeked thrush (*Catharus minimus minimus*) was the only SAR detected by Nighthawk. Across the ARU monitoring locations, five species of conservation concern (SOCC) were detected: American pipit (*Anthus* rubescens), cape May warbler (*Setophaga tigrine*), chipping sparrow (*Spizella passerina*), Newfoundland grey-cheeked thrush, and northern parula (*Setophaga americana*) (Table 4.4).

Table 4.4: Summary of Species Confirmed across the ARU Monitoring Locations during the 2023/January 2024 BWPA Monitoring Period

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank[1]
American pipit	*Anthus rubescens*	---	---	---	S2B,SUM
American redstart	*Setophaga ruticilla*	---	---	---	S5B
American robin	*Turdus migratorius*	---	---	---	S5B
American tree sparrow	*Spizelloides arborea*	---	---	---	S3B,SUM
Black-and-white warbler	*Mniotilta varia*	---	---	---	S5B
Black-billed cuckoo	*Coccyzus erythropthalmus*	---	---	---	SNA
Black oystercatcher	*Haematopus bachmani*	---	---	---	
Black-throated blue warbler	*Setophaga caerulescens*	---	---	---	SNA
Cape May warbler	*Setophaga tigrine*	---	---	---	S2B,SUM

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank[1]
Chipping sparrow	*Spizella passerina*	---	---	---	S2S3B,SUM
Chestnut-sided warbler	*Setophaga pensylvanica*	---	---	---	SNA
Common yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed junco	*Junco hyemalis*	---	---	---	S5
Dickcissel	*Spiza americana*	---	---	---	SNA
Grasshopper sparrow	*Ammodramus savannarum*	---	---	---	SNA
Greater yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Grey-cheeked thrush	*Catharus minimus minimus*	Candidate	Threatened	Threatened	S2B,SUM
Hermit thrush	*Catharus guttatus*	---	---	---	S5B
Hooded warbler	*Setophaga citrina*	---	---	---	SNA
Indigo bunting	*Passerina cyanea*	---	---	---	SNA
Killdeer	*Charadrius vociferus*	Candidate	---	---	S3B,SUM
Least sandpiper	*Calidris minutilla*	---	---	---	S3B,S4M
Lincoln's sparrow	*Melospiza lincolnii*	---	---	---	S5B
Mourning warbler	*Geothlypis philadelphia*	---	---	---	S4B,SUM
Northern parula	*Setophaga americana*	---	---	---	S1B?,SUM
Northern waterthrush	*Parkesia noveboracensis*	---	---	---	S5B
Ovenbird	*Seiurus aurocapilla*	---	---	---	S3B,SUM
Palm warbler	*Setophaga palmarum*	---	---	---	S4B
Red-breasted nuthatch	*Sitta canadensis*	---	---	---	S5
Savannah sparrow	*Passerculus sandwichensis*	---	---	---	S5B
Short-billed dowitcher	*Limnodromus griseus*	---	---	---	S3M
Solitary sandpiper	*Tringa solitaria*	---	---	---	S4M
Spotted sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
Swainson's thrush	*Catharus ustulatus*	---	---	---	S5B
Upland sandpiper	*Bartramia longicauda*	---	---	---	SNA
Veery	*Catharus fuscescens*	---	---	---	SNA
White-crowned sparrow	*Zonotrichia leucophrys*	---	---	---	S4B,SUM
White-throated sparrow	*Zonotrichia albicollis*	---	---	---	S5B
Wilson's snipe	*Gallinago delicata*	---	---	---	S5B
Wilson's warbler	*Cardellina pusilla*	---	---	---	S5B
Wood thrush	*Hylocichla mustelina*	---	---	---	SNA
Yellow-billed cuckoo	*Coccyzus americanus*	---	---	---	SNA

Source: (ACCDC, 2025)

[1] ACCDC S-Rank is provided wherever possible.

September had the highest number of unique species detected across the four ARU locations

for seasonal species richness (Figure 4.3).

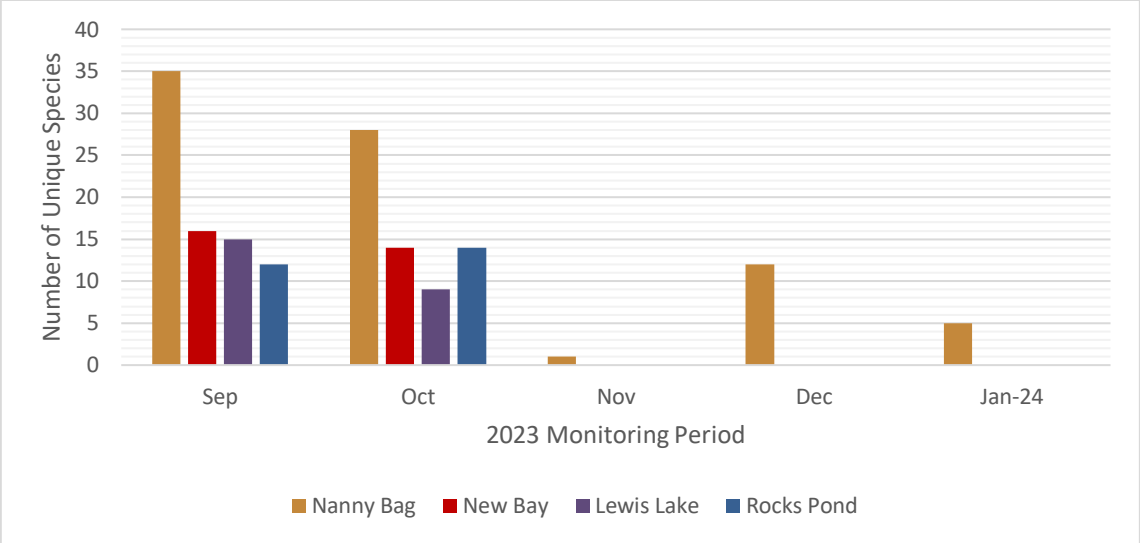

Figure 4.3: Nighthawk Species Richness across the Four ARU Monitoring Locations during the 2023/January 2024 BWP Monitoring Period

4.2.2 2024 Nighthawk Results

The Nighthawk model made a total of 89,651 vocalizations detected in the four ARUs deployed in 2024, most of which occurred in April and May (33%) and August (34%) (Tables 11, 12, 13, and 14, Appendix B; Figure 4.4). There were periods where the four ARUs were inactive; however, these inactive periods occurred asynchronously to provide adequate coverage for the second acoustic monitoring period at BWPA.

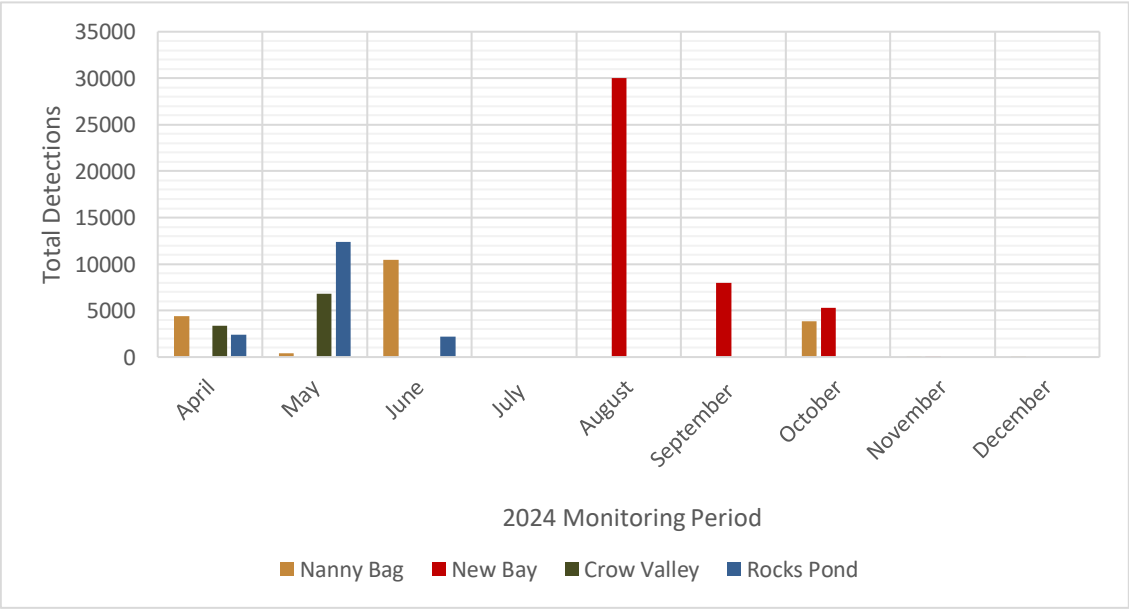

Figure 4.4: Total Number of Detections made by Nighthawk across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period

A subset of 2,916 detections was manually verified by Strum environmental scientists, and of those, 1,026 (35%) were correctly identified by Nighthawk (Tables 11, 12, 13, 14, Appendix B). Nighthawk was most successful at detecting American robin, mourning warbler (*Geothlypis philadelphia*), palm warbler (*Setophaga palmarum*), and semipalmated plover (*Charadrius semipalmatus*); all of which had a success rate of 90% or higher when a sample of detections were manually verified. Nighthawk also made 26,403 detections at the group level, 19,950 detections at the family level, and 26,933 detections at the order level (Table 4.5). Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Table 4.5: Summary of 2024 Combined BWPA Acoustic Monitors' Results

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American pipit	86	86	1%	0.93
American redstart	502	171	2%	0.88
American robin	105	97	97%	1.00
American tree sparrow	117	108	5%	0.99
Black-and-white warbler	379	143	80%	1.00
Black-billed cuckoo	7	7	0%	0.99
Black oystercatcher	29	29	0%	0.97
Bobolink	6	6	0%	1.00
Black-throated blue warbler	113	110	1%	0.89
Cape May warbler	678	56	4%	0.99
Canada warbler	2	2	0%	1.00
Chipping sparrow	97	58	19%	0.92
Chestnut-sided warbler	88	73	3%	0.93
Common yellowthroat	117	94	60%	1.00
Dark-eyed junco	683	164	87%	0.99
Dickcissel	2	2	0%	1.00
Grasshopper sparrow	54	54	4%	1.00
Greater yellowlegs	79	63	46%	0.99
Grey-cheeked thrush	1	1	0%	1.00
Hermit thrush	721	171	83%	1.00
Hooded warbler	22	22	0%	0.91
Indigo bunting	10	10	0%	0.95
Killdeer	206	58	36%	1.00
Lapland longspur	5	5	0%	1.00
Least sandpiper	53	53	9%	1.00
Lincoln's sparrow	33	33	27%	0.94
Mourning warbler	9	9	100%	0.97

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Northern parula	5	5	80%	1.00
Northern waterthrush	91	69	51%	1.00
Ovenbird	26	26	4%	0.95
Palm warbler	9	9	100%	1.00
Red-breasted nuthatch	109	108	3%	0.99
Rose-breasted grosbeak	2	2	0%	0.99
Savannah sparrow	349	167	46%	0.99
Scarlet tanager	20	20	0%	1.00
Semipalmated plover	2	2	100%	0.97
Short-billed dowitcher	137	115	34%	0.99
Solitary sandpiper	182	97	4%	0.95
Spotted sandpiper	64	64	48%	0.99
Swainson's thrush	292	70	19%	0.86
Upland sandpiper	73	73	10%	0.99
Veery	1	1	0%	0.99
Vesper sparrow	5	5	0%	0.99
White-crowned sparrow	29	29	24%	0.97
White-throated sparrow	10426	172	84%	0.99
Wilson's warbler	22	22	5%	0.97
Wood thrush	4	4	0%	1.00
Yellow-billed cuckoo	313	171	0%	0.99
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	82	0	N/A	N/A
BZWA	908	0	N/A	N/A
CUPS	227	0	N/A	N/A
DBUP	1385	0	N/A	N/A
DESP	394	0	N/A	N/A
DEWA	3	0	N/A	N/A
GROS	1	0	N/A	N/A
HSSP	66	0	N/A	N/A
MWAR	10	0	N/A	N/A
SBUF	719	0	N/A	N/A
SFHS	7069	0	N/A	N/A
SWLI	2621	0	N/A	N/A
TANA	5	0	N/A	N/A
THSH	181			

Nighthawk Group Name[2]	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
ZEEP	6279			
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	181	0	N/A	N/A
Bombycillidae	33	0	N/A	N/A
Calcariidae	498	0	N/A	N/A
Cardinalidae	10	0	N/A	N/A
Charadriidae	93	0	N/A	N/A
Cuculidae	181	0	N/A	N/A
Haematopodidae	165	0	N/A	N/A
Icteridae	1	0	N/A	N/A
Laridae	13	0	N/A	N/A
Motacillidae	49	0	N/A	N/A
Parulidae	14235	0	N/A	N/A
Passerellidae	8874	0	N/A	N/A
Scolopacidae	1779	0	N/A	N/A
Sittidae	43	0	N/A	N/A
Turdidae	248	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	2181	0	N/A	N/A
Cuculiformes	43	0	N/A	N/A
Passeriformes	24702	0	N/A	N/A
Pelecaniformes	7	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.7 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

[2] Groupings of birds with similar NFCs.

Most of the confirmed positive vocalizations across the four ARU locations during the spring migration period occurred in May (32%), which represent peak spring migration movement before the breeding season (Figure 4.5). The summer months (June and July) saw little to no detections, which is expected as birds produced less NFCs during peak breeding season. During the fall monitoring period, the four ARUs recorded the majority of confirmed positive vocalizations in August (21%), with positive detections going into September (11%) and October (17%) (Figure 4.5). These detections represent peak fall migration for many species leaving Newfoundland, with detections ending in October signifying the end of fall migration.

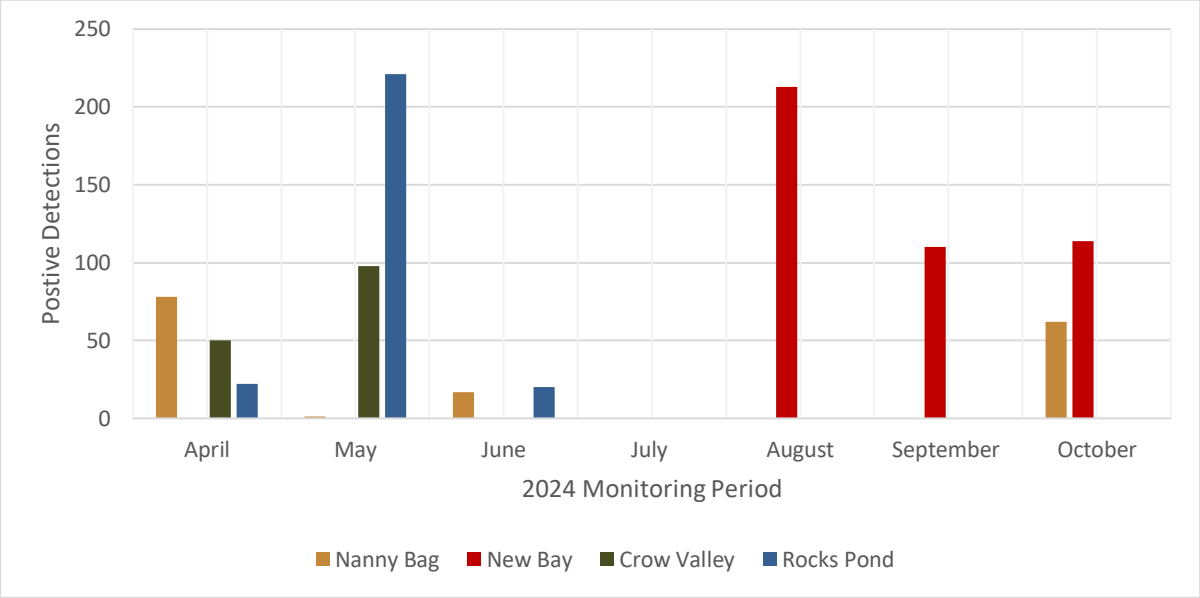

Figure 4.5: Nighthawk Detections across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period

There were 32 different species confirmed to have been positively detected by the model throughout the 2024 monitoring period across the ARU locations (Table 4.9). Of these, the most detected species were white-throated sparrow (144), dark-eyed junco (143), hermit thrush (142), and black-and-white warbler (116). Across the ARU locations, four SOCC were detected, which consisted of cape may warbler, chipping sparrow, northern parula, and semipalmated plover (Table 4.6). No SAR species was detected during the 2024 monitoring period.

Table 4.6: Summary of Species Confirmed across the ARU Monitoring Locations During the 2024 BWPA Monitoring Period

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank[1]
American pipit	*Anthus rubescens*	---	---	---	S3B,S4M
American redstart	*Setophaga ruticilla*	---	---	---	S5B
American robin	*Turdus migratorius*	---	---	---	S5B
American tree sparrow	*Spizelloides arborea*	---	---	---	S3B,SUM
Black-and-white warbler	*Mniotilta varia*	---	---	---	S5B
Black-throated blue warbler	*Setophaga caerulescens*	---	---	---	SNA
Cape May warbler	*Setophaga tigrine*	---	---	---	S2B,SUM
Chipping sparrow	*Spizella passerina*	---	---	---	S2S3B,SUM
Chestnut-sided warbler	*Setophaga pensylvanica*	---	---	---	SNA
Common yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed junco	*Junco hyemalis*	---	---	---	S5

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank[1]
Grasshopper sparrow	*Ammodramus savannarum*	---	---	---	SNA
Greater yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Hermit thrush	*Catharus guttatus*	---	---	---	S5B
Least sandpiper	*Calidris minutilla*	---	---	---	S3B,S4M
Lincoln's sparrow	*Melospiza lincolnii*	---	---	---	S5B
Mourning warbler	*Geothlypis philadelphia*	---	---	---	S4B,SUM
Northern parula	*Setophaga americana*	---	---	---	S1B?,SUM
Northern waterthrush	*Parkesia noveboracensis*	---	---	---	S5B
Ovenbird	*Seiurus aurocapilla*	---	---	---	S3B,SUM
Palm warbler	*Setophaga palmarum*	---	---	---	S4B
Red-breasted nuthatch	*Sitta canadensis*	---	---	---	S5
Savannah sparrow	*Passerculus sandwichensis*	---	---	---	S5B
Semipalmated plover	*Charadrius semipalmatus*	---	---	---	S1B,S4M
Short-billed dowitcher	*Limnodromus griseus*	---	---	---	S3M
Solitary sandpiper	*Tringa solitaria*	---	---	---	S4M
Spotted sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
Swainson's thrush	*Catharus ustulatus*	---	---	---	S5B
Upland sandpiper	*Bartramia longicauda*	---	---	---	SNA
White-crowned sparrow	*Zonotrichia leucophrys*	---	---	---	S4B,SUM
White-throated sparrow	*Zonotrichia albicollis*	---	---	---	S5B
Wilson's snipe	*Gallinago delicata*	---	---	---	S5B
Wilson's warbler	*Cardellina pusilla*	---	---	---	S5B
Wood thrush	*Hylocichla mustelina*	---	---	---	SNA
Yellow-billed cuckoo	*Coccyzus americanus*	---	---	---	SNA

Source: (ACCDC, 2025)

[1] ACCDC S-Rank is provided wherever possible.

In terms of seasonal species richness, the fall monitoring period saw higher species richness (26 species) than that of the spring months (23 species) across the ARU locations (Figure 4.6).

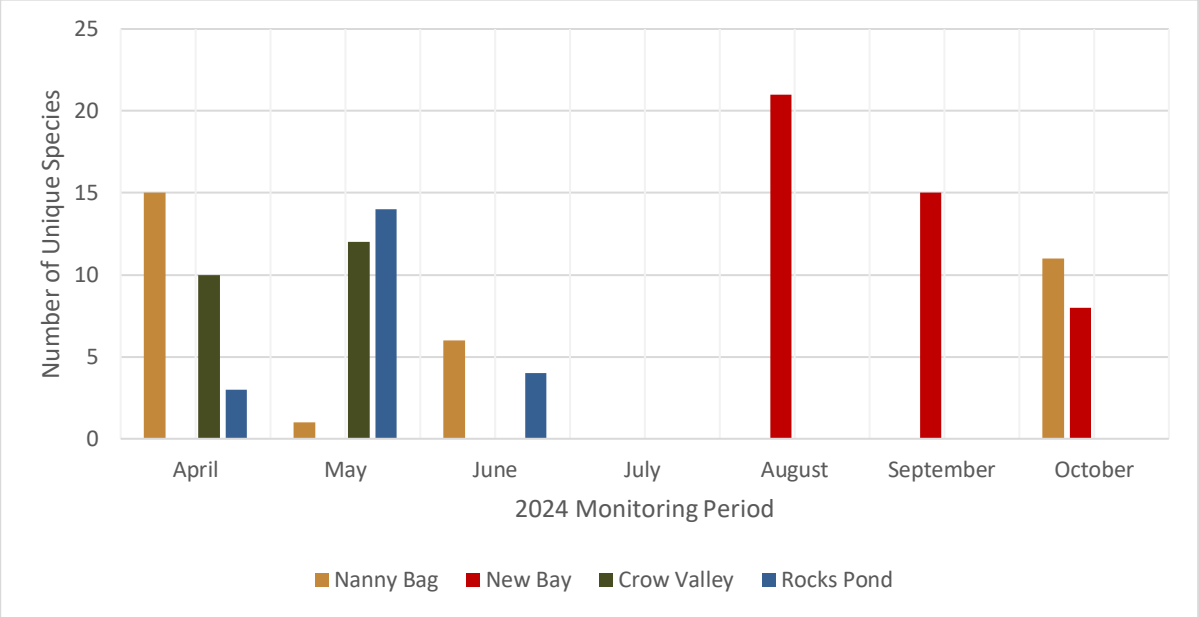

Figure 4.6: Nighthawk Species Richness across the Four ARU Monitoring Locations during the 2024 BWP Monitoring Period

5.0 DISCUSSION

5.1 Radar

Four avian radar units were deployed over a 9 km radius in an area to the northwest of the town of Botwood, Newfoundland in order to capture the avian migration movements over the western portion of the PA. The results of the 2024 radar monitoring campaign indicate a similar pattern of detections across all ARS with each showing that the number of BTs peaked on several days throughout the monitoring period.

These peaks occurred in mid to late April as well as May 24 and 25 during the spring, early to mid-June during the summer, and early to mid-October as well as early to mid-November during the fall. While these peaks suggest that these were the periods in which large migration events may have occurred in the area, it should be noted that there were a few extended periods during the 2024 monitoring period where all four radars were offline. It is possible that large migration events may have also occurred during these down periods that were not recorded by the radars. It is also expected that migration events will become increasingly harder to predict as birds adapt to changing weather conditions and climate change (Burnside et al., 2021; La Sorte & Fink, 2017; Nilsson et al., 2013).

5.1.1 Cues for Avian Migration

Several cues for migratory movements were discussed and analysed in determining possible correlations to migratory timing. Cues for migratory movements can include, but may not be limited to, wind direction, wind speed, temperature changes, lunar cycle, photoperiod, and

potential variations in migration cohort size (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Miller-Rushing et al., 2008; Robart et al., 2019).

Migratory bird activity observed was likely related to a number of these avian migration cues. The results of this report suggest that wind direction and wind speed may have either sped up or changed migration timing, especially during spring migration. (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Similarly, temperature changes and lunar cycles may have affected the internal avian clocks, indicating favourable conditions to forage or prepare for migratory movements. (Brisson-Curadeau et al., 2020; Korpach et al., 2024). The influence of temperature was especially noticeable during the fall migration where birds may have been using decreasing temperatures as trigger to begin the migration south (Brisson-Curadeau et al., 2020). The influence of lunar cycle was prevalent throughout the 2024 monitoring period indicating birds in the area may prefer to take advantage of the increased nighttime visibility provided by increased moonlight. These findings were partially consistent with the findings of other studies that examined the effects of weather and atmospheric conditions on bird migrations.

5.1.2 Migratory Bird Density

The target count within height bins and target density observed by each of the ARS for the 2024 monitoring period indicated very low levels of interaction between migratory avifauna and the Project as any avifauna flying at heights between 44 m to 226 m would potentially be within the rotor swept zone and at risk of interacting with the turbine. Less than 1% of observed targets were detected within the interaction corridor during the entirety of the 2024 monitoring period.

While there were a few periods where all four radars were inactive, migrating birds tend to not make a notable number of acute adjustments over 200 m to the altitude at which they are flying (Bowlin et al., 2015; Norevik et al., 2021). Therefore, the risk of interaction with the turbine blades would likely not be remarkably higher during the inactive periods than what was observed when the radars were active.

5.1.3 Avian Interaction Model

Studies that examined interactions between wind turbines and avifauna have determined the level of avian mortality caused by wind turbines to be low (Zimmerling et al., 2013). These studies are consistent with several post-construction avian mortality monitoring programs conducted by Strum at operational wind power projects across Atlantic Canada within the past decade (i.e., approximately one detectable bird mortality per wind turbine per year on average). The MBII model projection indicates that the interactions would be low and would have occurred on just a few nights during the 2024 monitoring period indicating that the level of avian mortality caused by the Project would be low for most of the Project's operation, and mortality events would be limited to a few events during the migration periods.

5.2 Acoustics

Acoustic monitoring provides a simple and reliable passive data collection method that supplements field surveys. Data was collected in a standardized manner by using the same

equipment, at the same time of day, and in the same location. This standardization generates a presence-absence indicator, which enables the tracking of environmental changes in a reliable way. Acoustic monitoring, along with field assessments, allows for a better overall understanding of avian abundance and species richness within the BWP.

5.2.1 Detection of Vocalizations

The results of the 2023/January 2024 ARU monitoring period show high detection during September and October, which are representative of peak fall migratory movement. While there were little to no detections in November, detections in December into January 2024 demonstrated evidence of winter bird activity. These observations during the 2023/January 2024 monitoring period supported expectations that birds displayed NFCs during peak migration seasons and reduced their vocalizations during non-migratory periods.

The results of the 2024 ARU monitoring period show peak vocalization detections in May for the spring monitoring period and in August for the fall monitoring period. Peak vocalizations during these two months signified peak NFCs detections during peak migration periods (Farnsworth et al., 2004; Winger et al., 2019). The distinct peak in May is notable as birds tend to migrate faster in the spring due to competitive pressure to arrive on their breeding grounds early (Nilsson et al., 2013). While there was a distinct peak in vocalizations in August, the comparably even detections into September and October suggested that birds may migrate slower and stopover for longer periods of time in the fall due to reduced competitive pressure and the presence of juveniles who are less efficient at foraging (Nilsson et al., 2013). Environmental factors such as temperature, wind speed and direction, and photoperiod may have also affected migration arrival (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Helm & Liedvogel, 2024; Robart et al., 2018, 2019).

It is noted that the 2023/January 2024 monitoring period saw higher detections in September and October compared to those of the fall 2024 monitoring period, but the 2024 monitoring period captured high detections in August. With climate change affecting weather conditions, it is assumed that migratory movement may have shifted annually depending on the varying external factors present in the region (Burnside et al., 2021; Gill et al., 2014; Kullberg et al., 2015; La Sorte & Fink, 2017). The 2024 monitoring period also had most of its ARU inactive during peak fall migratory months, which might have also affected detection rate.

5.2.2 Species Richness

The results of the 2023/January 2024 species richness suggest that species richness was highest during peak fall migration and there were still a variety of species present during the winter months. This is supported by the Birds Canada and ECCC joint report on the state of Canada's bird (2024), showing an increase of 19% of birds overwintering in Canada attributed to suitable forest habitat.

Species richness was found to be high throughout the 2024 monitoring period, specifically during peak migratory months. Notably, several species were observed during both the spring and fall migratory periods, such as greater yellowlegs, least sandpiper (*Calidris minutilla*), short-billed dowitcher (*Limnodromus griseus*), spotted sandpiper (*Actitic macularius*), and

semipalmated plover. This suggests a potential migratory trend within or near the BWP, with birds flying into the region during spring migration to begin their breeding period and later migrating out of the region during fall migration.

Similar to the findings for the detection rate between the monitoring periods, species richness was higher during the 2023/January 2024 monitoring period than that of the fall 2024 monitoring period. It is noted that 100% of the species observed in the fall 2024 monitoring period were also observed during the 2023/January 2024 monitoring period, suggesting a relatively consistent species inventory within or near the BWP. It is assumed that species richness observed during the 2024 monitoring period would have yielded similar results to that of the 2023/January 2024 monitoring period had the ARUs been consistently active.

5.3 General Avian Migration Trends

During the 2024 monitoring period, the ARS and ARU were deployed in tandem across the four monitoring sites to potentially correlate their assessment in identifying target populations and species composition of avian migrants. However, these correlations do not represent confirmed observations of species and migratory movements due in part to the detection range of the ARU being significantly lower than that of the ARS, with the ARS able to capture targets at distances 2,000 m to 3,000 m away. No correlation statistics were completed for radar and acoustic data. However, some noticeable observations were made and are discussed in this section.

Radar results captured high peak during April and May, with the highest peak occurring in late May. This coincided with the acoustic results seen during the spring 2024 monitoring period, where there were high NFC detections across the ARU sites in May. This suggests that the species composition observed by the ARUs during this period may have contributed to the migratory patterns captured by the ARS. Similarly, the ARU captured relatively high vocalizations from August to October, with the ARS observing high BTs in October and November. While the ARUs and ARS were inactive asynchronously, it is assumed that the species composition present in the ARU during October when both detections were active may have contributed to the high BTs seen by the ARS.

Reasons for an inexact temporal alignment between ARS and ARU observations are likely due to several factors, including detection range and weather conditions. An ARS system has a much greater detection range than an acoustic monitor, which can allow it to observe more migrants as they fly over the Project. Additionally, certain weather conditions are more favorable for acoustic sampling than radar. For example, low level clouds, or light rain conditions can force migratory birds closer to the ground. Migrants closer to the ground are more readily heard in acoustic sampling. Furthermore, migrants navigating through conditions of reduced visibility may create more calls to aid in their migration. These same weather conditions can prove difficult for the ARS which is unreliable in detecting birds against significant cloud cover.

6.0 SUMMARY

6.1 Radar

The four ARS units were able to capture several peak BT detection events during the 2024 monitoring period:

- Peak spring migrations occurred in mid to late April as well as May 24 and 25, 2024. It is assumed that spring migration occurred rapidly in several periods, due to either favourable weather conditions or the need for energy-saving and migration stopovers.
- Peak movement during the summer 2024 monitoring period occurred in early to mid-June.
- Peak fall migrations occurred in early to mid-October as well as mid to late November. It is assumed that fall migration occurred in smaller sporadic movements, with the later movements attributed to late migrants moving out of the province due to weather conditions and internal migration cues potentially related to temperature.
- Most BT detections seen throughout the 2024 monitoring period occurred around periods of a full moon indicating that migratory activity is more prevalent in the area when nighttime visibility is high.

6.2 Acoustics

The 2023/January 2024 detected 41 unique species and the 2024 monitoring period detected 32 unique species. There was only one SAR identified (grey-cheeked thrush) in the 2023/January 2024 monitoring period. Patterns observed during both monitoring periods are as follows:

- Peak detections were observed in April to May during the spring and from August to October during the fall. These detections are likely to be migratory movements, specifically during spring and fall migration.
- Based on manually verified nocturnal flight calls detections made by Nighthawk, peak migration times included the following:
    - Late August: early migrants
    - Late September to early October: last migrants
    - Mid-April: spring migration peak
    - Mid May: late migrants
- There were detections during non-migration months, specifically in June and December. These are attributed to their seasonal bird activity and thus do not contribute to the migratory movements potentially occurring near or within the BWPA.

6.3 Notable Migration Times

Notable migration times were determined from reviewing a combination of radar and acoustic data from the ARS and ARU monitoring periods. These notable time periods aimed to be broad to capture general trends, but peak dates are mentioned to highlight potential timing for monitoring efforts aimed at reducing interactions.

- Spring
  - Mid to late April (April 15 to April 25
  - Late May (May 20 to May 25)
- Fall
  - Late August (August 20 to August 27)
  - Late September (September 20 to September 30)
  - Early October (October 1 to October 10)

7.0 LIMITATIONS

7.1 Radar Data

Sensitive equipment in harsh, remote environments is prone to malfunction and difficult to monitor and maintain in remote areas. Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARS experienced interruptions during monitoring periods. Inclement weather events near the PA, particularly in July and August, also affected the ARS' outputs. Thus, radar data was collected somewhat intermittently throughout the ARS monitoring period.

Data collected by the ARS helps provide useful data for a greater understanding of when large migration events are expected to pass over the area of a proposed wind project, as well as the magnitude of such movements. Data collected from the radar can also be used to determine the heights at which avian species tend to travel at during migration events, and the potential risk of interactions with turbine blades; however, while most targets detected by the radars are assumed to be migratory birds, some targets may also be insects, bats, or ground interference. The radars can also confuse precipitation with biological targets; therefore, days with large amounts of rain or snowfall tend to be omitted from data analysis. While in general avian flight activity is reduced during periods or rainfall, avian species may still fly during these periods but will not be accurately recorded by the radar (Gordo, 2007).

While the Simrad Halo 20 radar is useful for detecting individual biological targets, it cannot infer the size of the target or any information on the potential species identification. Acoustic and field surveys are therefore often necessary to supplement ARS to gain a greater understanding of species detection. The ARS was also placed directly on the ground with no additional distances, which may increase abiotic data capturing due to ground interference. Exclusion zones generated on RadR during radar processing are helpful to reduce as much ground interference and external factors as possible.

For the radars to determine if a detected target is a bird, that target must stay in the radar's detection field for an extended period of approximately 4 seconds. Birds that only fly into the detection field momentarily will likely not be recorded by the radar. The duration that a target needs to be in the detection field to be considered a target can be reduced depending on the scope of the proposed project and the location of the radar; however, reducing the duration increases the likelihood of abiotic targets being detected and recorded.

7.2 Nighthawk

The Nighthawk model was designed for the detection and identification of avian nocturnal flight calls; however, not all birds migrate nocturnally. Finches, blackbirds, corvids, and swallows are examples of birds that primarily migrate during the day and may therefore go undetected by the model (Van Doren et al., 2023). It is assumed that these gaps will be filled using field surveys or other means of assessing the diurnal movement of birds through the PA.

It should be noted that while some species' nocturnal flight calls are distinctive, others can be very difficult to discern. In some instances, nocturnal flight calls cannot be identified with certainty by models or by the human ear. The Nighthawk model attempts to address this limitation by identifying on a broader level (e.g. to the group, family, or order level) when it cannot confidently identify a nocturnal flight call to species level.

Furthermore, Nighthawk often attempts (unsuccessfully) to classify daytime songs and calls as NFCs. This is a common source of error near sunset and sunrise, when many birds are still actively singing. To address this, the dataset was trimmed slightly to remove some of the hours when daytime bird songs and calls are most abundant (i.e., one hour before sunset and one hour after sunrise). This optimizes Nighthawk's accuracy by providing it with audio that primarily contains NFCs. Noise from non-target sources may also impact the functionality of the model. Calls made by spring peeper frogs, for example, sound very similar to the nocturnal flight call of the Swainson's thrush and can mislead the model. Anthropogenic and environmental noise can also affect the model's accuracy.

The developers of Nighthawk preprogrammed the model with a set list of species that can be detected (82 species). Since this list cannot be manually modified, species cannot be added or removed. Common nighthawk (*Chordeiles minor*) is an example of a species that was missing from the preprogrammed Nighthawk list and could not be added manually. Similar to the other limitations listed above, it is assumed that this gap will be addressed using field surveys to capture a full representation of avian species richness within the PA.

8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of Exploits Valley Renewable Energy Corporation (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
- represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

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Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Connor Nishikawa, Environmental Scientist and Polly Nguyen, Environmental Scientist was reviewed by Mark MacDonald, MSc., Project Manager and Senior Terrestrial Lead.

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APPENDIX A
DRAWINGS

EVREC Green Energy Hub

Project Locator

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area

Transportation

- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Waterbodies

Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-06	Project #: 24-10265
Scale: 1:200,000	Drawing #: 1
Drawn By: M. Partridge	
Checked By: N. Thomas	

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EVREC Green Energy Hub

Botwood Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Industrial Facility Infrastructure Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

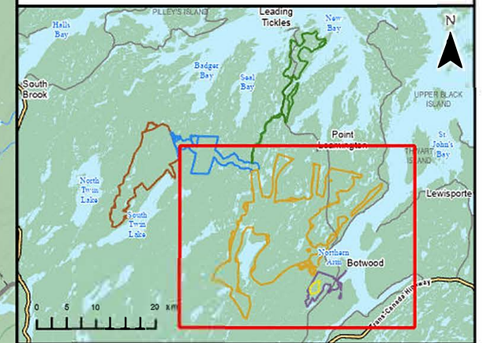
- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

Nanny Bag
Crow Valley
New Bay Radar
Rocks Pond
Point Leamington
Point of Bay
Botwood
Peterview
Alderburn
Lewis Lake
West Arm Brook
New Bay River
New Bay Pond
Northern Arm
Northern Arm Brook
Peters Pond
Peters River
Burnt Arm
Norris Arm
Rattling Brook
Exploits River
Frozen Ocean Lake
Highway 350
Trans-Canada-Highway

0 2 4 6 km



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:117,000	Drawing #: 2A
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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EVREC Green Energy Hub

Twin Lakes Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

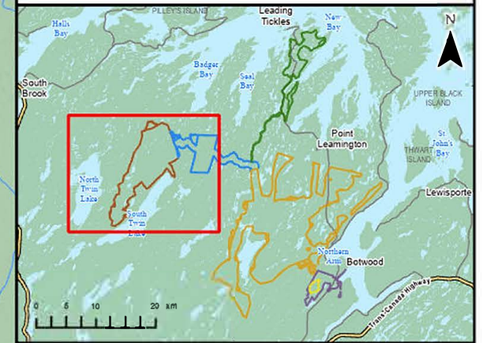
Marks Lake

Tommy's Arm River

North Twin Lake

South Twin Lake

0 1 2 3 km



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:75,000	Drawing #: 2B
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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EVREC Green Energy Hub

Leading Tickles Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

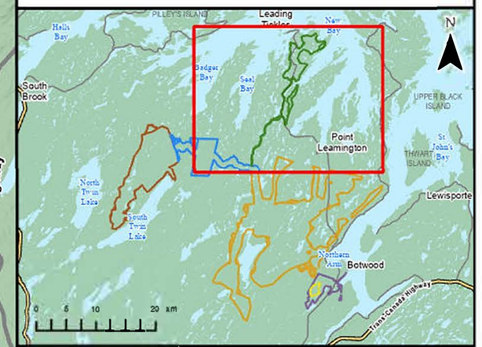
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Project Road
- Turbine
- Avian Radar Locations (2025)

Transportation

- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:94,000	Drawing #: 2C
Drawn By: M. Partridge	
Checked By: P. Nguyen	

strum CONSULTING

0 1.5 3 4.5 km

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APPENDIX B
TABLES

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-01-01	2024	1	1		-2.1		-15.8		-9		27		0						0		1		32		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-02	2024	1	2		-2.7		-17.1		-9.9		27.9		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-03	2024	1	3		-0.5		-2.9		-1.7		19.7		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-04	2024	1	4		-1.3		-3.7		-2.5		20.5		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-05	2024	1	5		-3.2		-7		-5.1		23.1		0						1.1		2					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-06	2024	1	6		-6		-14.1		-10.1		28.1		0						0		2		29		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-07	2024	1	7		-4.6		-15.9		-10.3		28.3		0						0		2		28		53	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-08	2024	1	8		-2.8		-16.7		-9.8		27.8		0						0.1		2		33		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-09	2024	1	9		-3.6		-11.2		-7.4		25.4		0						0		1		26		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-10	2024	1	10		-4.8		-20.5		-12.6		30.6		0						2.3		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-11	2024	1	11		4		-5		-0.5		18.5		0						0.9		4					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-12	2024	1	12		3.5		-3.5		0		18		0						0.1		2					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-13	2024	1	13		-3.3		-4.6		-4		22		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-14	2024	1	14		1.2		-3.9		-1.3		19.3		0						2.7		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-15	2024	1	15		2.6		-8.1		-2.8		20.8		0						0.9		0		27		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-16	2024	1	16		-2		-13.4		-7.7		25.7		0						1.1		1		26		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-17	2024	1	17		6.9		-8.2		-0.7		18.7		0						11.8		8		25		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-18	2024	1	18		-3.3		-7.5		-5.4		23.4		0						0.3		5		26		58	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-19	2024	1	19		-4.1		-7.4		-5.8		23.8		0						0		4		24		66	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-20	2024	1	20		-2.5		-11.7		-7.1		25.1		0						0.3		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-21	2024	1	21		-0.3		-11.7		-6		24		0						0.6		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-22	2024	1	22		-1.7		-10.2		-5.9		23.9		0						0.1		6		25		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-23	2024	1	23		0.5		-18.1		-8.8		26.8		0						0.2		6		26		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-24	2024	1	24		-7		-18.2		-12.6		30.6		0						0		6		29		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-25	2024	1	25		0.5		-22.3		-10.9		28.9		0						0		5		20		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-26	2024	1	26		-4.5		-25.1		-14.8		32.8		0						0		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-27	2024	1	27		-2.8		-6.1		-4.4		22.4		0						0		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-28	2024	1	28		0.4		-6.4		-3		21		0						0		5		3		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-29	2024	1	29		-6.4		-14.7		-10.5		28.5		0						2		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-30	2024	1	30		-11.2		-27		-19.1		37.1		0						0		8					
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-56.07	48.97	BADGER (AUT)	8400301	2024-02-02	2024	2	2		-0.8		-7.5		-4.1		22.1		0						4		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-03	2024	2	3		-3		-5.6		-4.3		22.3		0						2.1		16		1		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-04	2024	2	4		0.3		-5.3		-2.5		20.5		0						2.8		18		5		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-05	2024	2	5		0.5		-1.7		-0.6		18.6		0						13.3		28		4		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-06	2024	2	6		-0.5		-3.8		-2.2		20.2		0						0.7		32		3		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-07	2024	2	7		-3.4		-13.3		-8.4		26.4		0						0.1		30					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-08	2024	2	8		-4.2		-15		-9.6		27.6		0						0.9		29					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-09	2024	2	9		-1.6		-18.1		-9.8		27.8		0						0		29					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-10	2024	2	10		-0.5		-19		-9.8		27.8		0						0.1		28					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-11	2024	2	11		3.3		-2.5		0.4		17.6		0						2		27					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-12	2024	2	12		3.4		-1.6		0.9		17.1		0						0		23					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-13	2024	2	13		-0.5		-6.3		-3.4		21.4		0						0		21					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-14	2024	2	14		-1.5		-5.5		-3.5		21.5		0						8.8		21		1		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-15	2024	2	15		0		-2.3		-1.1		19.1		0						10.3		34		33		49	
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-56.07	48.97	BADGER (AUT)	8400301	2024-02-17	2024	2	17		-1.3		-13.9		-7.6		25.6		0						0		38		24		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-18	2024	2	18		-1.2		-8.7		-5		23		0						1.1		38		21		49	
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-56.07	48.97	BADGER (AUT)	8400301	2024-02-20	2024	2	20		-5.9		-16.1		-11		29		0						0		36		26		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-21	2024	2	21		-5.4		-20.9		-13.2		31.2		0						0		33		27		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-22	2024	2	22		-2.4		-22.1		-12.2		30.2		0						12		33					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-23	2024	2	23		6		-5.4		0.3		17.7		0						3.5		44					
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-56.07	48.97	BADGER (AUT)	8400301	2024-02-29	2024	2	29		10.7		-7.4		1.6		16.4		0						3.8		10		20		59	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-01	2024	3	1		-7.4		-10.9		-9.1		27.1		0						0		4		28		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-02	2024	3	2		-1.3		-9.8		-5.6		23.6		0						0		3		27		48	
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-56.07	48.97	BADGER (AUT)	8400301	2024-03-04	2024	3	4		0.1		-7.2		-3.5		21.5		0						0		1		34		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-05	2024	3	5		7.2		-8.8		-0.8		18.8		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-06	2024	3	6		8.1		-3.6		2.2		15.8		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-07	2024	3	7		0.4		-5.8		-2.7		20.7		0						15.1		1					

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-03-08	2024	3	8		-2		-5.3		-3.6		21.6		0						4.5		16		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-09	2024	3	9		-0.1		-5.7		-2.9		20.9		0						0		14		3		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-10	2024	3	10		3.7		-6.2		-1.3		19.3		0						0		12					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-11	2024	3	11		2.1		-2.9		-0.4		18.4		0						23.7		10		7		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-12	2024	3	12		2.5		0.2		1.4		16.6		0						15.2		17		6		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-13	2024	3	13		1.5		0		0.7		17.3		0						5.9		17		36		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-14	2024	3	14		2.8		-1.3		0.7		17.3		0						0.4		15					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-15	2024	3	15		2.8		-1.7		0.5		17.5		0						0		13					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-16	2024	3	16		4.1		-2.2		0.9		17.1		0						0.5		12					
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-56.07	48.97	BADGER (AUT)	8400301	2024-03-18	2024	3	18		0.3		-4.9		-2.3		20.3		0						7.9		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-19	2024	3	19		5.7		-5.1		0.3		17.7		0						6.4		17			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-03-20	2024	3	20		5.5		-2.7		1.4		16.6		0						2.5		18			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-03-21	2024	3	21		2.4		-4.2		-0.9		18.9		0						2.1		14		21		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-22	2024	3	22		1.6		-4		-1.2		19.2		0						0		15		21		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-23	2024	3	23		2.4		-3.6		-0.6		18.6		0						0.1		15		26		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-24	2024	3	24		7.5		-4.1		1.7		16.3		0						5.9		16		16		68	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-25	2024	3	25		0.9		-11.4		-5.3		23.3		0						0		10		30		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-26	2024	3	26		6.4		-12.5		-3.1		21.1		0						0		9					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-27	2024	3	27		5.9		-9.2		-1.6		19.6		0						0		9					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-28	2024	3	28		8.9		1.4		5.2		12.8		0						9.1		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-29	2024	3	29		5.8		0.7		3.2		14.8		0						21.2		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-30	2024	3	30		8.7		0.6		4.6		13.4		0						0.8		1		21		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-31	2024	3	31		6.9		-1.9		2.5		15.5		0						0.2		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-01	2024	4	1		6.3		-0.7		2.8		15.2		0						1.5		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-02	2024	4	2		4.1		-0.9		1.6		16.4		0						1.3		1		22		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-03	2024	4	3		2.5		-1.1		0.7		17.3		0						2.2		1		34		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-04	2024	4	4		2.7		-1.6		0.5		17.5		0						1.1		1		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-05	2024	4	5		1.5		-2.7		-0.6		18.6		0						0		1		5		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-06	2024	4	6		2.7		-1		0.9		17.1		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-07	2024	4	7		4.6		-2.8		0.9		17.1		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-08	2024	4	8		3.9		-3.2		0.4		17.6		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-09	2024	4	9		2.2		-3.4		-0.6		18.6		0						0.6		1		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-10	2024	4	10		3.9		-4.8		-0.4		18.4		0						0.5		1		33		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-11	2024	4	11		10.6		-8		1.3		16.7		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-12	2024	4	12		10.8		-0.3		5.2		12.8		0						0		1		22		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-13	2024	4	13		13.3		5.9		9.6		8.4		0						0.1		1		16		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-14	2024	4	14		14.7		2.3		8.5		9.5		0						0.3		0		18		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-15	2024	4	15		13.2		3.2		8.2		9.8		0						0.8		0		20		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-16	2024	4	16		14.2		5.3		9.7		8.3		0						9.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-17	2024	4	17		5.7		-0.5		2.6		15.4		0						4.3		0		3		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-18	2024	4	18		0.3		-1.7		-0.7		18.7		0						1.8		0		34		55	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-19	2024	4	19		5.1		-7.5		-1.2		19.2		0						0		1		36		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-20	2024	4	20		10.9		-8.7		1.1		16.9		0						0		0		18		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-21	2024	4	21		10		-5.1		2.5		15.5		0						5.2				26		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-22	2024	4	22		8.6		-5.7		1.4		16.6		0						0.3		0		23		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-23	2024	4	23		9.7		-4.2		2.7		15.3		0						0		0		26		52	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-24	2024	4	24		6		-5.8		0.1		17.9		0						8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-25	2024	4	25		11.8		-0.3		5.8		12.2		0						0.1		0		21		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-26	2024	4	26		4.1		-1.6		1.3		16.7		0						0		0		22		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-27	2024	4	27		8.5		-8.2		0.2		17.8		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-28	2024	4	28		13		-9.5		1.7		16.3		0						4.8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-29	2024	4	29		7.4		1		4.2		13.8		0						15		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-30	2024	4	30		7.9		3.1		5.5		12.5		0						2.3		0		2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-01	2024	5	1		12.7		2.8		7.8		10.2		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-02	2024	5	2		5.7		2.3		4		14		0						7.7				36		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-03	2024	5	3		4.7		0.6		2.6		15.4		0						2.6				1		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-04	2024	5	4		4		-0.6		1.7		16.3		0						0.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-05	2024	5	5		17.1		-2		7.5		10.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-06	2024	5	6		13.3		-2.7		5.3		12.7		0						0.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-07	2024	5	7		15.8		4.6		10.2		7.8		0						4.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-08	2024	5	8		11.1		1.5		6.3		11.7		0						8.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-09	2024	5	9		11		-0.8		5.1		12.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-10	2024	5	10		6.1		0.4		3.3		14.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-11	2024	5	11		12.3		-0.2		6		12		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-12	2024	5	12		7.1		0.6		3.8		14.2		0						11.5				5		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-13	2024	5	13		15.8		-0.1		7.9		10.1		0						0							

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-05-14	2024	5	14		13.8		-1.3		6.3		11.7		0						10.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-15	2024	5	15		6.4		3.1		4.7		13.3		0						10.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-16	2024	5	16		13.9		4.1		9		9		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-17	2024	5	17		18.6		2.8		10.7		7.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-18	2024	5	18		15.2		0.7		8		10		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-19	2024	5	19		15.1		0.5		7.8		10.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-20	2024	5	20		20.9		-1.7		9.6		8.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-21	2024	5	21		21.7		3.2		12.4		5.6		0						5.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-22	2024	5	22		14		2.9		8.5		9.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-23	2024	5	23		12.2		2.9		7.6		10.4		0						9.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-24	2024	5	24		12		4.2		8.1		9.9		0						13.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-25	2024	5	25		8		3.7		5.8		12.2		0						9				35		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-26	2024	5	26		6.6		1.1		3.9		14.1		0						0				2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-27	2024	5	27		17.2		0.3		8.7		9.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-28	2024	5	28		17.3		-1.6		7.9		10.1		0						1.2				22		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-29	2024	5	29		16.4		8.5		12.5		5.5		0						0.4				16		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-30	2024	5	30		23.8		2.7		13.3		4.7		0						0				25		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-31	2024	5	31		12.3		2.7		7.5		10.5		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-01	2024	6	1		6		4.2		5.1		12.9		0						23.1				2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-02	2024	6	2		16.2		4.6		10.4		7.6		0						12							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-03	2024	6	3		20.9		10.9		15.9		2.1		0						0.6				8		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-04	2024	6	4		13.9		6.5		10.2		7.8		0						7.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-05	2024	6	5		15		7		11		7		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-06	2024	6	6		13		7.7		10.4		7.6		0						6.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-07	2024	6	7		15.6		7.7		11.6		6.4		0						8.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-08	2024	6	8		16.9		4		10.5		7.5		0						0.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-09	2024	6	9		18.4		4		11.2		6.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-10	2024	6	10		15.9		7		11.5		6.5		0						8.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-11	2024	6	11		20.4		9.7		15		3		0						2.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-12	2024	6	12		22.1		11.5		16.8		1.2		0						8							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-13	2024	6	13		20.9		12.8		16.8		1.2		0						6.1				25		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-14	2024	6	14		27.6		11.5		19.6		0		1.6						0				26		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-15	2024	6	15		22.4		9.8		16.1		1.9		0						7.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-16	2024	6	16		20.1		6.4		13.2		4.8		0						6.8				32		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-17	2024	6	17		24		3.3		13.7		4.3		0						0				25		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-18	2024	6	18		26.3		12.6		19.4		0		1.4						0				24		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-19	2024	6	19		32.4		10.6		21.5		0		3.5						0				24		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-20	2024	6	20		33		13.4		23.2		0		5.2						0				29		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-21	2024	6	21		23.4		4.1		13.8		4.2		0						0				26		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-22	2024	6	22		23.2		2.3		12.7		5.3		0						0				27		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-23	2024	6	23		27.9		3.6		15.7		2.3		0						1.2				23		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-24	2024	6	24		16.9		11		13.9		4.1		0						28.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-25	2024	6	25		17.7		9.9		13.8		4.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-26	2024	6	26		25.2		8.5		16.9		1.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-27	2024	6	27		23.7		14.1		18.9		0		0.9						1.4				18		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-28	2024	6	28		22.3		7.2		14.8		3.2		0						1.2				29		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-29	2024	6	29		22		7		14.5		3.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-30	2024	6	30		18.8		11.9		15.3		2.7		0						0				18		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-01	2024	7	1		24.7		10.8		17.8		0.2		0						0				32		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-02	2024	7	2		21.7		6.6		14.2		3.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-03	2024	7	3		29.9		5.4		17.6		0.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-04	2024	7	4		28.6		9.2		18.9		0		0.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-05	2024	7	5		29		10		19.5		0		1.5						0				26		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-06	2024	7	6		26.1		13.1		19.6		0		1.6						8.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-07	2024	7	7		24.6		11.1		17.9		0.1		0						9.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-08	2024	7	8		32		9.2		20.6		0		2.6						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-09	2024	7	9		29.4		12.5		21		0		3						0.1				19		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-10	2024	7	10		28.3		15.4		21.9		0		3.9						3.7				27		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-11	2024	7	11		27.1		13		20		0		2						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-12	2024	7	12		24.3		13		18.7		0		0.7						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-13	2024	7	13		30.8		14.4		22.6		0		4.6						0				30		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-14	2024	7	14		27.4		14.1		20.8		0		2.8						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-15	2024	7	15		24.9		14.3		19.6		0		1.6						4.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-16	2024	7	16		29.6		14.3		21.9		0		3.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-17	2024	7	17		26.7		18.1		22.4		0		4.4						5.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-18	2024	7	18		31.4		17.6		24.5		0		6.5						2.1				20		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-19	2024	7	19		28.5		12.8		20.7		0		2.7						0				23		35	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-07-20	2024	7	20		30.1		10.7		20.4		0		2.4						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-21	2024	7	21		27.2		9.5		18.4		0		0.4						0				19		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-22	2024	7	22		23.7		10.4		17.1		0.9		0						0				23		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-23	2024	7	23			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-07-24	2024	7	24			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-07-25	2024	7	25		28.5		4		16.2		1.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-26	2024	7	26		20.2		9.7		15		3		0						6				34		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-27	2024	7	27		23.4		6.4		14.9		3.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-28	2024	7	28		30.2		8.2		19.2		0		1.2						0				27		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-29	2024	7	29		32.1		17		24.5		0		6.5						0				23		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-30	2024	7	30		32.8		18.6		25.7		0		7.7						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-31	2024	7	31		30.4		17.7		24.1		0		6.1						3.3				25		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-01	2024	8	1		30.4		16.4		23.4		0		5.4						0.2				22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-02	2024	8	2		25.7		11.1		18.4		0		0.4						6.4				34		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-03	2024	8	3		31.2		11.4		21.3		0		3.3						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-04	2024	8	4		26.9		19.6		23.2		0		5.2						2.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-05	2024	8	5		28.8		11.6		20.2		0		2.2						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-06	2024	8	6		21.2		10.4		15.8		2.2		0						4.3				24		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-07	2024	8	7		23		7		15		3		0						0				27		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-08	2024	8	8		23.1		5.5		14.3		3.7		0						0				23		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-09	2024	8	9		26.1		4.1		15.1		2.9		0						0				31		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-10	2024	8	10		24.1		12.6		18.3		0		0.3						7.4				22		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-11	2024	8	11		28		15.1		21.6		0		3.6						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-12	2024	8	12		28.5		11.3		19.9		0		1.9						0				23		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-13	2024	8	13		14.9		8.7		11.8		6.2		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-14	2024	8	14		21.6		2.7		12.2		5.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-15	2024	8	15		24.8		2.7		13.7		4.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-16	2024	8	16		26.7		5.2		15.9		2.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-17	2024	8	17		27.2		9		18.1		0		0.1						0				21		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-18	2024	8	18		29.8		14.7		22.2		0		4.2						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-19	2024	8	19		25.8		12.7		19.3		0		1.3						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-20	2024	8	20		24.5		12.4		18.5		0		0.5						11.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-21	2024	8	21		14.8		11.4		13.1		4.9		0						6.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-22	2024	8	22		20.2		11.3		15.7		2.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-23	2024	8	23		19.6		12.6		16.1		1.9		0						6.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-24	2024	8	24		23.2		8.3		15.8		2.2		0						4.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-25	2024	8	25		29.1		9		19.1		0		1.1						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-26	2024	8	26		29.2		6.9		18		0		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-27	2024	8	27		27.9		13.7		20.8		0		2.8						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-28	2024	8	28		22.4		12.3		17.3		0.7		0						4.4				23		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-29	2024	8	29		13.8		6.7		10.3		7.7		0						2.1				30		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-30	2024	8	30		22.2		3.9		13.1		4.9		0						0				26		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-31	2024	8	31		26.6		4.2		15.4		2.6		0						0				26		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-01	2024	9	1		24.5		15.8		20.2		0		2.2						0				19		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-02	2024	9	2		24.9		12.5		18.7		0		0.7						13.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-03	2024	9	3		20.6		7		13.8		4.2		0						0				28		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-04	2024	9	4		20.8		1.1		11		7		0						0				29		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-05	2024	9	5		24.7		-0.5		12.1		5.9		0						0				22		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-06	2024	9	6		28.4		7.2		17.8		0.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-07	2024	9	7		25.5		9.1		17.3		0.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-08	2024	9	8		21.9		8.7		15.3		2.7		0						4.2				15		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-09	2024	9	9		22.9		8		15.4		2.6		0						10.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-10	2024	9	10		20.5		6.9		13.7		4.3		0						0				22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-11	2024	9	11		20.8		3.1		12		6		0						3.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-12	2024	9	12		19.7		-1.4		9.2		8.8		0						0				27		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-13	2024	9	13		23.1		-1.6		10.8		7.2		0						10.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-14	2024	9	14		11.8		6.6		9.2		8.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-15	2024	9	15		16.6		4.3		10.4		7.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-16	2024	9	16		25.3		4.4		14.9		3.1		0						0				25		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-17	2024	9	17		24.4		8.5		16.4		1.6		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-18	2024	9	18		25.3		9.9		17.6		0.4		0						2.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-19	2024	9	19		15.5		6.3		10.9		7.1		0						6.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-20	2024	9	20		13.4		6.1		9.7		8.3		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-21	2024	9	21		13		5.5		9.3		8.7		0						0.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-22	2024	9	22		13.1		0.3		6.7		11.3		0						1.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-23	2024	9	23		15.2		1.5		8.3		9.7		0						0.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-24	2024	9	24		13.8		8.3		11		7		0						1.8							

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-09-25	2024	9	25		12.6		6.8		9.7		8.3		0						1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-26	2024	9	26		14.7		0.5		7.6		10.4		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-27	2024	9	27		13.4		0.7		7		11		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-28	2024	9	28		15.2		4.6		9.9		8.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-29	2024	9	29		16.7		3.7		10.2		7.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-30	2024	9	30		16.7		4.6		10.6		7.4		0						3.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-01	2024	10	1			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-10-02	2024	10	2		8.2		5.2		6.7		11.3		0						0.1				2		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-03	2024	10	3		13.5		-1.5		6		12		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-04	2024	10	4		18.8		-1.3		8.7		9.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-05	2024	10	5		15.7		0.7		8.2		9.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-06	2024	10	6		12.1		5.8		8.9		9.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-07	2024	10	7		10.7		3.4		7.1		10.9		0						0.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-08	2024	10	8		11.8		0.8		6.3		11.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-09	2024	10	9		11		3.6		7.3		10.7		0						36.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-10	2024	10	10		14.2		3.7		9		9		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-11	2024	10	11		13.3		-0.4		6.4		11.6		0						2.1				24		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-12	2024	10	12		11.7		4.8		8.2		9.8		0						0.5				22		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-13	2024	10	13		11.4		2.9		7.1		10.9		0						0				30		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-14	2024	10	14		14.1		-0.4		6.9		11.1		0						1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-15	2024	10	15		16.7		4.9		10.8		7.2		0						16.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-16	2024	10	16		12		0.4		6.2		11.8		0						1.3				22		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-17	2024	10	17		9.3		0.9		5.1		12.9		0						0				26		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-18	2024	10	18		8.2		-2.6		2.8		15.2		0						0				29		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-19	2024	10	19		15		-3.6		5.7		12.3		0						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-20	2024	10	20		18		0.4		9.2		8.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-21	2024	10	21		15.9		6.3		11.1		6.9		0						0				24		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-22	2024	10	22		9.9		-4.8		2.6		15.4		0						0				33		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-23	2024	10	23		15.2		-4.9		5.1		12.9		0						0				20		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-24	2024	10	24		18.9		8.2		13.5		4.5		0						14.4				24		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-25	2024	10	25		8.2		4		6.1		11.9		0						83.5				36		55	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-26	2024	10	26		10.1		2.6		6.4		11.6		0						7.4				33		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-27	2024	10	27		7.6		-2.6		2.5		15.5		0						1.5				24		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-28	2024	10	28		6.4		-6.2		0.1		17.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-29	2024	10	29		6.1		-8.6		-1.2		19.2		0						1.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-30	2024	10	30		5.7		-5.7		0		18		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-31	2024	10	31		9.7		2.1		5.9		12.1		0						5.8				20		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-01	2024	11	1		10.2		2.1		6.1		11.9		0						12.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-02	2024	11	2		5.1		-2.7		1.2		16.8		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-03	2024	11	3		5.2		-3.5		0.8		17.2		0						0.4		0		27		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-04	2024	11	4		1.5		-3.7		-1.1		19.1		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-05	2024	11	5		6.8		-5.7		0.6		17.4		0						4.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-06	2024	11	6		7.9		0.7		4.3		13.7		0						9.8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-07	2024	11	7		6		-1.3		2.4		15.6		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-08	2024	11	8		5.8		-1.1		2.4		15.6		0						3.2		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-09	2024	11	9		1.8		-0.9		0.4		17.6		0						0.9		0		2		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-10	2024	11	10		2.5		-2.7		-0.1		18.1		0						0.2		1		29		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-11	2024	11	11		9.2		-2		3.6		14.4		0						1		0		14		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-12	2024	11	12		12.2		3		7.6		10.4		0						4.5		0		1		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-13	2024	11	13		3		-0.4		1.3		16.7		0						5.2		0		2		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-14	2024	11	14		8.2		0.1		4.2		13.8		0						28.1				35		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-15	2024	11	15		12.3		8.2		10.3		7.7		0						6.4		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-16	2024	11	16		12.5		7.8		10.1		7.9		0						1.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-17	2024	11	17		8.6		6.4		7.5		10.5		0						7.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-18	2024	11	18		7.7		5.9		6.8		11.2		0						10.4		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-19	2024	11	19		7.5		5		6.3		11.7		0						5.1		0		2		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-20	2024	11	20		6.4		4.6		5.5		12.5		0						10.7		0		35		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-21	2024	11	21		7.2		2.2		4.7		13.3		0						9.3		0		1		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-22	2024	11	22		3.5		1.5		2.5		15.5		0						0.6		0		2		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-23	2024	11	23		5.6		2.5		4		14		0						8.7		0		9		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-24	2024	11	24		8		4.7		6.3		11.7		0						12		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-25	2024	11	25		6.2		4.2		5.2		12.8		0						4.8		0		36		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-26	2024	11	26			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-11-27	2024	11	27		2.8		-0.8		1		17		0						2.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-28	2024	11	28		4.5		-0.9		1.8		16.2		0						1.3		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-29	2024	11	29		4.3		-0.7		1.8		16.2		0						8.1		0		9		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-30	2024	11	30		3.4		-6.7		-1.7		19.7		0						0.6		0					

strum CONSULTING

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-12-01	2024	12	1		3.2		-7.1		-1.9		19.9		0						0.5				24		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-02	2024	12	2		4		-10.4		-3.2		21.2		0						0		0		21		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-03	2024	12	3		1		-12.2		-5.6		23.6		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-04	2024	12	4		-1.9		-8.5		-5.2		23.2		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-05	2024	12	5		0.7		-9.1		-4.2		22.2		0						5.4		1		11		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-06	2024	12	6		6.2		-2		2.1		15.9		0						15.1		1		19		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-07	2024	12	7		-0.4		-12.8		-6.6		24.6		0						0		0		26		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-08	2024	12	8		-1.8		-12.8		-7.3		25.3		0						1.9		1		22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-09	2024	12	9		3.1		-7.4		-2.2		20.2		0						7.1		11		25		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-10	2024	12	10		-2		-12.7		-7.4		25.4		0						0		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-11	2024	12	11		1.4		-8.2		-3.4		21.4		0						3.8		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-12	2024	12	12		13.8		1		7.4		10.6		0						8.6		1		18		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-13	2024	12	13		4.4		-4		0.2		17.8		0						0		0		25		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-14	2024	12	14		0.4		-5		-2.3		20.3		0						0		0		26		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-15	2024	12	15		0.1		-4.2		-2.1		20.1		0						0		0		29		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-16	2024	12	16		3.8		-8.7		-2.4		20.4		0						0		1		25		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-17	2024	12	17		7		-11.3		-2.1		20.1		0						2.2		1		18		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-18	2024	12	18		7		2.1		4.5		13.5		0						0		1		22		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-19	2024	12	19		3.1		-0.9		1.1		16.9		0						16.1		0		17		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-20	2024	12	20		-0.9		-11.9		-6.4		24.4		0						0		3					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-21	2024	12	21		2.2		-6.5		-2.2		20.2		0						32.9		9		22		58	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-22	2024	12	22		-0.6		-7.9		-4.2		22.2		0						0.1		11		17		80	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-23	2024	12	23		-4.5		-11.3		-7.9		25.9		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-24	2024	12	24		-6.3		-21.3		-13.8		31.8		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-25	2024	12	25		-4.9		-21.4		-13.1		31.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-26	2024	12	26		0.4		-18.8		-9.2		27.2		0						0.1		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-27	2024	12	27		-2.1		-6.1		-4.1		22.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-28	2024	12	28		-2.2		-7.7		-5		23		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-29	2024	12	29		0		-3.2		-1.6		19.6		0						1.3		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-30	2024	12	30		1.8		-2		-0.1		18.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-31	2024	12	31		1.7		-0.6		0.5		17.5		0						2.8		11					

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
01 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Apr 2024	0	0	0	0	0	0	0	12	0	0	0	12
04 Apr 2024	0	0	0	0	0	0	0	58	46	7	0	111
05 Apr 2024	0	0	0	0	0	0	0	155	0	0	0	155
06 Apr 2024	0	0	0	0	0	0	0	39	0	0	0	39
07 Apr 2024	0	0	0	0	0	0	0	15	0	0	0	15
08 Apr 2024	0	0	0	0	0	0	0	78	0	0	0	78
09 Apr 2024	0	0	0	0	0	0	0	53	33	10	0	96
10 Apr 2024	0	0	0	0	0	0	0	261	240	15	0	516
11 Apr 2024	0	0	0	0	0	0	0	254	0	0	0	254
12 Apr 2024	0	0	0	0	0	0	0	113	0	0	0	113
13 Apr 2024	0	0	0	0	0	0	0	33	0	0	0	33
14 Apr 2024	0	0	0	0	0	0	0	55	0	0	0	55
15 Apr 2024	0	0	0	0	0	0	0	315	272	84	0	671
16 Apr 2024	0	0	0	0	0	0	1	174	130	29	0	334
17 Apr 2024	0	0	0	0	0	0	0	10	0	0	0	10
18 Apr 2024	0	0	0	0	0	0	0	217	988	177	0	1382
19 Apr 2024	0	0	0	0	0	0	0	11	117	42	0	170
20 Apr 2024	0	0	0	0	0	0	0	55	0	0	0	55
21 Apr 2024	0	0	0	0	0	0	1	253	467	78	0	799
22 Apr 2024	0	0	0	0	0	0	3	343	288	121	0	755
23 Apr 2024	0	0	0	0	0	0	0	76	0	0	0	76
24 Apr 2024	0	0	0	0	0	0	0	100	0	0	0	100
25 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 May 2024	0	0	0	0	0	0	0	42	0	0	0	42
10 May 2024	0	0	0	0	0	0	0	3	5	0	0	8
11 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 May 2024	0	0	0	0	0	0	0	34	24	0	0	58
13 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 May 2024	0	0	0	0	0	0	0	200	197	69	0	466
16 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2024	0	0	0	0	0	0	0	3	0	0	0	3
18 May 2024	0	0	0	0	0	0	0	4	0	0	0	4
19 May 2024	0	0	0	0	0	0	0	6	0	0	0	6
20 May 2024	0	0	0	0	0	0	0	3	0	0	0	3
21 May 2024	0	0	0	0	0	0	10	471	534	118	0	1133
22 May 2024	0	0	0	0	0	0	0	10	0	0	0	10
23 May 2024	0	0	0	0	0	0	0	8	0	0	0	8
24 May 2024	0	0	0	0	0	0	5	531	913	227	0	1676
25 May 2024	0	0	0	0	0	0	2	750	1178	314	0	2244
26 May 2024	0	0	0	0	0	0	0	13	0	0	0	13

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
27 May 2024	0	0	0	0	0	0	0	16	0	0	0	16
28 May 2024	0	0	0	0	0	0	0	1	0	0	0	1
29 May 2024	0	0	0	0	0	0	0	36	25	1	0	62
30 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jun 2024	0	0	0	0	0	0	0	19	17	10	0	46
10 Jun 2024	0	0	0	0	0	0	27	483	431	107	0	1048
11 Jun 2024	0	0	0	0	0	0	2	153	169	64	0	388
12 Jun 2024	0	0	0	0	0	0	1	208	698	223	0	1130
13 Jun 2024	0	0	0	0	0	0	21	429	685	203	0	1338
14 Jun 2024	0	0	0	0	0	0	0	1	0	0	0	1
15 Jun 2024	0	0	0	0	0	0	0	19	127	67	0	213
16 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jun 2024	0	0	0	0	0	0	0	82	181	66	0	329
18 Jun 2024	0	0	0	0	0	0	0	5	0	0	0	5
19 Jun 2024	0	0	0	0	0	0	0	58	0	0	0	58
20 Jun 2024	0	0	0	0	0	0	0	4	0	0	0	4
21 Jun 2024	0	0	0	0	0	0	0	13	0	0	0	13
22 Jun 2024	0	0	0	0	0	0	1	98	145	37	0	281
23 Jun 2024	0	0	0	0	0	0	0	5	1	0	0	6
24 Jun 2024	0	0	0	0	0	0	0	65	166	36	0	267
25 Jun 2024	0	0	0	0	0	0	0	1	0	0	0	1
26 Jun 2024	0	0	0	0	0	0	0	11	0	0	0	11
27 Jun 2024	0	0	0	0	0	0	0	39	102	25	0	166
28 Jun 2024	0	0	0	0	0	0	0	66	66	35	0	167
29 Jun 2024	0	0	0	0	0	0	0	6	0	0	0	6
30 Jun 2024	0	0	0	0	0	0	0	31	119	39	0	189
01 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
22 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Aug 2024	0	0	0	0	0	0	0	26	0	0	0	26
17 Aug 2024	0	0	0	0	0	0	0	45	0	0	0	45
18 Aug 2024	0	0	0	0	0	0	0	63	0	0	0	63
19 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
16 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Oct 2024	0	0	0	0	0	0	0	7	0	0	0	7
02 Oct 2024	0	0	0	0	0	0	0	31	0	0	0	31
03 Oct 2024	0	0	0	0	0	0	0	6	0	0	0	6
04 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Nov 2024	0	0	0	0	0	0	3	359	330	5	0	697
06 Nov 2024	0	0	0	0	0	0	0	74	294	126	0	494
07 Nov 2024	0	0	0	0	0	0	5	84	126	21	0	236
08 Nov 2024	0	0	0	0	0	0	0	86	0	0	0	86
09 Nov 2024	0	0	0	0	0	0	0	33	74	23	0	130
10 Nov 2024	0	0	0	0	0	0	0	18	0	0	0	18

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
11 Nov 2024	0	0	0	0	0	0	0	70	70	39	0	179
12 Nov 2024	0	0	0	0	0	0	0	3	0	0	0	3
13 Nov 2024	0	0	0	0	0	0	0	2	0	0	0	2
14 Nov 2024	0	0	0	0	0	0	0	1	0	0	0	1
15 Nov 2024	0	0	0	0	0	0	0	111	21	19	0	151
16 Nov 2024	0	0	0	0	0	0	0	81	1	0	0	82
17 Nov 2024	0	0	0	0	0	0	0	375	1126	289	0	1790
18 Nov 2024	0	0	0	0	0	0	0	141	193	83	0	417
19 Nov 2024	0	0	0	0	0	0	0	266	429	111	0	806
20 Nov 2024	0	0	0	0	0	0	0	85	2	0	0	87
21 Nov 2024	0	0	0	0	0	0	0	80	155	46	0	281
22 Nov 2024	0	0	0	0	0	0	0	49	0	0	0	49
23 Nov 2024	0	0	0	0	0	0	1	199	355	97	0	652
24 Nov 2024	0	0	0	0	0	0	0	36	267	149	0	452
25 Nov 2024	0	0	0	0	0	0	0	39	36	88	0	163
26 Nov 2024	0	0	0	0	0	0	0	37	0	0	0	37
27 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
Bin Total	**0**	**0**	**0**	**0**	**0**	**0**	**83**	**9014**	**11843**	**3300**	**0**	**24240**

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
01 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Apr 2024	0	0	0	0	0	0	0	1	0	0	0	1
04 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Apr 2024	0	0	0	0	0	0	0	1	0	0	0	1
08 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Apr 2024	0	0	0	0	0	0	0	8	81	30	0	119
10 Apr 2024	0	0	0	0	0	0	0	0	2	0	0	2
11 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Apr 2024	0	0	0	0	0	0	0	13	421	63	0	497
16 Apr 2024	0	0	0	0	0	0	0	0	0	1	0	1
17 Apr 2024	0	0	0	0	0	0	0	26	50	11	0	87
18 Apr 2024	0	0	0	0	0	0	0	13	228	100	0	341
19 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Apr 2024	0	0	0	0	0	0	0	0	12	54	0	66
22 Apr 2024	0	0	0	0	0	0	0	123	184	34	0	341
23 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 May 2024	0	0	0	0	0	0	0	47	0	0	0	47
10 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 May 2024	0	0	0	0	0	0	0	0	1	0	0	1
16 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 May 2024	0	0	0	0	0	0	0	0	0	1	0	1
24 May 2024	0	0	0	0	0	0	3	407	815	173	0	1398
25 May 2024	0	0	0	0	0	0	3	363	631	126	0	1123
26 May 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
27 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 May 2024	0	0	0	0	0	0	1	0	0	0	0	1
29 May 2024	0	0	0	0	0	0	0	0	9	5	0	14
30 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jun 2024	0	0	0	0	0	0	0	14	1	0	0	15
10 Jun 2024	0	0	0	0	0	0	0	31	37	14	0	82
11 Jun 2024	0	0	0	0	0	0	0	2	57	26	0	85
12 Jun 2024	0	0	0	0	0	0	0	5	21	11	0	37
13 Jun 2024	0	0	0	0	0	0	4	94	167	72	0	337
14 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jun 2024	0	0	0	0	0	0	0	3	0	0	0	3
16 Jun 2024	0	0	0	0	0	0	0	4	35	27	0	66
17 Jun 2024	0	0	0	0	0	0	0	209	469	145	0	823
18 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jun 2024	0	0	0	0	0	0	0	1	0	0	0	1
20 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Jun 2024	0	0	0	0	1	5	31	143	286	99	0	565
23 Jun 2024	0	0	0	0	0	0	0	1	0	0	0	1
24 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jun 2024	0	0	0	0	0	0	0	10	25	11	0	46
28 Jun 2024	0	0	0	0	0	0	1	29	12	5	0	47
29 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jun 2024	0	0	0	0	0	0	0	4	126	68	0	198
01 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
22 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
16 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Oct 2024	0	0	0	0	0	0	0	0	0	2	0	2
08 Oct 2024	0	0	0	0	0	0	0	2	4	2	2	10
09 Oct 2024	0	0	0	0	0	0	0	1	4	4	3	12
10 Oct 2024	0	0	0	0	0	0	0	0	0	0	1	1
11 Oct 2024	0	0	0	0	0	0	0	3	6	14	24	47
12 Oct 2024	0	0	0	0	0	0	0	2	6	7	2	17
13 Oct 2024	0	0	0	0	0	0	0	4	4	13	8	29
14 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Oct 2024	0	0	0	0	0	0	0	0	10	4	0	14
18 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Oct 2024	0	0	0	0	0	0	0	0	1	1	0	2
23 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
11 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
Bin Total	**0**	**0**	**0**	**0**	**1**	**5**	**43**	**1564**	**3705**	**1123**	**40**	**6481**

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
01 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Apr 2024	0	0	0	0	0	0	0	2	13	3	0	18
05 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Apr 2024	0	0	0	0	0	0	0	23	73	8	0	104
10 Apr 2024	0	0	0	0	0	0	0	48	211	49	0	308
11 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Apr 2024	0	0	0	0	0	0	0	137	321	51	0	509
16 Apr 2024	0	0	0	0	0	0	0	51	141	58	0	250
17 Apr 2024	0	0	0	0	0	0	0	0	3	1	0	4
18 Apr 2024	0	0	0	0	0	0	0	140	479	127	0	746
19 Apr 2024	0	0	0	0	0	0	0	3	11	6	0	20
20 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Apr 2024	0	0	0	0	0	0	0	109	278	32	0	419
22 Apr 2024	0	0	0	0	0	0	1	100	166	75	0	342
23 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Apr 2024	0	0	0	0	0	0	0	233	432	106	0	771
25 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 May 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
28 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
24 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
19 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Oct 2024	0	0	0	0	0	0	0	9	18	9	0	36
08 Oct 2024	0	0	0	0	0	0	0	34	34	1	0	69
09 Oct 2024	0	0	0	0	0	0	1	193	450	84	0	728
10 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Oct 2024	0	0	0	0	0	0	0	6	176	77	0	259
12 Oct 2024	0	0	0	0	0	0	0	12	63	29	0	104
13 Oct 2024	0	0	0	0	0	0	0	4	62	56	0	122
14 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Oct 2024	0	0	0	0	0	0	0	201	978	360	0	1539
16 Oct 2024	0	0	0	0	0	0	1	8	217	135	0	361
17 Oct 2024	0	0	0	0	0	0	0	112	166	60	0	338
18 Oct 2024	0	0	0	0	0	0	0	2	0	0	0	2
19 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Oct 2024	0	0	0	0	0	0	0	33	292	189	0	514
23 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
15 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
Bin Total	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1460**	**4584**	**1516**	**0**	**7563**

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
01 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Apr 2024	0	0	0	0	0	0	0	0	25	8	0	33
10 Apr 2024	0	0	0	0	0	0	0	6	2	6	0	14
11 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Apr 2024	0	0	0	0	0	0	0	10	382	110	0	502
16 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Apr 2024	0	0	0	0	0	0	0	9	93	67	0	169
19 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Apr 2024	0	0	0	0	0	0	0	0	0	1	0	1
22 Apr 2024	0	0	0	0	0	0	1	81	71	3	0	156
23 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Apr 2024	0	0	0	0	0	0	0	19	76	23	0	118
25 Apr 2024	0	0	0	0	0	0	0	152	238	59	0	449
26 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 May 2024	0	0	0	0	0	0	0	244	580	21	0	845
09 May 2024	0	0	0	0	0	0	0	8	1	0	0	9
10 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 May 2024	0	0	0	0	0	0	0	169	457	239	0	865
13 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 May 2024	0	0	0	0	0	0	0	0	5	1	0	6
15 May 2024	0	0	0	0	0	0	0	1	5	3	0	9
16 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 May 2024	0	0	0	0	0	0	0	1	0	0	0	1
19 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 May 2024	0	0	0	0	0	0	0	109	280	105	0	494
25 May 2024	0	0	0	0	0	0	0	312	611	186	0	1109
26 May 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
27 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 May 2024	0	0	0	0	0	0	0	0	4	4	0	8
30 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
Bin Total	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1121**	**2830**	**836**	**0**	**4788**

Table 6: Species Detectable by Nighthawk ***Project # 24-10266***

Common Name	Scientific Name
American Redstart	*Setophaga ruticilla*
American Bittern	*Botaurus lentiginosus*
American Pipit	*Anthus rubescens*
American Robin	*Turdus migratorius*
American Tree Sparrow	*Spizelloides arborea*
Bicknell's Thrush	*Catharus bicknelli*
Black Oystercatcher	*Haematopus bachmani*
Black Skimmer	*Rynchops niger*
Black-and-white Warbler	*Mniotilta varia*
Black-bellied Plover	*Pluvialis squatarola*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Black-crowned Night-Heron	*Nycticorax nycticorax*
Black-throated Blue Warbler	*Setophaga caerulescens*
Bobolink	*Dolichonyx oryzivorus*
Brewer's Sparrow	*Spizella breweri*
Canada Warbler	*Cardellina canadensis*
Cape May Warbler	*Setophaga tigrina*
Cerulean Warbler	*Setophaga cerulea*
Chestnut-sided Warbler	*Setophaga pensylvanica*
Chipping Sparrow	*Spizella passerina*
Clay-colored Sparrow	*Spizella pallida*
Common Tern	*Sterna hirundo*
Common Yellowthroat	*Geothlypis trichas*
Dark-eyed Junco	*Junco hyemalis*
Dickcissel	*Spiza americana*
Eastern Meadowlark	*Sturnella magna*
Forster's Tern	*Sterna forsteri*
Golden-crowned Kinglet	*Regulus satrapa*
Golden-winged Warbler	*Vermivora chrysoptera*
Grasshopper Sparrow	*Ammodramus savannarum*
Gray-cheeked Thrush	*Catharus minimus*
Great Egret	*Ardea alba*
Greater Yellowlegs	*Tringa melanoleuca*
Green Heron	*Butorides virescens*
Harris's Sparrow	*Zonotrichia querula*
Henslow's Sparrow	*Centronyx henslowii*
Hermit Thrush	*Catharus guttatus*
Hermit Warbler	*Setophaga occidentalis*
Hooded Warbler	*Setophaga citrina*
Indigo Bunting	*Passerina cyanea*
Kentucky Warbler	*Geothlypis formosa*
Killdeer	*Charadrius vociferus*
Kirtland's Warbler	*Setophaga kirtlandii*
Lapland Longspur	*Calcarius lapponicus*
Lark Sparrow	*Chondestes grammacus*
Least Bittern	*Ixobrychus exilis*
Least Sandpiper	*Calidris minutilla*
Lesser Yellowlegs	*Tringa flavipes*
Lincoln's Sparrow	*Melospiza lincolnii*
MacGillivray's Warbler	*Geothlypis tolmiei*
Mourning Warbler	*Geothlypis philadelphia*

Common Name	Scientific Name
Nashville Warbler	*Leiothlypis ruficapilla*
Northern Parula	*Setophaga americana*
Northern Waterthrush	*Parkesia noveboracensis*
Orchard Oriole	*Icterus spurius*
Ovenbird	*Seiurus aurocapilla*
Painted Bunting	*Passerina ciris*
Palm Warbler	*Setophaga palmarum*
Red-breasted Nuthatch	*Sitta canadensis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Savannah Sparrow	*Passerculus sandwichensis*
Scarlet Tanager	*Piranga olivacea*
Seaside Sparrow	*Ammospiza maritima*
Semipalmated Plover	*Charadrius semipalmatus*
Short-billed Dowitcher	*Limnodromus griseus*
Solitary Sandpiper	*Tringa solitaria*
Spotted Sandpiper	*Actitis macularius*
Sprague's Pipit	*Anthus spragueii*
Summer Tanager	*Piranga rubra*
Swainson's Thrush	*Catharus ustulatus*
Upland Sandpiper	*Bartramia longicauda*
Veery	*Catharus fuscescens*
Vesper Sparrow	*Pooecetes gramineus*
White-crowned Sparrow	*Zonotrichia leucophrys*
White-throated Sparrow	*Zonotrichia albicollis*
Wilson's Snipe	*Gallinago delicata*
Wilson's Warbler	*Cardellina pusilla*
Wood Thrush	*Hylocichla mustelina*
Worm-eating Warbler	*Helmitheros vermivorum*
Yellow-billed Cuckoo	*Coccyzus americanus*
Yellow-rumped Warbler	*Setophaga coronata*
Yellow-throated Warbler	*Setophaga dominica*

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Apecies	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
249	250.6	0	11025	Passeriformes	0.97110367	Passerellidae	0.9951822	SFHS	0.9888024	whtspa	0.9883384	whtspa	0.988338411	2023-09-22	04:09.0	Y
256	257.8	0	11025	Passeriformes	0.9715143	Passerellidae	0.9952048	SFHS	0.98943186	whtspa	0.9983126	whtspa	0.998312593	2023-09-22	04:16.0	Y
643.6	645.2	0	11025	Passeriformes	0.9705842	Passerellidae	0.9944171	SFHS	0.9861044	whtspa	0.99481446	whtspa	0.994814456	2023-09-22	10:43.6	Y
297.2	299	0	11025	Passeriformes	0.9720195	Passerellidae	0.9951859	DESP	0.9904293	savspa	0.9958014	savspa	0.995801389	2023-09-22	04:59.2	Y
2459.4	2461.2	0	11025	Passeriformes	0.9721462	Passerellidae	0.99552107	DESP	0.9914982	savspa	0.9970938	savspa	0.997093797	2023-09-22	41:01.4	Y
2695	2696.6	0	11025	Passeriformes	0.97038597	Passerellidae	0.99505156	SFHS	0.9880697	whtspa	0.99768853	whtspa	0.997688532	2023-09-22	44:57.0	Y
3005.6	3007	0	11025	Passeriformes	0.97214633	Passerellidae	0.9950794	SFHS	0.98869425	whtspa	0.9902919	whtspa	0.990291893	2023-09-22	50:07.6	Y
578.8	580.6	0	11025	Passeriformes	0.97223717	Parulidae	0.9564811			bawwar	0.9999999	bawwar	0.999999881	2023-09-22	09:40.8	Y
1358.4	1360	0	11025	Passeriformes	0.9720551	Parulidae	0.95465547	BZWA	0.9685998	comyel	0.99991775	comyel	0.999917746	2023-09-22	22:40.4	Y
197.6	199.4	0	11025	Passeriformes	0.9719203	Passerellidae	0.9953863	DESP	0.9916033	savspa	0.9984091	savspa	0.998409092	2023-09-22	03:19.6	Y
3172	3173.8	0	11025	Passeriformes	0.9721614	Passerellidae	0.99553454	DESP	0.9918618	savspa	0.99694026	savspa	0.996940255	2023-09-22	52:54.0	Y
2250.4	2252.2	0	11025	Passeriformes	0.97178644	Turdidae	0.95920444	THSH	0.94653857	swathr	0.88502717	swathr	0.88502717	2023-09-23	37:32.4	Y
454.6	456.4	0	11025	Passeriformes	0.9718677	Passerellidae	0.9954535	SFHS	0.9894583	whtspa	0.99773645	whtspa	0.997736454	2023-09-23	07:36.6	Y
3164.4	3165.8	0	11025	Passeriformes	0.9682947	Parulidae	0.94666076	BZWA	0.9813363	comyel	0.9840645	comyel	0.984064519	2023-09-23	52:46.4	Y
2959	2960.8	0	11025	Passeriformes	0.97177345	Passerellidae	0.99469346	DESP	0.98938435	savspa	0.9973832	savspa	0.997383177	2023-09-23	49:21.0	Y
940.4	942.2	0	11025	Passeriformes	0.9721673	Parulidae	0.95603657			bawwar	0.99999976	bawwar	0.999999762	2023-09-23	15:42.4	Y
3130	3131.8	0	11025	Passeriformes	0.9459022	Parulidae	0.8749123	BZWA	0.97074205	comyel	0.9999906	comyel	0.999990582	2023-09-24	52:14.0	Y
2290.6	2292	0	11025	Passeriformes	0.9722305	Passerellidae	0.99557745	SWLI	0.99710375	linspa	0.9928289	linspa	0.992828906	2023-09-24	38:14.6	Y
1600.4	1602.2	0	11025	Passeriformes	0.9720454	Passerellidae	0.9953955	DESP	0.9888342	savspa	0.9907482	savspa	0.990748227	2023-09-24	26:44.4	Y
2318.8	2320.4	0	11025	Passeriformes	0.96732056	Turdidae	0.9552655	THSH	0.94178635	swathr	0.8802115	swathr	0.880211473	2023-09-24	38:40.8	Y
20.4	22.2	0	11025	Passeriformes	0.97175646	Passerellidae	0.99538004	SFHS	0.98977834	whtspa	0.99842155	whtspa	0.99842155	2023-09-24	00:22.4	Y
347.8	349.2	0	11025	Passeriformes	0.9721296	Parulidae	0.9553501	MWAR	0.9989371	mouwar	0.98286784	mouwar	0.982867837	2023-09-24	05:49.8	Y
365.6	366.8	0	11025	Passeriformes	0.97199315	Parulidae	0.9524276	MWAR	0.9984713	mouwar	0.8644193	mouwar	0.864419281	2023-09-24	06:07.6	Y
1210.8	1212.6	0	11025	Passeriformes	0.9721291	Passerellidae	0.9953312	DESP	0.9916082	savspa	0.99811953	savspa	0.998119533	2023-09-24	20:12.8	Y
862.6	864.2	0	11025	Passeriformes	0.97223365	Parulidae	0.95645124			bawwar	0.99999976	bawwar	0.999999762	2023-09-24	14:24.6	Y
2173.4	2175.2	0	11025	Passeriformes	0.97216344	Parulidae	0.9529206	MWAR	0.99890614	mouwar	0.9953584	mouwar	0.995358407	2023-09-24	36:15.4	Y
2522.8	2524.6	0	11025	Passeriformes	0.9720024	Passerellidae	0.9953092	DESP	0.9913845	savspa	0.9982243	savspa	0.998224318	2023-09-24	42:04.8	Y
1.6	3.4	0	11025	Passeriformes	0.96474385	Passerellidae	0.99377257			daejun	0.99539137	daejun	0.995391369	2023-09-24	00:05.6	Y
14.2	15.6	0	11025	Passeriformes	0.8261783	Passerellidae	0.83963966			daejun	0.87908185	daejun	0.879081845	2023-09-24	00:18.2	Y
1354	1356	0	11025	Passeriformes	0.9722359	Passerellidae	0.99559045			daejun	0.99701154	daejun	0.997011542	2023-09-24	22:38.0	Y
107.4	109.2	0	11025	Passeriformes	0.972146	Passerellidae	0.9955389	SFHS	0.98991334	whtspa	0.99853015	whtspa	0.998530149	2023-09-24	01:51.4	Y
2391.4	2392.8	0	11025	Passeriformes	0.9721266	Parulidae	0.9552928			bawwar	0.9922638	bawwar	0.992263794	2023-09-24	39:53.4	Y
3209.6	3211.4	0	11025	Passeriformes	0.9722168	Parulidae	0.9563771			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	53:31.6	Y
3221	3222.8	0	11025	Passeriformes	0.972234	Parulidae	0.9564827			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	53:43.0	Y
880	881.4	0	11025	Passeriformes	0.96351475	Parulidae	0.8216407	BZWA	0.8510332	comyel	0.9999598	comyel	0.999959826	2023-09-24	14:42.0	Y
1397.4	1399	0	11025	Passeriformes	0.9721152	Parulidae	0.9558839	BZWA	0.9662769	comyel	0.9999553	comyel	0.999955297	2023-09-24	23:19.4	Y
1457	1458.8	0	11025	Passeriformes	0.97167104	Parulidae	0.9551669	BZWA	0.9797672	comyel	0.9999896	comyel	0.999989629	2023-09-24	24:19.0	Y
1504.6	1506.4	0	11025	Passeriformes	0.9719297	Parulidae	0.95545244	BZWA	0.97917527	comyel	0.99999976	comyel	0.999999762	2023-09-24	25:06.6	Y
2770	2771.8	0	11025	Passeriformes	0.9719811	Parulidae	0.955501	BZWA	0.98190284	comyel	0.9999999	comyel	0.999999881	2023-09-24	46:12.0	Y
2806.4	2807.8	0	11025	Passeriformes	0.96862596	Parulidae	0.94551915	BZWA	0.979042	comyel	0.99999857	comyel	0.999998569	2023-09-24	46:48.4	Y
3182.2	3183.4	0	11025	Passeriformes	0.9710906	Parulidae	0.9524518	BZWA	0.9563736	comyel	0.99999833	comyel	0.999998331	2023-09-24	53:04.2	Y
2761	2762.6	0	11025	Passeriformes	0.97177875	Parulidae	0.9508903	DEWA	0.9999871	norpar	0.99991655	norpar	0.999916553	2023-09-24	46:03.0	Y
2083.4	2085	0	11025	Passeriformes	0.9691853	Parulidae	0.95263624	SBUF	0.9145362	palwar	0.99999785	palwar	0.999997854	2023-09-24	34:45.4	Y
2965.2	2966.8	0	11025	Passeriformes	0.9683014	Parulidae	0.94708055	SBUF	0.92216533	palwar	0.99999964	palwar	0.999999642	2023-09-24	49:27.2	Y
3238	3239.6	0	11025	Passeriformes	0.96834636	Parulidae	0.9181254	SBUF	0.900942	palwar	0.9999981	palwar	0.999998093	2023-09-24	54:00.0	Y
3256	3257.4	0	11025	Passeriformes	0.96399474	Parulidae	0.9022101	SBUF	0.8630677	palwar	0.9999988	palwar	0.999998808	2023-09-24	54:18.0	Y
761.2	762.8	0	11025	Passeriformes	0.97216845	Parulidae	0.95551026			bawwar	0.9947403	bawwar	0.994740307	2023-09-24	12:43.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Apecies	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1416.4	1418.2	0	11025	Passeriformes	0.97211	Parulidae	0.95488125			bawwar	0.99999917	bawwar	0.999999166	2023-09-24	23:38.4	Y
1589.4	1591.2	0	11025	Passeriformes	0.972234	Parulidae	0.95644665			bawwar	0.99999976	bawwar	0.999999762	2023-09-24	26:31.4	Y
1372.4	1374.2	0	11025	Passeriformes	0.96310025	Parulidae	0.943101	BZWA	0.9676501	comyel	0.99999547	comyel	0.99999547	2023-09-24	22:54.4	Y
489.4	492	0	11025	Passeriformes	0.97158986	Passerellidae	0.99479276	DESP	0.98922974	savspa	0.99708766	savspa	0.997087657	2023-09-24	08:11.4	Y
185.8	187.6	0	11025	Passeriformes	0.9722189	Passerellidae	0.9955368	SFHS	0.9900685	whtspa	0.9985599	whtspa	0.998559892	2023-09-24	03:07.8	Y
271.2	273	0	11025	Passeriformes	0.9718865	Passerellidae	0.9950612	SFHS	0.9890471	whtspa	0.9982039	whtspa	0.998203874	2023-09-24	04:33.2	Y
278	279.8	0	11025	Passeriformes	0.9721733	Passerellidae	0.9954803	SFHS	0.99003744	whtspa	0.9985298	whtspa	0.998529792	2023-09-24	04:40.0	Y
290.4	292	0	11025	Passeriformes	0.97087854	Passerellidae	0.9951945	SFHS	0.98776555	whtspa	0.99671054	whtspa	0.996710539	2023-09-24	04:52.4	Y
322	323.8	0	11025	Passeriformes	0.9722243	Passerellidae	0.9955627	SFHS	0.9901254	whtspa	0.9985415	whtspa	0.998541474	2023-09-24	05:24.0	Y
351	352.8	0	11025	Passeriformes	0.9719571	Passerellidae	0.9951851	SFHS	0.9893673	whtspa	0.99815035	whtspa	0.998150349	2023-09-24	05:53.0	Y
373.2	375	0	11025	Passeriformes	0.9721934	Passerellidae	0.99553126	SFHS	0.9900002	whtspa	0.9984806	whtspa	0.998480618	2023-09-24	06:15.2	Y
453.2	454.6	0	11025	Passeriformes	0.9720827	Passerellidae	0.9955503	SFHS	0.98998296	whtspa	0.9974132	whtspa	0.997413218	2023-09-24	07:35.2	Y
457.2	459	0	11025	Passeriformes	0.9722044	Passerellidae	0.9955318	SFHS	0.990036	whtspa	0.99851555	whtspa	0.998515546	2023-09-24	07:39.2	Y
462.6	464.4	0	11025	Passeriformes	0.97209984	Passerellidae	0.99544096	SFHS	0.989958	whtspa	0.998038	whtspa	0.998037994	2023-09-24	07:44.6	Y
472.2	473.8	0	11025	Passeriformes	0.97208506	Passerellidae	0.9955101	SFHS	0.9899282	whtspa	0.9981869	whtspa	0.998186886	2023-09-24	07:54.2	Y
480	481.6	0	11025	Passeriformes	0.9722325	Passerellidae	0.9955917	SFHS	0.9731439	whtspa	0.9960102	whtspa	0.996010184	2023-09-24	08:02.0	Y
488.2	491.2	0	11025	Passeriformes	0.9722287	Passerellidae	0.9955813	SFHS	0.99016005	whtspa	0.9985776	whtspa	0.998577595	2023-09-24	08:10.2	Y
500	501.8	0	11025	Passeriformes	0.97221476	Passerellidae	0.9955715	SFHS	0.99014497	whtspa	0.9983033	whtspa	0.998303294	2023-09-24	08:22.0	Y
542.8	544.4	0	11025	Passeriformes	0.9699129	Passerellidae	0.9948896	SFHS	0.98765624	whtspa	0.9969694	whtspa	0.996969402	2023-09-24	09:04.8	Y
558.2	559.8	0	11025	Passeriformes	0.97196454	Passerellidae	0.9952224	SFHS	0.98878956	whtspa	0.97864693	whtspa	0.978646934	2023-09-24	09:20.2	Y
566.8	568.6	0	11025	Passeriformes	0.97166026	Passerellidae	0.9952793	SFHS	0.9897244	whtspa	0.9983784	whtspa	0.998378396	2023-09-24	09:28.8	Y
576.6	578.4	0	11025	Passeriformes	0.9721004	Passerellidae	0.9954346	SFHS	0.9900351	whtspa	0.99853456	whtspa	0.99853456	2023-09-24	09:38.6	Y
629.2	631	0	11025	Passeriformes	0.9716485	Passerellidae	0.99532145	SFHS	0.9894155	whtspa	0.99826694	whtspa	0.998266935	2023-09-24	10:31.2	Y
757.8	759.4	0	11025	Passeriformes	0.97215366	Passerellidae	0.9954531	SFHS	0.98988205	whtspa	0.99823916	whtspa	0.99823916	2023-09-24	12:39.8	Y
463.8	465.6	0	11025	Passeriformes	0.97182155	Parulidae	0.9547841	BZWA	0.98217267	comyel	0.9999999	comyel	0.999999881	2023-09-25	07:47.8	Y
2350.8	2352.6	0	11025	Passeriformes	0.9722286	Parulidae	0.9564465			bawwar	0.9999999	bawwar	0.999999881	2023-09-25	39:12.8	Y
2365.2	2366.6	0	11025	Passeriformes	0.97065556	Parulidae	0.9511177			bawwar	0.9917738	bawwar	0.991773784	2023-09-25	39:27.2	Y
1086.8	1088.6	0	11025	Passeriformes	0.9708204	Parulidae	0.9539434	BZWA	0.98044086	comyel	0.99999917	comyel	0.999999166	2023-09-25	18:08.8	Y
1672.8	1674.6	0	11025	Passeriformes	0.97217363	Parulidae	0.95598555	BZWA	0.9829091	comyel	0.9999999	comyel	0.999999881	2023-09-25	27:54.8	Y
1689.4	1691.2	0	11025	Passeriformes	0.9721059	Parulidae	0.955304	BZWA	0.9826469	comyel	0.9999999	comyel	0.999999881	2023-09-25	28:11.4	Y
2404.2	2405.8	0	11025	Passeriformes	0.9679091	Turdidae	0.94801915	THSH	0.92781407	herthr	0.9999989	herthr	0.999998927	2023-09-25	40:08.2	Y
3138.2	3139.6	0	11025	Passeriformes	0.97176623	Turdidae	0.95798343	THSH	0.9446465	herthr	0.9999989	herthr	0.999998927	2023-09-25	52:22.2	Y
613	614.2	0	11025	Passeriformes	0.97127455	Parulidae	0.9442434			amered	0.90033215	amered	0.900332153	2023-09-25	10:15.0	Y
1378.4	1380	0	11025	Passeriformes	0.97217226	Parulidae	0.956184			amered	0.8973639	amered	0.897363901	2023-09-25	23:00.4	Y
2895.6	2897.4	0	11025	Passeriformes	0.9693832	Parulidae	0.95046574			amered	0.9003421	amered	0.900342107	2023-09-25	48:17.6	Y
1212.6	1214.2	0	11025	Passeriformes	0.9722109	Parulidae	0.95621115			bawwar	0.9999994	bawwar	0.999999404	2023-09-25	20:14.6	Y
1348.8	1350.4	0	11025	Passeriformes	0.97221416	Parulidae	0.95631915			bawwar	0.9999999	bawwar	0.999999881	2023-09-25	22:30.8	Y
1367	1368.6	0	11025	Passeriformes	0.9721485	Parulidae	0.95638883			bawwar	0.99999976	bawwar	0.999999762	2023-09-25	22:49.0	Y
1374	1376.2	0	11025	Passeriformes	0.9710994	Parulidae	0.954444			bawwar	0.99999917	bawwar	0.999999166	2023-09-25	22:56.0	Y
2444.4	2446.2	0	11025	Passeriformes	0.9720824	Parulidae	0.95620614			bawwar	0.9999677	bawwar	0.999967694	2023-09-25	40:46.4	Y
1041.2	1042.4	0	11025	Passeriformes	0.9678772	Turdidae	0.9469142	THSH	0.9293699	herthr	0.99999857	herthr	0.999998569	2023-09-25	17:23.2	Y
3.2	4.6	0	11025	Passeriformes	0.9716968	Parulidae	0.94731534	SBUF	0.9324792	palwar	0.99999976	palwar	0.999999762	2023-09-25	00:05.2	Y
518.6	519.8	0	11025	Passeriformes	0.9713047	Passerellidae	0.9942159	DESP	0.984656	savspa	0.99300957	savspa	0.993009567	2023-09-25	08:40.6	Y
1044.4	1046	0	11025	Passeriformes	0.971974	Turdidae	0.9583839	THSH	0.9450773	herthr	0.9999989	herthr	0.999998927	2023-09-26	17:28.4	Y
2034.2	2035.4	0	11025	Passeriformes	0.9663811	Turdidae	0.9508863	THSH	0.9344099	herthr	0.9999988	herthr	0.999998808	2023-09-26	33:58.2	Y
2949.6	2951	0	11025	Passeriformes	0.9678279	Turdidae	0.9364027	THSH	0.9185558	herthr	0.99999774	herthr	0.999997735	2023-09-26	49:13.6	Y
2535.4	2536.8	0	11025	Passeriformes	0.9722288	Passerellidae	0.99557567	SWLI	0.9970849	linspa	0.8972546	linspa	0.897254586	2023-09-26	42:19.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Apecies	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2569.4	2571	0	11025	Charadriiformes	0.9810111	Scolopacidae	0.9955017			sposan	0.9994106	sposan	0.999410629	2023-09-26	42:51.4	Y
1137.8	1139.6	0	11025	Passeriformes	0.9722178	Parulidae	0.9561282			bawwar	0.9999999	bawwar	0.999999881	2023-09-26	18:59.8	Y
2409.6	2411.4	0	11025	Passeriformes	0.97223645	Parulidae	0.95646256			bawwar	0.9999999	bawwar	0.999999881	2023-09-26	40:11.6	Y
2252	2253.4	0	11025	Passeriformes	0.95053905	Passerellidae	0.99032146			daejun	0.99254227	daejun	0.992542267	2023-09-26	37:34.0	Y
983.6	985.4	0	11025	Passeriformes	0.9665954	Parulidae	0.9010192	SBUF	0.8926823	palwar	0.9999981	palwar	0.999998093	2023-09-26	16:25.6	Y
1861.2	1862.8	0	11025	Passeriformes	0.96959925	Parulidae	0.94219065	SBUF	0.92798096	palwar	0.9999982	palwar	0.999998212	2023-09-26	31:03.2	Y
3246.2	3248	0	11025	Passeriformes	0.972088	Passerellidae	0.9954749	DESP	0.9917602	savspa	0.9984018	savspa	0.998401821	2023-09-26	54:08.2	Y
6.6	8.2	0	11025	Passeriformes	0.9721347	Passerellidae	0.9954417	SFHS	0.9898032	whtspa	0.99745387	whtspa	0.997453868	2023-09-26	00:08.6	Y
759.6	761.2	0	11025	Passeriformes	0.9676077	Parulidae	0.93892056			bawwar	0.99945766	bawwar	0.999457657	2023-09-26	12:41.6	Y
2653.4	2655	0	11025	Passeriformes	0.9715243	Turdidae	0.95912445	THSH	0.94657916	swathr	0.88439596	swathr	0.884395957	2023-09-26	44:15.4	Y
1466.4	1468.2	0	11025	Passeriformes	0.9722187	Passerellidae	0.99556315			daejun	0.9969716	daejun	0.996971607	2023-09-27	24:30.4	Y
1476.2	1477.8	0	11025	Passeriformes	0.9721143	Passerellidae	0.99555427			daejun	0.9969958	daejun	0.996995807	2023-09-27	24:40.2	Y
2990.6	2993	0	11025	Passeriformes	0.97123647	Passerellidae	0.995182			daejun	0.99687046	daejun	0.996870458	2023-09-27	49:54.6	Y
632.2	634	0	11025	Passeriformes	0.9708972	Turdidae	0.95412815	THSH	0.93811536	herthr	0.9999987	herthr	0.999998689	2023-09-27	10:36.2	Y
640.8	642.4	0	11025	Passeriformes	0.962613	Turdidae	0.9450348	THSH	0.92473704	herthr	0.9999987	herthr	0.999998689	2023-09-27	10:44.8	Y
644.4	645.8	0	11025	Passeriformes	0.96643716	Turdidae	0.9472755	THSH	0.927132	herthr	0.9999974	herthr	0.999997377	2023-09-27	10:48.4	Y
648.4	650.2	0	11025	Passeriformes	0.97193044	Turdidae	0.95820004	THSH	0.9449395	herthr	0.9999989	herthr	0.999998927	2023-09-27	10:52.4	Y
1361.8	1363.4	0	11025	Passeriformes	0.96547294	Parulidae	0.94215107			bawwar	0.98589027	bawwar	0.985890269	2023-09-28	22:45.8	Y
1069	1070.8	0	11025	Passeriformes	0.97214925	Passerellidae	0.9955225	SFHS	0.9901039	whtspa	0.99845755	whtspa	0.998457551	2023-09-28	17:53.0	Y
2190.6	2192.2	0	11025	Passeriformes	0.95401216	Parulidae	0.93766207			wlswar	0.96272576	wlswar	0.962725759	2023-09-28	36:32.6	Y
3571.8	3573.2	0	11025	Passeriformes	0.97102326	Turdidae	0.92548287			amerob	0.9975132	amerob	0.997513175	2023-09-28	59:35.8	Y
1683.4	1685.2	0	11025	Passeriformes	0.97210103	Passerellidae	0.9955445			daejun	0.9969779	daejun	0.996977925	2023-09-28	28:07.4	Y
1467.8	1469.4	0	11025	Charadriiformes	0.97971785	Scolopacidae	0.9952009			greyel	0.9938823	greyel	0.993882298	2023-09-28	24:31.8	Y
2056.6	2058	0	11025	Passeriformes	0.9718403	Turdidae	0.9589472	THSH	0.9460912	herthr	0.9999989	herthr	0.999998927	2023-09-28	34:20.6	Y
2286.6	2288	0	11025	Passeriformes	0.9597112	Turdidae	0.94188464	THSH	0.922636	herthr	0.9999937	herthr	0.999993682	2023-09-28	38:10.6	Y
2291.6	2293	0	11025	Passeriformes	0.9720634	Turdidae	0.9378435	THSH	0.919041	herthr	0.99999714	herthr	0.999997139	2023-09-28	38:15.6	Y
2925.2	2926.6	0	11025	Passeriformes	0.9721247	Turdidae	0.9590299	THSH	0.9461124	herthr	0.9999989	herthr	0.999998927	2023-09-28	48:49.2	Y
2632.4	2634.2	0	11025	Passeriformes	0.9714883	Motacillidae	0.9368045			amepip	0.9649515	amepip	0.964951515	2023-09-28	43:54.4	Y
2882.6	2884.4	0	11025	Passeriformes	0.97195655	Passerellidae	0.99533796	DESP	0.99160016	savspa	0.99826545	savspa	0.998265445	2023-09-28	48:04.6	Y
628.8	630.6	0	11025	Passeriformes	0.97219986	Passerellidae	0.9955473	SFHS	0.9900799	whtspa	0.9984811	whtspa	0.998481095	2023-09-28	10:30.8	Y
42.8	44.4	0	11025	Passeriformes	0.9714119	Passerellidae	0.99536186	SFHS	0.9892625	whtspa	0.98962307	whtspa	0.98962307	2023-09-28	00:44.8	Y
2396.6	2398.4	0	11025	Passeriformes	0.97218263	Passerellidae	0.9954957	SFHS	0.9900441	whtspa	0.9977781	whtspa	0.997778118	2023-09-29	39:58.6	Y
3205.4	3207.2	0	11025	Passeriformes	0.9722073	Passerellidae	0.9955811			daejun	0.99700016	daejun	0.997000158	2023-09-29	53:29.4	Y
3208	3209.2	0	11025	Passeriformes	0.960929	Passerellidae	0.9903052			daejun	0.99173087	daejun	0.991730869	2023-09-29	53:32.0	Y
3223.4	3225.2	0	11025	Passeriformes	0.9718926	Passerellidae	0.9954911			daejun	0.99695635	daejun	0.996956348	2023-09-29	53:47.4	Y
3243.8	3246.2	0	11025	Passeriformes	0.9721025	Passerellidae	0.99554646			daejun	0.9958033	daejun	0.995803297	2023-09-29	54:07.8	Y
195.8	197.6	0	11025	Passeriformes	0.96990305	Parulidae	0.94730455	SBUF	0.93445975	palwar	0.9999819	palwar	0.99998188	2023-09-29	03:17.8	Y
958.4	960.2	0	11025	Passeriformes	0.9720872	Passerellidae	0.9954798	SFHS	0.98978615	whtspa	0.99849594	whtspa	0.998495936	2023-09-29	16:00.4	Y
2585	2586.6	0	11025	Passeriformes	0.9623953	Turdidae	0.9363114	THSH	0.9095358	herthr	0.99999356	herthr	0.999993563	2023-09-29	43:07.0	Y
90.2	92	0	11025	Passeriformes	0.9710278	Passerellidae	0.99512684	SFHS	0.9890532	whtspa	0.9981464	whtspa	0.998146415	2023-09-29	01:32.2	Y
179.2	181	0	11025	Passeriformes	0.96820015	Turdidae	0.95007044	THSH	0.933211	herthr	0.99999857	herthr	0.999998569	2023-09-29	03:01.2	Y
187.2	188.4	0	11025	Passeriformes	0.95471185	Turdidae	0.92159736	THSH	0.88835394	herthr	0.99999595	herthr	0.999995947	2023-09-29	03:09.2	Y
195	196.4	0	11025	Passeriformes	0.97175884	Turdidae	0.9574667	THSH	0.94392675	herthr	0.9999989	herthr	0.999998927	2023-09-29	03:17.0	Y
207.2	209	0	11025	Passeriformes	0.96893376	Turdidae	0.9536943	THSH	0.9376546	herthr	0.9999988	herthr	0.999998808	2023-09-29	03:29.2	Y
1116.2	1118	0	11025	Passeriformes	0.971649	Passerellidae	0.9954692			daejun	0.99690884	daejun	0.996908844	2023-09-30	18:40.2	Y
1129.8	1131.4	0	11025	Passeriformes	0.9676853	Passerellidae	0.99469674			daejun	0.99637645	daejun	0.996376455	2023-09-30	18:53.8	Y
1349	1350.6	0	11025	Passeriformes	0.97198176	Passerellidae	0.9954341			daejun	0.99688333	daejun	0.996883333	2023-09-30	22:33.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Apecies	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2635.4	2637.2	0	11025	Passeriformes	0.97056454	Parulidae	0.95268404	BZWA	0.98142195	comyel	0.99999976	comyel	0.999999762	2023-09-30	43:57.4	Y
371	372.8	0	11025	Passeriformes	0.9668251	Passerellidae	0.99404293			daejun	0.9957283	daejun	0.995728314	2023-09-30	06:13.0	Y
2321.2	2322.8	0	11025	Passeriformes	0.9718698	Passerellidae	0.99552816			daejun	0.9969879	daejun	0.996987879	2023-09-30	38:43.2	Y
3132.6	3134.4	0	11025	Passeriformes	0.97144115	Passerellidae	0.9936418	DESP	0.97746736	savspa	0.99148047	savspa	0.99148047	2023-09-30	52:14.6	Y
3042.2	3044	0	11025	Passeriformes	0.9680328	Passerellidae	0.99414873			daejun	0.9931672	daejun	0.993167222	2023-09-30	50:44.2	Y
920.8	922.6	0	11025	Passeriformes	0.9721654	Parulidae	0.9558262	SBUF	0.9382118	palwar	0.9999995	palwar	0.999999523	2023-09-30	15:22.8	Y
1410.8	1412.2	0	11025	Passeriformes	0.97191894	Passerellidae	0.9954248	DESP	0.9917434	savspa	0.99768364	savspa	0.997683644	2023-09-30	23:32.8	Y
1421.6	1423.4	0	11025	Passeriformes	0.9720283	Passerellidae	0.9953679	DESP	0.9916164	savspa	0.99833363	savspa	0.998333633	2023-09-30	23:43.6	Y
1441.8	1443.6	0	11025	Passeriformes	0.9722124	Parulidae	0.95615774			bawwar	0.9999999	bawwar	0.999999881	2023-10-01	24:03.8	Y
1589.4	1590.8	0	11025	Passeriformes	0.96357083	Passerellidae	0.99336994			daejun	0.99587303	daejun	0.995873034	2023-10-01	26:33.4	Y
1597.8	1599.4	0	11025	Passeriformes	0.9695013	Passerellidae	0.99497885			daejun	0.99643636	daejun	0.996436357	2023-10-01	26:41.8	Y
1587.2	1589	0	11025	Passeriformes	0.9722263	Passerellidae	0.99557257	DESP	0.99197876	savspa	0.99852175	savspa	0.998521745	2023-10-01	26:31.2	Y
147.8	149.6	0	11025	Passeriformes	0.9655827	Parulidae	0.9396883	BZWA	0.97642505	comyel	0.99999917	comyel	0.999999166	2023-10-02	02:29.8	Y
2477.6	2479.4	0	11025	Passeriformes	0.97218937	Passerellidae	0.99557483			daejun	0.9970009	daejun	0.997000873	2023-10-02	41:19.6	Y
2480.2	2482	0	11025	Passeriformes	0.9709427	Passerellidae	0.9953128			daejun	0.99683917	daejun	0.996839166	2023-10-02	41:22.2	Y
2076.4	2078.4	0	11025	Charadriiformes	0.98068434	Scolopacidae	0.99530375			sposan	0.9994344	sposan	0.999434412	2023-10-02	34:36.4	Y
2127.2	2129.2	0	11025	Charadriiformes	0.98025745	Scolopacidae	0.9951894			sposan	0.99756336	sposan	0.997563362	2023-10-02	35:27.2	Y
2663.4	2664.8	0	11025	Charadriiformes	0.9604692	Scolopacidae	0.99005437			sposan	0.99719197	sposan	0.997191966	2023-10-02	44:23.4	Y
1670.6	1672.4	0	11025	Charadriiformes	0.981124	Scolopacidae	0.995526			sposan	0.99936587	sposan	0.999365866	2023-10-02	27:52.6	Y
1685.2	1687.4	0	11025	Charadriiformes	0.9813239	Scolopacidae	0.99551916			sposan	0.99953043	sposan	0.999530435	2023-10-02	28:07.2	Y
2910.4	2911.6	0	11025	Passeriformes	0.97058266	Parulidae	0.94360393	SBUF	0.9234955	palwar	0.99999964	palwar	0.999999642	2023-10-03	48:34.4	Y
1034	1035.6	0	11025	Charadriiformes	0.9801468	Scolopacidae	0.9949555			greyel	0.99854004	greyel	0.998540044	2023-10-04	17:16.0	Y
296	297.4	0	11025	Charadriiformes	0.97978	Scolopacidae	0.9948855			sposan	0.9851778	sposan	0.985177815	2023-10-04	04:58.0	Y
3353.4	3354.8	0	11025	Passeriformes	0.9720863	Turdidae	0.95936215			amerob	0.9999995	amerob	0.999999523	2023-10-05	55:57.4	Y
3146	3147.8	0	11025	Passeriformes	0.9581349	Passerellidae	0.98989433	DESP	0.9689049	savspa	0.97553796	savspa	0.975537956	2023-10-05	52:30.0	Y
3160.6	3162.4	0	11025	Passeriformes	0.9720238	Passerellidae	0.9953689	DESP	0.9914478	savspa	0.9982917	savspa	0.998291671	2023-10-05	52:44.6	Y
954.4	956	0	11025	Passeriformes	0.97022206	Passerellidae	0.9945476			daejun	0.99638957	daejun	0.996389568	2023-10-06	15:56.4	Y
1761.8	1763.6	0	11025	Passeriformes	0.97180283	Passerellidae	0.993806	DESP	0.98665106	savspa	0.9962774	savspa	0.996277392	2023-10-06	29:23.8	Y
1794	1796.6	0	11025	Passeriformes	0.9718052	Passerellidae	0.9947907	DESP	0.9900698	savspa	0.9970715	savspa	0.997071505	2023-10-06	29:56.0	Y
23.2	24.6	0	11025	Passeriformes	0.97223467	Passerellidae	0.99557954	SWLI	0.9970988	linspa	0.90892	linspa	0.90891999	2023-10-07	00:25.2	Y
457.2	459	0	11025	Passeriformes	0.9721305	Passerellidae	0.9954631	DESP	0.99183613	savspa	0.99841547	savspa	0.99841547	2023-10-07	07:39.2	Y
487.8	489.6	0	11025	Passeriformes	0.9711502	Passerellidae	0.99530655	DESP	0.99145144	savspa	0.9950054	savspa	0.995005429	2023-10-07	08:09.8	Y
500	501.8	0	11025	Passeriformes	0.97201407	Passerellidae	0.99548066	DESP	0.99146944	savspa	0.99780995	savspa	0.997809947	2023-10-07	08:22.0	Y
813.4	815.2	0	11025	Passeriformes	0.9722366	Passerellidae	0.9955917			daejun	0.99701214	daejun	0.997012138	2023-10-07	13:35.4	Y
3328.4	3330	0	11025	Passeriformes	0.97218657	Turdidae	0.95976543			amerob	0.9999999	amerob	0.999999881	2023-10-07	55:32.4	Y
3449.4	3451	0	11025	Passeriformes	0.96757495	Passerellidae	0.9948413			daejun	0.9964754	daejun	0.996475399	2023-10-07	57:33.4	Y
3451.2	3456.2	0	11025	Passeriformes	0.97212934	Passerellidae	0.99556607			daejun	0.9970017	daejun	0.997001708	2023-10-07	57:35.2	Y
2498.4	2500.2	0	11025	Passeriformes	0.97200304	Passerellidae	0.9953689	DESP	0.9827738	savspa	0.99004024	savspa	0.990040243	2023-10-07	41:40.4	Y
3328.4	3330	0	11025	Passeriformes	0.97217125	Turdidae	0.95924586			amerob	0.99999964	amerob	0.999999642	2023-10-12	55:32.4	Y
3151.6	3153	0	11025	Passeriformes	0.9697333	Passerellidae	0.99240327	CUPS	0.95758814	amtspa	0.9972703	amtspa	0.997270286	2023-10-12	52:31.6	Y
3050.4	3051.6	0	11025	Charadriiformes	0.98133093	Scolopacidae	0.99563617			greyel	0.9429332	greyel	0.942933202	2023-10-15	50:52.4	Y
3053.4	3055.2	0	11025	Charadriiformes	0.98117644	Scolopacidae	0.9955751			greyel	0.9991266	greyel	0.999126613	2023-10-15	50:55.4	Y
3058.4	3060	0	11025	Charadriiformes	0.97950613	Scolopacidae	0.9947389			greyel	0.9981523	greyel	0.998152316	2023-10-15	51:00.4	Y
3072.2	3073.4	0	11025	Charadriiformes	0.9665417	Scolopacidae	0.9918243			greyel	0.9950152	greyel	0.995015204	2023-10-15	51:14.2	Y
911.6	913.4	0	11025	Passeriformes	0.971609	Passerellidae	0.9954886	CUPS	0.98889357	amtspa	0.9989994	amtspa	0.998999417	2023-10-18	15:15.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
606.6	608.2	0	11025	Passeriformes	0.9306867	Passerellidae	0.98352057	SFHS	0.9524877	whtspa	0.9899358	whtspa	0.989935815	2023-09-19	10:06.6	Y
612	613.4	0	11025	Passeriformes	0.9645573	Passerellidae	0.990986	SFHS	0.9854645	whtspa	0.997741	whtspa	0.997740984	2023-09-19	10:12.0	Y
639.8	641.4	0	11025	Passeriformes	0.9645148	Passerellidae	0.9911652	SFHS	0.9758256	whtspa	0.9899559	whtspa	0.989955902	2023-09-19	10:39.8	Y
646.6	648.2	0	11025	Passeriformes	0.97172326	Passerellidae	0.99527127	SFHS	0.9886125	whtspa	0.99800414	whtspa	0.998004138	2023-09-19	10:46.6	Y
3092	3093.8	0	11025	Passeriformes	0.97220254	Parulidae	0.9564448			bawwar	0.99999964	bawwar	0.999999642	2023-09-20	51:34.0	Y
2599.2	2601	0	11025	Passeriformes	0.9693887	Parulidae	0.94640493	ZEEP	0.9384208	camwar	0.9989532	camwar	0.998953223	2023-09-20	43:21.2	Y
2268.8	2270.4	0	11025	Charadriiformes	0.98127407	Scolopacidae	0.9956202			greyel	0.99955064	greyel	0.999550641	2023-09-20	37:50.8	Y
2276.4	2278.4	0	11025	Charadriiformes	0.98134077	Scolopacidae	0.9956333			greyel	0.9997818	greyel	0.999781787	2023-09-20	37:58.4	Y
2119.4	2121.2	0	11025	Passeriformes	0.9721123	Passerellidae	0.9955564	SFHS	0.9900821	whtspa	0.99844813	whtspa	0.998448133	2023-09-20	35:21.4	Y
3574.8	3576.6	0	11025	Passeriformes	0.9720856	Passerellidae	0.9955011	SFHS	0.9900141	whtspa	0.99843687	whtspa	0.998436868	2023-09-20	59:36.8	Y
525.4	527.2	0	11025	Passeriformes	0.9722261	Parulidae	0.9564067			bawwar	0.9999999	bawwar	0.999999881	2023-09-20	08:47.4	Y
1443	1444.8	0	11025	Passeriformes	0.97223693	Parulidae	0.9564782			bawwar	0.9999999	bawwar	0.999999881	2023-09-20	24:05.0	Y
1455	1456.8	0	11025	Passeriformes	0.9716035	Parulidae	0.9496632			bawwar	0.99999774	bawwar	0.999997735	2023-09-20	24:17.0	Y
3024.4	3026	0	11025	Passeriformes	0.97192085	Parulidae	0.94509727			bawwar	0.9999976	bawwar	0.999997616	2023-09-20	50:26.4	Y
3323.8	3325.6	0	11025	Passeriformes	0.9722344	Parulidae	0.95642245			bawwar	0.9999999	bawwar	0.999999881	2023-09-20	55:25.8	Y
1193.6	1195.4	0	11025	Passeriformes	0.97191757	Parulidae	0.95342493	SBUF	0.9299176	palwar	0.99999976	palwar	0.999999762	2023-09-20	19:55.6	Y
1206.2	1207.8	0	11025	Passeriformes	0.97219086	Parulidae	0.95584995	SBUF	0.9395634	palwar	0.9999999	palwar	0.999999881	2023-09-20	20:08.2	Y
1570.2	1572	0	11025	Passeriformes	0.97218883	Passerellidae	0.9955519	SFHS	0.9901598	whtspa	0.9985328	whtspa	0.998532772	2023-09-20	26:12.2	Y
3254.6	3256.2	0	11025	Passeriformes	0.97218215	Passerellidae	0.99552083	SFHS	0.9900303	whtspa	0.9983552	whtspa	0.99835521	2023-09-20	54:16.6	Y
199	200.6	0	11025	Passeriformes	0.9654156	Passerellidae	0.985306	CUPS	0.9657968	amtspa	0.99850756	amtspa	0.998507559	2023-09-20	03:21.0	Y
729.8	731.8	0	11025	Charadriiformes	0.98077214	Scolopacidae	0.9952317			sposan	0.99919325	sposan	0.999193251	2023-09-21	12:13.8	Y
3080.4	3082.2	0	11025	Passeriformes	0.9721271	Passerellidae	0.9948302	SFHS	0.98932517	whtspa	0.9983242	whtspa	0.998324215	2023-09-22	51:22.4	Y
1798.2	1799.8	0	11025	Passeriformes	0.972131	Parulidae	0.9563537			amered	0.90286565	amered	0.902865648	2023-09-22	30:00.2	Y
2383.8	2385.6	0	11025	Passeriformes	0.9722282	Passerellidae	0.99557954	DESP	0.9919916	savspa	0.99853146	savspa	0.998531461	2023-09-22	39:45.8	Y
1084.8	1086.4	0	11025	Passeriformes	0.9684816	Turdidae	0.95480466	THSH	0.94160414	swathr	0.8784433	swathr	0.878443301	2023-09-22	18:06.8	Y
2940.8	2942.4	0	11025	Passeriformes	0.97164816	Passerellidae	0.9952939	SFHS	0.9888864	whtspa	0.99709916	whtspa	0.997099161	2023-09-22	49:02.8	Y
3008.6	3010.4	0	11025	Passeriformes	0.97222453	Passerellidae	0.9955468	SFHS	0.9900737	whtspa	0.99843687	whtspa	0.998436868	2023-09-22	50:10.6	Y
920.6	922.4	0	11025	Passeriformes	0.9722002	Parulidae	0.9561793	BZWA	0.983229	comyel	0.9999999	comyel	0.999999881	2023-09-23	15:22.6	Y
828	829.6	0	11025	Passeriformes	0.971816	Passerellidae	0.9954673	SFHS	0.98920935	whtspa	0.9974367	whtspa	0.997436702	2023-09-23	13:50.0	Y
1566	1567.8	0	11025	Passeriformes	0.96892405	Passerellidae	0.9947672	DESP	0.99051076	savspa	0.99789774	savspa	0.997897744	2023-09-23	26:08.0	Y
2079.4	2081	0	11025	Passeriformes	0.97124285	Turdidae	0.95790315	THSH	0.9450956	swathr	0.88141084	swathr	0.881410837	2023-09-23	34:41.4	Y
1563.6	1565.4	0	11025	Passeriformes	0.97171944	Passerellidae	0.9953435	DESP	0.99146616	savspa	0.99829704	savspa	0.998297036	2023-09-24	26:07.6	Y
1573.6	1575.6	0	11025	Passeriformes	0.9721184	Passerellidae	0.99555653	DESP	0.99195814	savspa	0.9985043	savspa	0.998504281	2023-09-24	26:17.6	Y
1588.4	1590.4	0	11025	Passeriformes	0.9721863	Passerellidae	0.99556714	DESP	0.9919556	savspa	0.9985128	savspa	0.998512805	2023-09-24	26:32.4	Y
1849.2	1851	0	11025	Passeriformes	0.9645216	Passerellidae	0.99377644	SFHS	0.9854334	whtspa	0.99121094	whtspa	0.991210938	2023-09-24	30:53.2	Y
1230.8	1232.6	0	11025	Passeriformes	0.9720177	Passerellidae	0.99531907	SFHS	0.9896912	whtspa	0.9983144	whtspa	0.998314381	2023-09-24	20:34.8	Y
1944	1945.8	0	11025	Passeriformes	0.96686393	Parulidae	0.94066775	SBUF	0.9280141	palwar	0.99999976	palwar	0.999999762	2023-09-24	32:26.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
543	544.8	0	11025	Passeriformes	0.9719757	Passerellidae	0.9954856			daejun	0.9969331	daejun	0.996933103	2023-09-24	09:07.0	Y
1819	1820.8	0	11025	Passeriformes	0.96859914	Passerellidae	0.9942416			daejun	0.9963637	daejun	0.996363699	2023-09-24	30:23.0	Y
340.8	342.4	0	11025	Passeriformes	0.9539244	Turdidae	0.92248356	THSH	0.88808703	herthr	0.9999958	herthr	0.999995828	2023-09-24	05:44.8	Y
389.8	391.4	0	11025	Passeriformes	0.97010744	Turdidae	0.95247185	THSH	0.93394965	herthr	0.9999988	herthr	0.999998808	2023-09-24	06:33.8	Y
933.6	935.4	0	11025	Passeriformes	0.9722366	Passerellidae	0.9955852	SWLI	0.9971027	linspa	0.98563576	linspa	0.985635757	2023-09-24	15:37.6	Y
555.8	557.6	0	11025	Passeriformes	0.9721705	Passerellidae	0.99554753	DESP	0.9918594	savspa	0.99832135	savspa	0.998321354	2023-09-24	09:19.8	Y
567	568.8	0	11025	Passeriformes	0.97217065	Passerellidae	0.9954768	DESP	0.9918269	savspa	0.99839777	savspa	0.998397768	2023-09-24	09:31.0	Y
1121.4	1123	0	11025	Passeriformes	0.9712484	Passerellidae	0.9953034	DESP	0.99127346	savspa	0.9974239	savspa	0.997423887	2023-09-24	18:45.4	Y
2641.6	2643.2	0	11025	Passeriformes	0.9710377	Passerellidae	0.9950094	DESP	0.99016106	savspa	0.9971144	savspa	0.99711442	2023-09-24	44:03.6	Y
2645.2	2647	0	11025	Passeriformes	0.972147	Passerellidae	0.9955456	DESP	0.9918944	savspa	0.99845505	savspa	0.998455048	2023-09-24	44:07.2	Y
3026.6	3028.4	0	11025	Passeriformes	0.9722128	Passerellidae	0.9955701	DESP	0.9919756	savspa	0.9984931	savspa	0.998493075	2023-09-24	50:28.6	Y
1610.4	1612	0	11025	Passeriformes	0.97220683	Parulidae	0.9562045			bawwar	0.99999964	bawwar	0.999999642	2023-09-25	26:54.4	Y
2186	2188	0	11025	Passeriformes	0.9713336	Passerellidae	0.99337983	DESP	0.9807968	savspa	0.9952136	savspa	0.995213628	2023-09-25	36:30.0	Y
798.4	801.8	0	11025	Charadriiformes	0.9796826	Scolopacidae	0.99508804			greyel	0.99947757	greyel	0.999477565	2023-09-25	13:20.4	Y
802.4	804	0	11025	Charadriiformes	0.97979707	Scolopacidae	0.9949227			greyel	0.99068695	greyel	0.990686953	2023-09-25	13:24.4	Y
807.6	810.2	0	11025	Charadriiformes	0.9814433	Scolopacidae	0.99567336			greyel	0.99978346	greyel	0.999783456	2023-09-25	13:29.6	Y
810.8	813.4	0	11025	Charadriiformes	0.98146355	Scolopacidae	0.99567467			greyel	0.999723	greyel	0.999723017	2023-09-25	13:32.8	Y
814.2	817	0	11025	Charadriiformes	0.98148465	Scolopacidae	0.9957172			greyel	0.9997665	greyel	0.999766529	2023-09-25	13:36.2	Y
823.8	825.6	0	11025	Charadriiformes	0.9814674	Scolopacidae	0.995695			greyel	0.9998078	greyel	0.999807775	2023-09-25	13:45.8	Y
785.8	787	0	11025	Passeriformes	0.95800227	Turdidae	0.94355524	THSH	0.9273492	swathr	0.8641453	swathr	0.864145279	2023-09-25	13:07.8	Y
3235.6	3237.2	0	11025	Passeriformes	0.97221404	Parulidae	0.9563295			bawwar	0.999997	bawwar	0.99999702	2023-09-25	53:57.6	Y
1910	1911.4	0	11025	Passeriformes	0.97222114	Turdidae	0.9596664			amerob	0.99999976	amerob	0.999999762	2023-09-26	31:55.0	Y
3463.6	3465	0	11025	Passeriformes	0.93984413	Passerellidae	0.9872679			daejun	0.9924314	daejun	0.992431402	2023-09-26	57:48.6	Y
1135.8	1137.4	0	11025	Passeriformes	0.953666	Turdidae	0.94968206	THSH	0.9286459	herthr	0.99999845	herthr	0.99999845	2023-09-26	19:00.8	Y
2517.2	2518.6	0	11025	Passeriformes	0.97223556	Passerellidae	0.9955851	SWLI	0.99711007	linspa	0.99097717	linspa	0.990977168	2023-09-26	42:02.2	Y
2558.4	2560	0	11025	Passeriformes	0.97223127	Passerellidae	0.9955787	SWLI	0.99709153	linspa	0.9931444	linspa	0.993144393	2023-09-26	42:43.4	Y
226.4	227.6	0	11025	Passeriformes	0.96142244	Parulidae	0.92451346			bawwar	0.9997609	bawwar	0.999760926	2023-09-26	03:46.4	Y
2631.4	2633	0	11025	Passeriformes	0.96532315	Turdidae	0.9512553	THSH	0.9362766	swathr	0.8717167	swathr	0.871716678	2023-09-26	43:53.4	Y
2038.4	2040.2	0	11025	Passeriformes	0.96827716	Passerellidae	0.992242	SFHS	0.9859059	whtspa	0.99721056	whtspa	0.997210562	2023-09-26	34:00.4	Y
1701	1702.6	0	11025	Passeriformes	0.96708196	Turdidae	0.9554274	THSH	0.9422773	swathr	0.87788165	swathr	0.877881646	2023-09-26	28:23.0	Y
2523.2	2524.6	0	11025	Passeriformes	0.97210276	Passerellidae	0.9955381			daejun	0.9969543	daejun	0.996954322	2023-09-27	42:08.2	Y
2544.6	2546.4	0	11025	Passeriformes	0.97220945	Passerellidae	0.99557614			daejun	0.99700063	daejun	0.997000635	2023-09-27	42:29.6	Y
2547.8	2550.4	0	11025	Passeriformes	0.97221655	Passerellidae	0.9955848			daejun	0.99700767	daejun	0.997007668	2023-09-27	42:32.8	Y
1576.4	1579	0	11025	Passeriformes	0.96875185	Turdidae	0.95383394	THSH	0.9386557	herthr	0.99999857	herthr	0.999998569	2023-09-27	26:21.4	Y
368.4	370.2	0	11025	Passeriformes	0.95831877	Passerellidae	0.9905495			daejun	0.99576557	daejun	0.995765567	2023-09-28	06:10.4	Y
377.4	379	0	11025	Passeriformes	0.9672217	Turdidae	0.95325166	THSH	0.9390457	swathr	0.8601431	swathr	0.860143125	2023-09-28	06:19.4	Y
416.4	417.6	0	11025	Passeriformes	0.9687544	Turdidae	0.9554618	THSH	0.9419064	swathr	0.85107803	swathr	0.851078033	2023-09-28	06:58.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2092.8	2094.6	0	11025	Passeriformes	0.97198945	Passerellidae	0.9955492	DESP	0.99189067	savspa	0.998425	savspa	0.998425007	2023-09-29	34:57.8	Y
2342.6	2344.4	0	11025	Passeriformes	0.9720247	Passerellidae	0.9954412	DESP	0.9915523	savspa	0.998257	savspa	0.998256981	2023-09-29	39:07.6	Y
2397.6	2399.4	0	11025	Passeriformes	0.9720123	Passerellidae	0.9952775	DESP	0.99042624	savspa	0.99610066	savspa	0.996100664	2023-09-29	40:02.6	Y
2404.2	2406	0	11025	Passeriformes	0.97216845	Passerellidae	0.99552935	DESP	0.99189174	savspa	0.9984779	savspa	0.998477876	2023-09-29	40:09.2	Y
2570	2571.6	0	11025	Passeriformes	0.9721853	Passerellidae	0.99555594	SFHS	0.99003613	whtspa	0.99817836	whtspa	0.998178363	2023-09-29	42:55.0	Y
3013.6	3014.8	0	11025	Passeriformes	0.96998525	Parulidae	0.9529703	SBUF	0.9144692	ovenbi1	0.94031525	ovenbi1	0.940315247	2023-09-29	50:15.6	Y
599.6	601	0	11025	Passeriformes	0.94972646	Turdidae	0.91204196	THSH	0.86485577	herthr	0.999912	herthr	0.999912024	2023-09-29	10:01.6	Y
597.8	599.4	0	11025	Passeriformes	0.9705739	Turdidae	0.956352	THSH	0.9421935	swathr	0.87433654	swathr	0.874336541	2023-09-29	09:59.8	Y
629.4	631	0	11025	Passeriformes	0.96887434	Turdidae	0.9570731	THSH	0.94397825	swathr	0.8787227	swathr	0.878722727	2023-09-29	10:31.4	Y
1129.8	1131.2	0	11025	Passeriformes	0.9577822	Turdidae	0.9446468	THSH	0.9225447	herthr	0.99999785	herthr	0.999997854	2023-09-29	18:51.8	Y
2949.2	2951	0	11025	Passeriformes	0.9645728	Turdidae	0.9446088	THSH	0.92677903	herthr	0.9999981	herthr	0.999998093	2023-09-29	49:11.2	Y
2983.4	2984.8	0	11025	Passeriformes	0.9482312	Turdidae	0.8734956	THSH	0.8111855	herthr	0.99963915	herthr	0.999639153	2023-09-29	49:45.4	Y
3012.8	3014.4	0	11025	Passeriformes	0.9637179	Turdidae	0.94479424	THSH	0.92055947	herthr	0.9999981	herthr	0.999998093	2023-09-29	50:14.8	Y
3278	3279.6	0	11025	Passeriformes	0.9643856	Turdidae	0.9485087	THSH	0.9281056	herthr	0.9999962	herthr	0.999996185	2023-09-29	54:40.0	Y
3275.6	3277.4	0	11025	Passeriformes	0.97219515	Passerellidae	0.9955545	SFHS	0.99007404	whtspa	0.9984611	whtspa	0.998461127	2023-09-29	54:37.6	Y
708.4	710.2	0	11025	Passeriformes	0.9721495	Passerellidae	0.99555826			daejun	0.99700195	daejun	0.997001946	2023-09-30	11:52.4	Y
1343	1344.4	0	11025	Passeriformes	0.9695665	Passerellidae	0.9918285			daejun	0.99561644	daejun	0.995616436	2023-09-30	22:27.0	Y
3387	3388.8	0	11025	Passeriformes	0.9713789	Passerellidae	0.9954491			daejun	0.99686915	daejun	0.996869147	2023-09-30	56:31.0	Y
375.8	377.6	0	11025	Passeriformes	0.9722011	Passerellidae	0.9955512	DESP	0.99183613	savspa	0.99844766	savspa	0.998447657	2023-09-30	06:19.8	Y
386.6	390	0	11025	Passeriformes	0.9721666	Passerellidae	0.9955396	DESP	0.9918541	savspa	0.9983847	savspa	0.998384714	2023-09-30	06:30.6	Y
394.8	396.6	0	11025	Passeriformes	0.9721719	Passerellidae	0.99552554	DESP	0.9917339	savspa	0.9983924	savspa	0.998392403	2023-09-30	06:38.8	Y
682.8	684.6	0	11025	Passeriformes	0.972162	Passerellidae	0.9953412	DESP	0.99155563	savspa	0.99821484	savspa	0.998214841	2023-09-30	11:26.8	Y
703.8	705.2	0	11025	Passeriformes	0.9721211	Passerellidae	0.9953874	DESP	0.9916345	savspa	0.9980964	savspa	0.998096406	2023-09-30	11:47.8	Y
2569.4	2571.2	0	11025	Passeriformes	0.9719663	Passerellidae	0.9952441	SFHS	0.9893222	whtspa	0.9929397	whtspa	0.992939711	2023-09-30	42:53.4	Y
2881.6	2883.4	0	11025	Passeriformes	0.9720477	Passerellidae	0.99520326	SFHS	0.9892882	whtspa	0.9973671	whtspa	0.997367084	2023-09-30	48:05.6	Y
3468.6	3470.2	0	11025	Passeriformes	0.97223645	Parulidae	0.9564916			bawwar	0.9999999	bawwar	0.999999881	2023-09-30	57:50.6	Y
3088.4	3089.6	0	11025	Passeriformes	0.9721204	Passerellidae	0.99535084	DESP	0.9916768	savspa	0.99840814	savspa	0.998408139	2023-09-30	51:30.4	Y
2533.8	2535.4	0	11025	Passeriformes	0.95750344	Turdidae	0.9433892	THSH	0.9209544	herthr	0.9999974	herthr	0.999997377	2023-09-30	42:15.8	Y
300	302.8	0	11025	Passeriformes	0.97172475	Passerellidae	0.99548787			daejun	0.9969727	daejun	0.99697268	2023-09-30	05:05.0	Y
963.8	965.6	0	11025	Passeriformes	0.9675903	Passerellidae	0.9949934			daejun	0.99677616	daejun	0.996776164	2023-09-30	16:08.8	Y
978	979.8	0	11025	Passeriformes	0.9716134	Passerellidae	0.99547535			daejun	0.9969747	daejun	0.996974707	2023-09-30	16:23.0	Y
37.4	39	0	11025	Passeriformes	0.9701108	Turdidae	0.9538186	THSH	0.9355013	herthr	0.99999845	herthr	0.99999845	2023-09-30	00:42.4	Y
39.2	40.8	0	11025	Passeriformes	0.9718071	Turdidae	0.9589668	THSH	0.9457443	herthr	0.99999845	herthr	0.99999845	2023-09-30	00:44.2	Y
67.6	69	0	11025	Passeriformes	0.9216599	Turdidae	0.90017825	THSH	0.8340438	herthr	0.998914	herthr	0.998914003	2023-09-30	01:12.6	Y
2598	2599.6	0	11025	Passeriformes	0.9721953	Passerellidae	0.9955361	SFHS	0.99004316	whtspa	0.9983834	whtspa	0.998383403	2023-09-30	43:23.0	Y
3227.6	3229.4	0	11025	Passeriformes	0.9721771	Passerellidae	0.9955114	DESP	0.9918636	savspa	0.99847	savspa	0.998470008	2023-09-30	53:49.6	Y
500.6	502.2	0	11025	Passeriformes	0.96917176	Parulidae	0.935825	SBUF	0.9283242	palwar	0.99999976	palwar	0.999999762	2023-09-30	08:22.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2523.8	2525.6	0	11025	Passeriformes	0.9719077	Passerellidae	0.9955102	DESP	0.9918922	savspa	0.9984664	savspa	0.998466372	2023-09-30	42:05.8	Y
945.6	947.4	0	11025	Passeriformes	0.9721914	Passerellidae	0.9955161	SFHS	0.9900081	whtspa	0.99826187	whtspa	0.998261869	2023-09-30	15:47.6	Y
311	312.6	0	11025	Passeriformes	0.9721183	Passerellidae	0.9954265	DESP	0.9915462	savspa	0.99833256	savspa	0.99833256	2023-10-01	05:13.0	Y
2425.4	2427.2	0	11025	Passeriformes	0.9719421	Parulidae	0.9550558	BZWA	0.9802855	comyel	0.99999833	comyel	0.999998331	2023-10-01	40:27.4	Y
1371.4	1372.8	0	11025	Passeriformes	0.9717207	Passerellidae	0.99499893	DESP	0.99039453	savspa	0.9973218	savspa	0.997321784	2023-10-01	22:53.4	Y
3446.2	3448	0	11025	Passeriformes	0.9721861	Turdidae	0.95932823			amerob	0.99999964	amerob	0.999999642	2023-10-01	57:31.2	Y
3456.2	3457.8	0	11025	Passeriformes	0.9721872	Turdidae	0.9593273			amerob	0.99999976	amerob	0.999999762	2023-10-01	57:41.2	Y
3585.6	3587.2	0	11025	Passeriformes	0.97222805	Turdidae	0.95883983			amerob	0.99999976	amerob	0.999999762	2023-10-01	59:50.6	Y
628.6	630.4	0	11025	Passeriformes	0.97050935	Passerellidae	0.9951807			daejun	0.9967668	daejun	0.996766806	2023-10-01	10:33.6	Y
2021.2	2023	0	11025	Passeriformes	0.97219807	Passerellidae	0.9955888			daejun	0.9968246	daejun	0.996824622	2023-10-01	33:46.2	Y
2024.4	2026.2	0	11025	Passeriformes	0.9709943	Passerellidae	0.99518687			daejun	0.9965963	daejun	0.996596277	2023-10-01	33:49.4	Y
532.2	534	0	11025	Passeriformes	0.9717961	Turdidae	0.9587671	THSH	0.9455796	herthr	0.9999989	herthr	0.999998927	2023-10-01	08:57.2	Y
586.6	588	0	11025	Passeriformes	0.96883696	Turdidae	0.95420545	THSH	0.93858635	herthr	0.99999595	herthr	0.999995947	2023-10-01	09:51.6	Y
596.4	598.2	0	11025	Passeriformes	0.97124714	Turdidae	0.9575834	THSH	0.9444046	herthr	0.9999988	herthr	0.999998808	2023-10-01	10:01.4	Y
814.6	816.2	0	11025	Passeriformes	0.9587855	Turdidae	0.929515	THSH	0.8959763	herthr	0.99999785	herthr	0.999997854	2023-10-01	13:39.6	Y
1068.6	1070.2	0	11025	Passeriformes	0.94799405	Turdidae	0.93257713	THSH	0.909762	herthr	0.9999795	herthr	0.999979496	2023-10-01	17:53.6	Y
3262	3263.6	0	11025	Charadriiformes	0.9807027	Scolopacidae	0.9953135			greyel	0.99965405	greyel	0.999654055	2023-10-01	54:24.0	Y
3276.4	3278.4	0	11025	Charadriiformes	0.98146594	Scolopacidae	0.9956864			greyel	0.99977726	greyel	0.999777257	2023-10-01	54:38.4	Y
3296.4	3298.2	0	11025	Charadriiformes	0.9814765	Scolopacidae	0.9957118			greyel	0.99981576	greyel	0.999815762	2023-10-01	54:58.4	Y
2279.8	2281.6	0	11025	Passeriformes	0.962712	Turdidae	0.9410927	THSH	0.918204	herthr	0.9999981	herthr	0.999998093	2023-10-01	38:01.8	Y
1984.4	1986.2	0	11025	Passeriformes	0.9717601	Motacillidae	0.9372232			amepip	0.9629468	amepip	0.962946773	2023-10-02	33:08.4	Y
1997.8	2000.4	0	11025	Passeriformes	0.9637849	Motacillidae	0.9318108			amepip	0.91987896	amepip	0.91987896	2023-10-02	33:21.8	Y
2001.2	2003.2	0	11025	Passeriformes	0.97202075	Motacillidae	0.93717			amepip	0.9657904	amepip	0.965790391	2023-10-02	33:25.2	Y
403	404.8	0	11025	Passeriformes	0.9714938	Passerellidae	0.9954358	SFHS	0.98998976	whtspa	0.99821764	whtspa	0.998217642	2023-10-02	06:47.0	Y
405.4	407	0	11025	Passeriformes	0.9720681	Passerellidae	0.99534386	SFHS	0.98953176	whtspa	0.9971668	whtspa	0.997166812	2023-10-02	06:49.4	Y
2117.2	2119	0	11025	Charadriiformes	0.98140955	Scolopacidae	0.99567896			greyel	0.99977046	greyel	0.999770463	2023-10-02	35:19.2	Y
2066.6	2068.4	0	11025	Passeriformes	0.96613866	Turdidae	0.9487093	THSH	0.93022686	herthr	0.99999833	herthr	0.999998331	2023-10-02	34:28.6	Y
2799.2	2801	0	11025	Passeriformes	0.9719263	Passerellidae	0.99524695	SFHS	0.98953307	whtspa	0.9978421	whtspa	0.997842073	2023-10-02	46:41.2	Y
3299.8	3301.6	0	11025	Passeriformes	0.97208875	Motacillidae	0.93757236			amepip	0.9685328	amepip	0.968532801	2023-10-02	55:01.8	Y
3329.2	3330.8	0	11025	Passeriformes	0.9705066	Motacillidae	0.9361686			amepip	0.96228963	amepip	0.962289631	2023-10-02	55:31.2	Y
1167	1168.8	0	11025	Passeriformes	0.96765286	Turdidae	0.9462909	THSH	0.9282887	herthr	0.99999654	herthr	0.999996543	2023-10-02	19:29.0	Y
1527.2	1529	0	11025	Passeriformes	0.97217566	Turdidae	0.9544368	THSH	0.93993145	swathr	0.8758544	swathr	0.875854373	2023-10-02	25:29.2	Y
1599.2	1601	0	11025	Passeriformes	0.97156614	Turdidae	0.95902425	THSH	0.9463246	swathr	0.88215375	swathr	0.882153749	2023-10-02	26:41.2	Y
1621.6	1623.2	0	11025	Passeriformes	0.9721619	Parulidae	0.95632046	SBUF	0.93412304	ovenbi1	0.9730075	ovenbi1	0.9730075	2023-10-02	27:03.6	Y
2497	2498.8	0	11025	Passeriformes	0.97108096	Passerellidae	0.99540186			daejun	0.99687684	daejun	0.996876836	2023-10-02	41:39.0	Y
3262.2	3263.8	0	11025	Passeriformes	0.96739876	Turdidae	0.95159286	THSH	0.93278384	herthr	0.99999774	herthr	0.999997735	2023-10-02	54:24.2	Y
3488.2	3489.6	0	11025	Passeriformes	0.9429991	Turdidae	0.9162069	THSH	0.88445777	herthr	0.9999937	herthr	0.999993682	2023-10-02	58:10.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1722.2	1724	0	11025	Passeriformes	0.9679511	Parulidae	0.9386651	SBUF	0.913596	palwar	0.999998	palwar	0.999997973	2023-10-02	28:44.2	Y
1729.8	1731.6	0	11025	Passeriformes	0.97214293	Passerellidae	0.9953289	SFHS	0.9898762	whtspa	0.99845934	whtspa	0.998459339	2023-10-02	28:51.8	Y
3286.8	3288.2	0	11025	Passeriformes	0.9684396	Motacillidae	0.9285384			amepip	0.9236309	amepip	0.923630893	2023-10-02	54:50.8	Y
625.4	627.2	0	11025	Passeriformes	0.96990246	Passerellidae	0.995199			daejun	0.9967602	daejun	0.99676019	2023-10-02	10:29.4	Y
2237	2240.2	0	11025	Passeriformes	0.9721425	Passerellidae	0.99548495			daejun	0.9969951	daejun	0.996995091	2023-10-02	37:21.0	Y
2269.2	2271	0	11025	Passeriformes	0.9701868	Passerellidae	0.9948902			daejun	0.9966792	daejun	0.996679187	2023-10-02	37:53.2	Y
3161.4	3164	0	11025	Passeriformes	0.9720896	Passerellidae	0.9955317			daejun	0.99689215	daejun	0.996892154	2023-10-02	52:45.4	Y
2462	2463.6	0	11025	Charadriiformes	0.98139703	Scolopacidae	0.9956332			greyel	0.999718	greyel	0.99971801	2023-10-02	41:06.0	Y
48.8	50.4	0	11025	Passeriformes	0.92794406	Turdidae	0.9056573	THSH	0.87052184	herthr	0.99999	herthr	0.999989986	2023-10-02	00:52.8	Y
1170.6	1172	0	11025	Passeriformes	0.95235777	Turdidae	0.8780494	THSH	0.8079133	herthr	0.99999166	herthr	0.999991655	2023-10-02	19:34.6	Y
351.4	353.2	0	11025	Passeriformes	0.97204643	Passerellidae	0.99536234	DESP	0.9914581	savspa	0.9979962	savspa	0.997996211	2023-10-02	05:53.4	Y
1333.6	1335.2	0	11025	Passeriformes	0.95997673	Passerellidae	0.9783207	DESP	0.9425989	savspa	0.95842814	savspa	0.958428144	2023-10-02	22:15.6	Y
1349.8	1351.6	0	11025	Passeriformes	0.97163177	Passerellidae	0.9953242	DESP	0.99152774	savspa	0.9982755	savspa	0.998275518	2023-10-02	22:31.8	Y
1908.2	1910	0	11025	Passeriformes	0.9685103	Parulidae	0.9137976	SBUF	0.91784763	palwar	0.99999917	palwar	0.999999166	2023-10-03	31:50.2	Y
3557.6	3559	0	11025	Passeriformes	0.9720171	Turdidae	0.95903456			amerob	0.99999964	amerob	0.999999642	2023-10-03	59:21.6	Y
149	150.6	0	11025	Passeriformes	0.9588543	Turdidae	0.93905294	THSH	0.9187857	herthr	0.9999615	herthr	0.999961495	2023-10-04	02:33.0	Y
2216.6	2218.4	0	11025	Passeriformes	0.9707772	Parulidae	0.9482371	SBUF	0.9174058	palwar	0.9999994	palwar	0.999999404	2023-10-04	37:00.6	Y
1438.2	1440	0	11025	Charadriiformes	0.98138416	Scolopacidae	0.995635			sposan	0.9995042	sposan	0.999504209	2023-10-04	23:58.2	Y
1454.6	1456.6	0	11025	Charadriiformes	0.98133516	Scolopacidae	0.99561346			sposan	0.99943644	sposan	0.999436438	2023-10-04	24:14.6	Y
1575.6	1577.4	0	11025	Charadriiformes	0.9814338	Scolopacidae	0.9956857			greyel	0.9998004	greyel	0.999800384	2023-10-04	26:17.6	Y
3118.2	3120.2	0	11025	Passeriformes	0.97210926	Passerellidae	0.9955444			daejun	0.9969995	daejun	0.996999502	2023-10-05	52:03.2	Y
3281.6	3283.4	0	11025	Passeriformes	0.9720696	Passerellidae	0.9955428			daejun	0.9969765	daejun	0.996976495	2023-10-05	54:46.6	Y
1890.6	1892.4	0	11025	Passeriformes	0.96553546	Turdidae	0.92951596	THSH	0.90062916	herthr	0.99999595	herthr	0.999995947	2023-10-05	31:35.6	Y
1976.8	1978.4	0	11025	Passeriformes	0.97141653	Turdidae	0.95632225	THSH	0.9413649	herthr	0.9999988	herthr	0.999998808	2023-10-05	33:01.8	Y
3225.2	3227	0	11025	Passeriformes	0.9719154	Passerellidae	0.9954875	SFHS	0.9884439	whtspa	0.99696726	whtspa	0.996967256	2023-10-06	53:47.2	Y
403.4	404.8	0	11025	Passeriformes	0.9641779	Passerellidae	0.99393106	SFHS	0.9804468	whtspa	0.9740132	whtspa	0.974013209	2023-10-06	06:45.4	Y
1740.6	1742.4	0	11025	Passeriformes	0.9720115	Passerellidae	0.99495924	DESP	0.9905916	savspa	0.9975261	savspa	0.997526109	2023-10-06	29:02.6	Y
1197	1198.8	0	11025	Passeriformes	0.9716186	Passerellidae	0.99525625	SFHS	0.98966354	whtspa	0.9976405	whtspa	0.997640491	2023-10-06	19:59.0	Y
603.4	605.2	0	11025	Passeriformes	0.972097	Passerellidae	0.99532926	SFHS	0.9894572	whtspa	0.99845505	whtspa	0.998455048	2023-10-06	10:05.4	Y
1672.6	1674.2	0	11025	Passeriformes	0.96959025	Passerellidae	0.9943281			daejun	0.9961331	daejun	0.996133089	2023-10-07	27:56.6	Y
334.4	336	0	11025	Passeriformes	0.9717552	Passerellidae	0.9953126	SFHS	0.98942435	whtspa	0.99654657	whtspa	0.996546566	2023-10-07	05:36.4	Y
717.6	719.2	0	11025	Passeriformes	0.967604	Parulidae	0.9328999	SBUF	0.86563945	palwar	0.99994266	palwar	0.99994266	2023-10-07	11:59.6	Y
2714.6	2716.4	0	11025	Passeriformes	0.9714722	Passerellidae	0.9924353	DESP	0.9838706	savspa	0.9893953	savspa	0.98939532	2023-10-07	45:16.6	Y
2436.8	2438.2	0	11025	Charadriiformes	0.97842115	Scolopacidae	0.99398005			shbdow	0.9997776	shbdow	0.999777615	2023-10-09	40:38.8	Y
3202.6	3204.2	0	11025	Passeriformes	0.96305835	Passerellidae	0.99380094			daejun	0.996545	daejun	0.996545017	2023-10-10	53:26.6	Y
3224.2	3227	0	11025	Passeriformes	0.9716352	Passerellidae	0.9954124			daejun	0.9969531	daejun	0.99695313	2023-10-10	53:48.2	Y
3231.8	3233.4	0	11025	Passeriformes	0.8523368	Passerellidae	0.9583966			daejun	0.94490993	daejun	0.94490993	2023-10-10	53:55.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3252.8	3254.4	0	11025	Passeriformes	0.9598375	Passerellidae	0.99372804			daejun	0.9964445	daejun	0.996444523	2023-10-10	54:16.8	Y
3440.2	3441.8	0	11025	Passeriformes	0.97051954	Passerellidae	0.99465394			daejun	0.9962657	daejun	0.996265709	2023-10-10	57:24.2	Y
3453	3454.8	0	11025	Passeriformes	0.97221226	Passerellidae	0.9955663			daejun	0.9970053	daejun	0.997005284	2023-10-10	57:37.0	Y
3562.6	3565.6	0	11025	Passeriformes	0.9703432	Passerellidae	0.9951931			daejun	0.9967064	daejun	0.996706426	2023-10-10	59:26.6	Y
1829.6	1831	0	11025	Passeriformes	0.9592413	Turdidae	0.8704423	THSH	0.8097303	herthr	0.99998856	herthr	0.999988556	2023-10-10	30:33.6	Y
2405.4	2406.6	0	11025	Charadriiformes	0.9563391	Scolopacidae	0.9843126			shbdow	0.9980837	shbdow	0.998083711	2023-10-10	40:07.4	Y
1061.2	1062.4	0	11025	Passeriformes	0.9716205	Parulidae	0.9510187			amered	0.84064555	amered	0.840645552	2023-10-12	17:43.2	Y
2460.6	2462.4	0	11025	Passeriformes	0.97213924	Turdidae	0.9597628			amerob	0.9999999	amerob	0.999999881	2023-10-12	41:05.6	Y
2463.2	2464.8	0	11025	Passeriformes	0.9711377	Turdidae	0.95797217			amerob	0.99999917	amerob	0.999999166	2023-10-12	41:08.2	Y
2458.4	2460.2	0	11025	Passeriformes	0.9721006	Passerellidae	0.99554306			daejun	0.99695253	daejun	0.996952534	2023-10-12	41:03.4	Y
3459	3461	0	11025	Passeriformes	0.96965986	Passerellidae	0.9950113			daejun	0.99671555	daejun	0.996715546	2023-10-12	57:44.0	Y
1959.2	1960.8	0	11025	Passeriformes	0.9696358	Turdidae	0.947232	THSH	0.9250943	herthr	0.9999987	herthr	0.999998689	2023-10-12	32:44.2	Y
1004.6	1006.4	0	11025	Charadriiformes	0.899327	Scolopacidae	0.8988092			shbdow	0.97745603	shbdow	0.977456033	2023-10-12	16:46.6	Y
2779	2780.6	0	11025	Charadriiformes	0.98070395	Scolopacidae	0.9953702			shbdow	0.9998566	shbdow	0.999856591	2023-10-12	46:21.0	Y
453	454.6	0	11025	Charadriiformes	0.98031795	Scolopacidae	0.9953135			shbdow	0.9999043	shbdow	0.999904275	2023-10-13	07:35.0	Y
2784.6	2786	0	11025	Charadriiformes	0.98025036	Scolopacidae	0.9953733			shbdow	0.9351745	shbdow	0.935174525	2023-10-13	46:28.6	Y
694.6	696.4	0	11025	Passeriformes	0.964864	Turdidae	0.94767576	THSH	0.93017143	herthr	0.99999845	herthr	0.99999845	2023-10-16	11:38.6	Y
1805.2	1806.8	0	11025	Charadriiformes	0.9806121	Scolopacidae	0.9947885			greyel	0.99944013	greyel	0.999440134	2023-10-17	30:07.2	Y
1807.6	1809.2	0	11025	Charadriiformes	0.9812361	Scolopacidae	0.99550796			greyel	0.99919814	greyel	0.999198139	2023-10-17	30:09.6	Y
1809.8	1811.4	0	11025	Charadriiformes	0.9813115	Scolopacidae	0.9956013			greyel	0.99962044	greyel	0.999620438	2023-10-17	30:11.8	Y
1813.2	1815	0	11025	Charadriiformes	0.9814773	Scolopacidae	0.9957047			greyel	0.9997359	greyel	0.999735892	2023-10-17	30:15.2	Y
1815.6	1817	0	11025	Charadriiformes	0.9803741	Scolopacidae	0.9952158			greyel	0.999464	greyel	0.999463975	2023-10-17	30:17.6	Y
1818.4	1819.6	0	11025	Charadriiformes	0.9795655	Scolopacidae	0.99481237			greyel	0.9985536	greyel	0.998553574	2023-10-17	30:20.4	Y
2456.2	2458	0	11025	Passeriformes	0.971696	Parulidae	0.9537973	BZWA	0.98208976	comyel	0.9999999	comyel	0.999999881	2023-10-18	40:58.2	Y
1613.4	1615	0	11025	Charadriiformes	0.9724901	Scolopacidae	0.994121			shbdow	0.999212	shbdow	0.999212027	2023-10-20	26:55.4	Y
447.2	448.6	0	11025	Charadriiformes	0.9430838	Scolopacidae	0.988366			shbdow	0.99929214	shbdow	0.999292135	2023-10-20	07:29.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1694.6	1696.4	0	11025	Passeriformes	0.97159314	Passerellidae	0.99526924	DESP	0.9916236	savspa	0.99837023	savspa	0.99837023	2023-09-22	28:16.6	Y
2169	2170.8	0	11025	Passeriformes	0.9708619	Passerellidae	0.9947812	DESP	0.99052215	savspa	0.9973181	savspa	0.997318089	2023-09-22	36:11.0	Y
1965.2	1967	0	11025	Passeriformes	0.97193795	Passerellidae	0.99541277	SFHS	0.98969114	whtspa	0.9984394	whtspa	0.998439372	2023-09-22	32:47.2	Y
1969.4	1971.2	0	11025	Passeriformes	0.97163266	Passerellidae	0.9954248	SFHS	0.9892051	whtspa	0.9981945	whtspa	0.998194516	2023-09-22	32:51.4	Y
1430.8	1432.6	0	11025	Passeriformes	0.9702525	Passerellidae	0.994724	DESP	0.9901787	savspa	0.99735945	savspa	0.997359455	2023-09-23	23:54.8	Y
1970.2	1972	0	11025	Passeriformes	0.97219694	Passerellidae	0.99554944	SFHS	0.98997366	whtspa	0.9972197	whtspa	0.997219682	2023-09-23	32:52.0	Y
1623.2	1624.8	0	11025	Passeriformes	0.9655666	Passerellidae	0.9941894	DESP	0.9881655	savspa	0.9583461	savspa	0.958346128	2023-09-23	27:05.2	Y
553.2	555.2	0	11025	Passeriformes	0.9721549	Passerellidae	0.9955687			daejun	0.9969957	daejun	0.996995687	2023-09-23	09:13.2	Y
653	654.6	0	11025	Passeriformes	0.8249812	Passerellidae	0.94755715			daejun	0.94635123	daejun	0.94635123	2023-09-23	10:53.0	Y
1905.2	1907	0	11025	Passeriformes	0.9720767	Passerellidae	0.9954182	DESP	0.9917909	savspa	0.9984168	savspa	0.998416781	2023-09-23	31:45.2	Y
1916.4	1918.2	0	11025	Passeriformes	0.9656879	Passerellidae	0.9909649	DESP	0.9866087	savspa	0.993802	savspa	0.993802011	2023-09-23	31:56.4	Y
37	38.6	0	11025	Passeriformes	0.9705625	Passerellidae	0.9953134	SFHS	0.9889303	whtspa	0.9981762	whtspa	0.998176217	2023-09-23	00:37.0	Y
3205.4	3206.6	0	11025	Passeriformes	0.9699144	Parulidae	0.95028937	SBUF	0.9240572	ovenbi1	0.9197605	ovenbi1	0.919760525	2023-09-23	53:27.4	Y
3141.4	3143.2	0	11025	Charadriiformes	0.98110896	Scolopacidae	0.9954764			sposan	0.9994041	sposan	0.999404073	2023-09-23	52:23.4	Y
447.6	449.2	0	11025	Passeriformes	0.9692909	Parulidae	0.94845283	BZWA	0.9805116	chswar	0.96622854	chswar	0.966228545	2023-09-23	07:29.6	Y
153.2	155	0	11025	Passeriformes	0.96908545	Parulidae	0.94937575	BZWA	0.9764806	comyel	0.99999785	comyel	0.999997854	2023-09-23	02:35.2	Y
875.8	877.4	0	11025	Passeriformes	0.971807	Passerellidae	0.995375	SFHS	0.9892258	whtspa	0.9981856	whtspa	0.998185575	2023-09-23	14:37.8	Y
1042.4	1044.2	0	11025	Passeriformes	0.9722325	Parulidae	0.95641273			bawwar	0.9999999	bawwar	0.999999881	2023-09-23	17:24.4	Y
3344.4	3346.2	0	11025	Passeriformes	0.97220063	Passerellidae	0.9955604	DESP	0.99196374	savspa	0.9985091	savspa	0.998509109	2023-09-23	55:46.4	Y
2140.2	2142.2	0	11025	Passeriformes	0.9713435	Parulidae	0.9291624	BZWA	0.9665363	comyel	0.99998534	comyel	0.999985337	2023-09-24	35:42.2	Y
3178.2	3179.6	0	11025	Passeriformes	0.9685878	Passerellidae	0.9930414	DESP	0.98103297	savspa	0.988724	savspa	0.988723993	2023-09-24	53:00.2	Y
3385.8	3387.2	0	11025	Passeriformes	0.9513014	Turdidae	0.95784			amerob	0.9998894	amerob	0.999889374	2023-09-24	56:28.8	Y
3410	3411.4	0	11025	Passeriformes	0.96235156	Turdidae	0.9583086			amerob	0.99999774	amerob	0.999997735	2023-09-24	56:53.0	Y
3256.6	3258	0	11025	Passeriformes	0.9469496	Passerellidae	0.9913272			daejun	0.99381703	daejun	0.993817031	2023-09-24	54:19.6	Y
3298	3300.2	0	11025	Passeriformes	0.9683488	Passerellidae	0.99465877			daejun	0.99664056	daejun	0.996640563	2023-09-24	55:01.0	Y
3301.2	3304	0	11025	Passeriformes	0.9720961	Passerellidae	0.99542135			daejun	0.99694425	daejun	0.996944249	2023-09-24	55:04.2	Y
162.2	164	0	11025	Passeriformes	0.9314713	Turdidae	0.900658	THSH	0.84783703	herthr	0.9999708	herthr	0.999970794	2023-09-24	02:45.2	Y
657.8	659	0	11025	Passeriformes	0.91485137	Turdidae	0.90801513	THSH	0.87852675	herthr	0.9999944	herthr	0.999994397	2023-09-24	11:00.8	Y
662.2	663.6	0	11025	Passeriformes	0.9700585	Turdidae	0.9533065	THSH	0.9370535	herthr	0.99999857	herthr	0.999998569	2023-09-24	11:05.2	Y
670.6	672	0	11025	Passeriformes	0.9692115	Turdidae	0.9521427	THSH	0.93607366	herthr	0.9999987	herthr	0.999998689	2023-09-24	11:13.6	Y
678.4	679.8	0	11025	Passeriformes	0.95962083	Turdidae	0.94315773	THSH	0.92291975	herthr	0.99999523	herthr	0.999995232	2023-09-24	11:21.4	Y
1469	1470.8	0	11025	Passeriformes	0.96590906	Turdidae	0.9502295	THSH	0.9343611	herthr	0.99999774	herthr	0.999997735	2023-09-24	24:32.0	Y
1480.6	1482.4	0	11025	Passeriformes	0.94312805	Turdidae	0.9038876	THSH	0.8666815	herthr	0.9999708	herthr	0.999970794	2023-09-24	24:43.6	Y
761	762.8	0	11025	Passeriformes	0.97203034	Passerellidae	0.9953675	DESP	0.9913721	savspa	0.99806947	savspa	0.998069465	2023-09-24	12:44.0	Y
1374	1375.8	0	11025	Passeriformes	0.97193754	Passerellidae	0.9954822	DESP	0.98838145	savspa	0.9933695	savspa	0.99336952	2023-09-24	22:57.0	Y
1385.6	1387.6	0	11025	Passeriformes	0.9619263	Passerellidae	0.98949605	DESP	0.973708	savspa	0.9904693	savspa	0.990469277	2023-09-24	23:08.6	Y
685.6	687.8	0	11025	Charadriiformes	0.98145616	Scolopacidae	0.9957131			wilsni1	0.95616394	wilsni1	0.956163943	2023-09-24	11:28.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
689.8	691.2	0	11025	Charadriiformes	0.98148525	Scolopacidae	0.99572706			wilsni1	0.9952668	wilsni1	0.995266795	2023-09-24	11:32.8	Y
2423.6	2425.4	0	11025	Passeriformes	0.9722268	Parulidae	0.95639735			bawwar	0.99999976	bawwar	0.999999762	2023-09-24	40:25.6	Y
3432.8	3434.6	0	11025	Passeriformes	0.97160894	Passerellidae	0.9947285	DESP	0.9889291	savspa	0.9969478	savspa	0.996947825	2023-09-24	57:14.8	Y
1397.8	1399.6	0	11025	Passeriformes	0.9722373	Parulidae	0.95646363			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	23:19.8	Y
1425.6	1427.2	0	11025	Passeriformes	0.97223645	Parulidae	0.9564585			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	23:47.6	Y
3491.8	3493.6	0	11025	Passeriformes	0.9722349	Parulidae	0.9564353			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	58:13.8	Y
2009.8	2011.6	0	11025	Passeriformes	0.9721406	Turdidae	0.9593654	THSH	0.9465675	herthr	0.9999988	herthr	0.999998808	2023-09-24	33:31.8	Y
959	960.8	0	11025	Passeriformes	0.9722214	Parulidae	0.955694	MWAR	0.99911803	mouwar	0.9914035	mouwar	0.99140352	2023-09-24	16:01.0	Y
971.6	973.4	0	11025	Passeriformes	0.97203255	Parulidae	0.9529552	MWAR	0.9963731	mouwar	0.9732318	mouwar	0.973231792	2023-09-24	16:13.6	Y
114	115.8	0	11025	Passeriformes	0.9721896	Parulidae	0.95628756			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	01:56.0	Y
40.2	42	0	11025	Passeriformes	0.97223747	Parulidae	0.95634425	MWAR	0.99920505	mouwar	0.9956304	mouwar	0.995630383	2023-09-24	00:42.2	Y
808.2	810	0	11025	Passeriformes	0.96095204	Passerellidae	0.9906978	DESP	0.9852604	savspa	0.996378	savspa	0.996378005	2023-09-24	13:30.2	Y
826	827.8	0	11025	Passeriformes	0.9720453	Passerellidae	0.9954922	DESP	0.9913515	savspa	0.9942958	savspa	0.994295776	2023-09-24	13:48.0	Y
1063.4	1065.2	0	11025	Passeriformes	0.97143954	Passerellidae	0.9944218	DESP	0.9898577	savspa	0.9978217	savspa	0.997821689	2023-09-24	17:45.4	Y
2528.4	2530	0	11025	Passeriformes	0.9722076	Parulidae	0.9559667			bawwar	0.99999976	bawwar	0.999999762	2023-09-25	42:11.4	Y
1948	1949.8	0	11025	Passeriformes	0.9722314	Parulidae	0.9545649	BZWA	0.9828492	comyel	0.99999964	comyel	0.999999642	2023-09-25	32:31.0	Y
970.8	972.6	0	11025	Passeriformes	0.9722168	Parulidae	0.95619	BZWA	0.9830403	comyel	0.9999999	comyel	0.999999881	2023-09-25	16:12.8	Y
9.4	11.2	0	11025	Passeriformes	0.97221	Passerellidae	0.99555725	SFHS	0.9901002	whtspa	0.99779	whtspa	0.997789979	2023-09-25	00:11.4	Y
62.6	64.2	0	11025	Passeriformes	0.9719204	Passerellidae	0.9953975	SFHS	0.98956674	whtspa	0.9984347	whtspa	0.998434722	2023-09-25	01:04.6	Y
280.6	283	0	11025	Passeriformes	0.96750903	Passerellidae	0.9936348			daejun	0.9941051	daejun	0.994105101	2023-09-25	04:40.6	Y
613.6	615.4	0	11025	Passeriformes	0.97212243	Passerellidae	0.99555004			daejun	0.9969831	daejun	0.996983111	2023-09-25	10:13.6	Y
2809.8	2811.2	0	11025	Passeriformes	0.9540313	Turdidae	0.91976136	THSH	0.88281184	herthr	0.9999206	herthr	0.999920607	2023-09-25	46:49.8	Y
362	363.8	0	11025	Passeriformes	0.9657047	Passerellidae	0.9942914	SFHS	0.98531705	whtspa	0.99651474	whtspa	0.996514738	2023-09-25	06:02.0	Y
785	786.8	0	11025	Passeriformes	0.97221935	Parulidae	0.95645744			bawwar	0.9999999	bawwar	0.999999881	2023-09-25	13:07.0	Y
1800.2	1802	0	11025	Passeriformes	0.9719775	Passerellidae	0.995323	DESP	0.99154	savspa	0.9980913	savspa	0.99809128	2023-09-25	30:02.2	Y
1823.2	1825	0	11025	Passeriformes	0.9720435	Passerellidae	0.9954364	DESP	0.9916169	savspa	0.9982998	savspa	0.998299778	2023-09-25	30:25.2	Y
1352.6	1354.4	0	11025	Passeriformes	0.9720773	Passerellidae	0.9955135	SFHS	0.9897357	whtspa	0.9979906	whtspa	0.997990608	2023-09-25	22:34.6	Y
17	18.4	0	11025	Passeriformes	0.97075987	Passerellidae	0.99456996	DESP	0.9898413	savspa	0.95650107	savspa	0.956501067	2023-09-25	00:19.0	Y
2528	2529.4	0	11025	Passeriformes	0.9718013	Passerellidae	0.9953453	DESP	0.99154085	savspa	0.9983699	savspa	0.998369873	2023-09-25	42:10.0	Y
510.4	512	0	11025	Passeriformes	0.9718759	Passerellidae	0.9954886	SFHS	0.9898016	whtspa	0.9965714	whtspa	0.996571422	2023-09-25	08:32.4	Y
251.6	253.4	0	11025	Passeriformes	0.9720437	Passerellidae	0.9951035	SFHS	0.98969954	whtspa	0.9984072	whtspa	0.998407185	2023-09-25	04:13.6	Y
663	664.8	0	11025	Passeriformes	0.97217315	Passerellidae	0.99555415	SFHS	0.9901446	whtspa	0.9985341	whtspa	0.998534083	2023-09-26	11:07.0	Y
3561.4	3563	0	11025	Passeriformes	0.9672502	Turdidae	0.95349675	THSH	0.9403898	swathr	0.87787384	swathr	0.877873838	2023-09-26	59:23.4	Y
1020	1021.8	0	11025	Passeriformes	0.9720506	Passerellidae	0.99547595	SFHS	0.9899602	whtspa	0.998362	whtspa	0.998362005	2023-09-26	17:02.0	Y
318.8	320.2	0	11025	Passeriformes	0.9718902	Parulidae	0.9554293	BZWA	0.9564233	comyel	0.9992632	comyel	0.999263227	2023-09-27	05:21.8	Y
199.2	200.6	0	11025	Passeriformes	0.9709358	Passerellidae	0.99485576			daejun	0.9965629	daejun	0.996562898	2023-09-27	03:22.2	Y
2310.4	2312.2	0	11025	Passeriformes	0.9721453	Passerellidae	0.9954887	SFHS	0.9900664	whtspa	0.99856997	whtspa	0.998569965	2023-09-27	38:33.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1428.8	1430.4	0	11025	Passeriformes	0.9439746	Passerellidae	0.9880683			daejun	0.9922701	daejun	0.992270112	2023-09-27	23:50.8	Y
2658	2659.6	0	11025	Passeriformes	0.9633875	Passerellidae	0.99307984			daejun	0.996185	daejun	0.996185005	2023-09-27	44:22.0	Y
2663.6	2665.4	0	11025	Passeriformes	0.9721914	Passerellidae	0.9955747			daejun	0.9970059	daejun	0.99700588	2023-09-27	44:27.6	Y
1064.8	1066.2	0	11025	Passeriformes	0.97092795	Turdidae	0.9562656	THSH	0.9420084	herthr	0.9999988	herthr	0.999998808	2023-09-27	17:48.8	Y
1730.2	1731.8	0	11025	Passeriformes	0.96535146	Turdidae	0.95144445	THSH	0.93456906	herthr	0.9999987	herthr	0.999998689	2023-09-27	28:54.2	Y
3456.8	3458	0	11025	Passeriformes	0.9711453	Turdidae	0.9578615			amerob	0.9999975	amerob	0.999997497	2023-09-28	57:40.8	Y
3467.4	3468.8	0	11025	Passeriformes	0.97223705	Turdidae	0.95767516			amerob	0.99999964	amerob	0.999999642	2023-09-28	57:51.4	Y
980.8	982.6	0	11025	Passeriformes	0.9713694	Passerellidae	0.9954287			daejun	0.9969093	daejun	0.99690932	2023-09-28	16:24.8	Y
3235.4	3236.8	0	11025	Passeriformes	0.9675235	Passerellidae	0.99461645			daejun	0.99583554	daejun	0.995835543	2023-09-28	53:59.4	Y
3240	3241.4	0	11025	Passeriformes	0.97171235	Passerellidae	0.99439263			daejun	0.99612856	daejun	0.996128559	2023-09-28	54:04.0	Y
2854.6	2856.4	0	11025	Passeriformes	0.97192323	Parulidae	0.9386517	ZEEP	0.92228466	camwar	0.9999982	camwar	0.999998212	2023-09-28	47:36.6	Y
2314.6	2316.4	0	11025	Passeriformes	0.96718806	Passerellidae	0.994785	DESP	0.9898336	savspa	0.9975662	savspa	0.997566223	2023-09-28	38:36.6	Y
936.8	938.4	0	11025	Passeriformes	0.97217786	Passerellidae	0.9955415	SFHS	0.990021	whtspa	0.9985226	whtspa	0.99852258	2023-09-29	15:39.8	Y
958.2	960	0	11025	Passeriformes	0.972162	Passerellidae	0.99553657	SFHS	0.99007726	whtspa	0.99851686	whtspa	0.998516858	2023-09-29	16:01.2	Y
1144.8	1146.4	0	11025	Passeriformes	0.9712663	Passerellidae	0.99520785	SFHS	0.98810905	whtspa	0.9947253	whtspa	0.994725287	2023-09-29	19:07.8	Y
1566.8	1568.6	0	11025	Passeriformes	0.9722344	Passerellidae	0.99558276	SFHS	0.99016833	whtspa	0.99855	whtspa	0.998549998	2023-09-29	26:09.8	Y
1157.4	1161.2	0	11025	Charadriiformes	0.9814399	Scolopacidae	0.99569136			greyel	0.9994197	greyel	0.999419689	2023-09-29	19:19.4	Y
1161.6	1166.6	0	11025	Charadriiformes	0.98149025	Scolopacidae	0.99571806			greyel	0.9998036	greyel	0.999803603	2023-09-29	19:23.6	Y
1166.6	1169.8	0	11025	Charadriiformes	0.98149025	Scolopacidae	0.99571806			greyel	0.9998036	greyel	0.999803603	2023-09-29	19:28.6	Y
1184	1185.6	0	11025	Charadriiformes	0.98145205	Scolopacidae	0.9957009			greyel	0.99950886	greyel	0.999508858	2023-09-29	19:46.0	Y
847.4	852.4	0	11025	Charadriiformes	0.981061	Scolopacidae	0.99550337			greyel	0.9994937	greyel	0.999493718	2023-09-29	14:09.4	Y
853.2	858.2	0	11025	Charadriiformes	0.9813843	Scolopacidae	0.99562424			greyel	0.9994771	greyel	0.999477088	2023-09-29	14:15.2	Y
858.2	862	0	11025	Charadriiformes	0.9813843	Scolopacidae	0.99562424			greyel	0.9994771	greyel	0.999477088	2023-09-29	14:20.2	Y
862.2	863.6	0	11025	Charadriiformes	0.9814485	Scolopacidae	0.99568707			greyel	0.99416685	greyel	0.994166851	2023-09-29	14:24.2	Y
871.2	872.4	0	11025	Charadriiformes	0.9808492	Scolopacidae	0.9955499			greyel	0.9990038	greyel	0.999003828	2023-09-29	14:33.2	Y
874.6	876.4	0	11025	Charadriiformes	0.9814647	Scolopacidae	0.99570674			greyel	0.999778	greyel	0.999777973	2023-09-29	14:36.6	Y
1013.6	1015.4	0	11025	Charadriiformes	0.9814928	Scolopacidae	0.9957308			wilsni1	0.99987483	wilsni1	0.99987483	2023-09-29	16:55.6	Y
3108	3109.8	0	11025	Passeriformes	0.9722168	Passerellidae	0.9955824			daejun	0.9970084	daejun	0.997008383	2023-10-01	51:51.0	Y
1818.6	1820.4	0	11025	Passeriformes	0.9720634	Parulidae	0.9544836	SBUF	0.9371578	palwar	0.9999999	palwar	0.999999881	2023-10-01	30:21.6	Y
1096.4	1097.6	0	11025	Passeriformes	0.9527847	Turdidae	0.92948794	THSH	0.9013548	herthr	0.99944097	herthr	0.999440968	2023-10-01	18:18.4	Y
439.6	441.2	0	11025	Passeriformes	0.96852374	Passerellidae	0.9936469	SFHS	0.98329145	whtspa	0.99459004	whtspa	0.994590044	2023-10-01	07:21.6	Y
2632.2	2633.8	0	11025	Passeriformes	0.9718726	Passerellidae	0.99547595			daejun	0.9969759	daejun	0.996975899	2023-10-01	43:55.2	Y
2638.8	2640.4	0	11025	Passeriformes	0.93096477	Passerellidae	0.98804605			daejun	0.993501	daejun	0.993501008	2023-10-01	44:01.8	Y
2643.6	2646.2	0	11025	Passeriformes	0.9722019	Passerellidae	0.9955741			daejun	0.99699783	daejun	0.996997833	2023-10-01	44:06.6	Y
1574.4	1576.2	0	11025	Passeriformes	0.9701689	Passerellidae	0.9945845	DESP	0.98467165	savspa	0.98508066	savspa	0.985080659	2023-10-01	26:17.4	Y
2931	2932.8	0	11025	Charadriiformes	0.97777736	Scolopacidae	0.9949096			shbdow	0.9998976	shbdow	0.999897599	2023-10-01	48:53.0	Y
1981	1982.8	0	11025	Passeriformes	0.9690758	Passerellidae	0.99375945	DESP	0.9786694	savspa	0.9715632	savspa	0.97156322	2023-10-02	33:03.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
752.2	753.8	0	11025	Passeriformes	0.97132504	Passerellidae	0.9946091	SFHS	0.98756474	whtspa	0.9978231	whtspa	0.997823119	2023-10-02	12:34.2	Y
1692.8	1694.4	0	11025	Passeriformes	0.9721975	Turdidae	0.95863646			amerob	0.99999964	amerob	0.999999642	2023-10-02	28:15.8	Y
2097.6	2099.4	0	11025	Passeriformes	0.97032106	Passerellidae	0.9952769			daejun	0.9968472	daejun	0.996847212	2023-10-02	35:00.6	Y
2110	2113.8	0	11025	Passeriformes	0.9720767	Passerellidae	0.9955746			daejun	0.99700826	daejun	0.997008264	2023-10-02	35:13.0	Y
3539.4	3541	0	11025	Passeriformes	0.96413636	Passerellidae	0.98137844			daejun	0.9904847	daejun	0.990484715	2023-10-02	59:02.4	Y
3541.8	3543.4	0	11025	Passeriformes	0.9715943	Passerellidae	0.99539953			daejun	0.99687	daejun	0.996869981	2023-10-02	59:04.8	Y
879.4	881.4	0	11025	Passeriformes	0.97176695	Passerellidae	0.99550265			daejun	0.9969489	daejun	0.996948898	2023-10-03	14:41.4	Y
473.8	475	0	11025	Passeriformes	0.96574605	Turdidae	0.93444914	THSH	0.9160074	herthr	0.9697318	herthr	0.969731808	2023-10-04	07:55.8	Y
2956.4	2958.2	0	11025	Passeriformes	0.97191715	Passerellidae	0.99514246	DESP	0.99127793	savspa	0.99791557	savspa	0.997915566	2023-10-05	49:20.4	Y
2631.4	2633.2	0	11025	Passeriformes	0.97192985	Passerellidae	0.99545103	SFHS	0.99000496	whtspa	0.998543	whtspa	0.998543024	2023-10-05	43:55.4	Y
2456.2	2458	0	11025	Passeriformes	0.9654264	Passerellidae	0.9943797			daejun	0.9964071	daejun	0.996407092	2023-10-07	40:59.2	Y
189	191	0	11025	Passeriformes	0.97192943	Passerellidae	0.9950347	DESP	0.9891354	savspa	0.9958787	savspa	0.995878696	2023-10-07	03:11.0	Y
2497.2	2498.8	0	11025	Passeriformes	0.9699753	Turdidae	0.95547915	THSH	0.9404551	herthr	0.9999981	herthr	0.999998093	2023-10-09	41:40.2	Y
2676.8	2678.4	0	11025	Passeriformes	0.95558244	Turdidae	0.9303841	THSH	0.90342534	herthr	0.99999666	herthr	0.999996662	2023-10-10	44:38.8	Y
1337	1338.6	0	11025	Passeriformes	0.97197646	Passerellidae	0.9954848			daejun	0.9969118	daejun	0.996911824	2023-10-10	22:21.0	Y
3286.8	3288.6	0	11025	Passeriformes	0.9718989	Passerellidae	0.99539447	SFHS	0.9898867	whtspa	0.9983979	whtspa	0.998397887	2023-10-10	54:50.8	Y
196.8	198.6	0	11025	Passeriformes	0.97087497	Passerellidae	0.994558	SFHS	0.98865336	whtspa	0.99814236	whtspa	0.998142362	2023-10-10	03:18.8	Y
946.6	948.2	0	11025	Passeriformes	0.9415428	Passerellidae	0.9872765	SFHS	0.9480721	whtspa	0.89371395	whtspa	0.893713951	2023-10-10	15:48.6	Y
1778.6	1780.4	0	11025	Passeriformes	0.97216344	Passerellidae	0.9954749	SFHS	0.9897782	whtspa	0.9982937	whtspa	0.998293698	2023-10-10	29:40.6	Y
1895.8	1897.4	0	11025	Passeriformes	0.9702997	Passerellidae	0.9937874	HSSP	0.9906571	whcspa	0.991595	whcspa	0.99159497	2023-10-12	31:38.8	Y
73.4	74.8	0	11025	Passeriformes	0.96794623	Passerellidae	0.9937122	SFHS	0.9806113	whtspa	0.9881911	whtspa	0.988191128	2023-10-12	01:16.4	Y
416.2	418	0	11025	Passeriformes	0.9706085	Passerellidae	0.9952931	SFHS	0.98933905	whtspa	0.99761754	whtspa	0.997617543	2023-10-12	06:58.2	Y
438.8	440.6	0	11025	Passeriformes	0.97141266	Passerellidae	0.9950046	SFHS	0.98687255	whtspa	0.9974426	whtspa	0.997442603	2023-10-12	07:20.8	Y
3107.6	3109.4	0	11025	Passeriformes	0.97210705	Passerellidae	0.99540126	SFHS	0.9896917	whtspa	0.99812573	whtspa	0.998125732	2023-10-12	51:47.6	Y
2265.2	2266.8	0	11025	Passeriformes	0.97217304	Passerellidae	0.9955695			daejun	0.99700207	daejun	0.997002065	2023-10-12	37:47.2	Y
2735	2736.6	0	11025	Charadriiformes	0.9814354	Scolopacidae	0.9956768			greyel	0.9997708	greyel	0.99977082	2023-10-15	45:37.0	Y
2742.6	2744.4	0	11025	Charadriiformes	0.98145676	Scolopacidae	0.99569464			greyel	0.999752	greyel	0.999751985	2023-10-15	45:44.6	Y
2749.8	2751.6	0	11025	Charadriiformes	0.9813028	Scolopacidae	0.9955979			greyel	0.99966407	greyel	0.999664068	2023-10-15	45:51.8	Y
2757.8	2759.4	0	11025	Charadriiformes	0.9813436	Scolopacidae	0.9956053			greyel	0.99959165	greyel	0.999591649	2023-10-15	45:59.8	Y
2764.8	2766	0	11025	Charadriiformes	0.98109347	Scolopacidae	0.9955069			greyel	0.9991899	greyel	0.999189913	2023-10-15	46:06.8	Y
2785.2	2786.8	0	11025	Charadriiformes	0.98085636	Scolopacidae	0.99540025			greyel	0.99958915	greyel	0.999589145	2023-10-15	46:27.2	Y
3049.2	3051	0	11025	Passeriformes	0.9716095	Passerellidae	0.995378	DESP	0.991288	savspa	0.9973726	savspa	0.997372627	2023-10-15	50:51.2	Y
2550.4	2552.2	0	11025	Passeriformes	0.9701293	Passerellidae	0.9941744	SFHS	0.983521	whtspa	0.99726856	whtspa	0.997268558	2023-10-17	42:32.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1318.6	1320.4	0	11025	Passeriformes	0.9715755	Parulidae	0.94877386			bawwar	0.99999297	bawwar	0.999992967	2023-09-20	07:00.6	Y
1318.6	1320.4	0	11025	Passeriformes	0.9715755	Parulidae	0.94877386			bawwar	0.99999297	bawwar	0.999992967	2023-09-20	07:00.6	Y
3351.2	3352.8	0	11025	Passeriformes	0.97164404	Parulidae	0.9517665			bawwar	0.9999652	bawwar	0.999965191	2023-09-20	40:53.2	Y
3351.2	3352.8	0	11025	Passeriformes	0.97164404	Parulidae	0.9517665			bawwar	0.9999652	bawwar	0.999965191	2023-09-20	40:53.2	Y
1332.4	1334.2	0	11025	Passeriformes	0.9719107	Passerellidae	0.99538064	SFHS	0.9897389	whtspa	0.9984971	whtspa	0.998497128	2023-09-20	07:14.4	Y
1332.4	1334.2	0	11025	Passeriformes	0.9719107	Passerellidae	0.99538064	SFHS	0.9897389	whtspa	0.9984971	whtspa	0.998497128	2023-09-20	07:14.4	Y
1144.6	1146.4	0	11025	Passeriformes	0.97199214	Passerellidae	0.9953709	SFHS	0.9896062	whtspa	0.9984268	whtspa	0.998426795	2023-09-21	04:07.6	Y
1144.6	1146.4	0	11025	Passeriformes	0.97199214	Passerellidae	0.9953709	SFHS	0.9896062	whtspa	0.9984268	whtspa	0.998426795	2023-09-21	04:07.6	Y
856.6	858.4	0	11025	Passeriformes	0.97014296	Parulidae	0.94968325	BZWA	0.9775083	comyel	0.99997735	comyel	0.99997735	2023-09-22	57:18.6	Y
856.6	858.4	0	11025	Passeriformes	0.97014296	Parulidae	0.94968325	BZWA	0.9775083	comyel	0.99997735	comyel	0.99997735	2023-09-22	57:18.6	Y
987.4	989	0	11025	Passeriformes	0.9715456	Passerellidae	0.99524325	SFHS	0.9885671	whtspa	0.997364	whtspa	0.997363985	2023-09-22	59:29.4	Y
987.4	989	0	11025	Passeriformes	0.9715456	Passerellidae	0.99524325	SFHS	0.9885671	whtspa	0.997364	whtspa	0.997363985	2023-09-22	59:29.4	Y
723.6	725.4	0	11025	Passeriformes	0.9690832	Passerellidae	0.9949687			daejun	0.99625933	daejun	0.996259332	2023-09-22	53:03.6	Y
1803.8	1805.6	0	11025	Passeriformes	0.9701071	Passerellidae	0.99515957			daejun	0.9967687	daejun	0.996768713	2023-09-22	11:03.8	Y
800.2	802	0	11025	Passeriformes	0.9720452	Passerellidae	0.99542373	SFHS	0.98985744	whtspa	0.9983897	whtspa	0.998389721	2023-09-22	54:20.2	Y
1199.2	1201	0	11025	Passeriformes	0.97181344	Passerellidae	0.9954905	SFHS	0.98961467	whtspa	0.9968587	whtspa	0.996858716	2023-09-22	00:59.2	Y
723.6	725.4	0	11025	Passeriformes	0.9690832	Passerellidae	0.9949687			daejun	0.99625933	daejun	0.996259332	2023-09-22	53:03.6	Y
800.2	802	0	11025	Passeriformes	0.9720452	Passerellidae	0.99542373	SFHS	0.98985744	whtspa	0.9983897	whtspa	0.998389721	2023-09-22	54:20.2	Y
1199.2	1201	0	11025	Passeriformes	0.97181344	Passerellidae	0.9954905	SFHS	0.98961467	whtspa	0.9968587	whtspa	0.996858716	2023-09-22	00:59.2	Y
1803.8	1805.6	0	11025	Passeriformes	0.9701071	Passerellidae	0.99515957			daejun	0.9967687	daejun	0.996768713	2023-09-22	11:03.8	Y
1418.8	1420.6	0	11025	Passeriformes	0.97216326	Parulidae	0.95635605			bawwar	0.99999976	bawwar	0.999999762	2023-09-22	04:40.8	Y
1418.8	1420.6	0	11025	Passeriformes	0.97216326	Parulidae	0.95635605			bawwar	0.99999976	bawwar	0.999999762	2023-09-22	04:40.8	Y
2927.4	2928.8	0	11025	Passeriformes	0.94556403	Passerellidae	0.98198384	DESP	0.9531683	savspa	0.9811996	savspa	0.981199622	2023-09-22	29:49.4	Y
2927.4	2928.8	0	11025	Passeriformes	0.94556403	Passerellidae	0.98198384	DESP	0.9531683	savspa	0.9811996	savspa	0.981199622	2023-09-22	29:49.4	Y
2543.6	2545.4	0	11025	Passeriformes	0.9717914	Passerellidae	0.9951061	SFHS	0.9890792	whtspa	0.9980064	whtspa	0.998006403	2023-09-22	23:25.6	Y
2543.6	2545.4	0	11025	Passeriformes	0.9717914	Passerellidae	0.9951061	SFHS	0.9890792	whtspa	0.9980064	whtspa	0.998006403	2023-09-22	23:25.6	Y
1237.8	1239.6	0	11025	Passeriformes	0.97191095	Passerellidae	0.9952656	DESP	0.9912879	savspa	0.99807775	savspa	0.99807775	2023-09-22	01:39.8	Y
1237.8	1239.6	0	11025	Passeriformes	0.97191095	Passerellidae	0.9952656	DESP	0.9912879	savspa	0.99807775	savspa	0.99807775	2023-09-22	01:39.8	Y
577.2	578.6	0	11025	Passeriformes	0.9667673	Passerellidae	0.9939242	SFHS	0.98266304	whtspa	0.99683326	whtspa	0.996833265	2023-09-22	50:39.2	Y
577.2	578.6	0	11025	Passeriformes	0.9667673	Passerellidae	0.9939242	SFHS	0.98266304	whtspa	0.99683326	whtspa	0.996833265	2023-09-22	50:39.2	Y
2636.6	2638.4	0	11025	Passeriformes	0.9721264	Passerellidae	0.9954933	SFHS	0.9898016	whtspa	0.99794155	whtspa	0.997941554	2023-09-22	24:58.6	Y
2636.6	2638.4	0	11025	Passeriformes	0.9721264	Passerellidae	0.9954933	SFHS	0.9898016	whtspa	0.99794155	whtspa	0.997941554	2023-09-22	24:58.6	Y
2876	2877.6	0	11025	Passeriformes	0.9719082	Passerellidae	0.9952828	DESP	0.98642135	savspa	0.9932172	savspa	0.99321717	2023-09-23	28:58.0	Y
2876	2877.6	0	11025	Passeriformes	0.9719082	Passerellidae	0.9952828	DESP	0.98642135	savspa	0.9932172	savspa	0.99321717	2023-09-23	28:58.0	Y
1845	1846.4	0	11025	Passeriformes	0.9719863	Turdidae	0.9589111	THSH	0.94578415	herthr	0.9999989	herthr	0.999998927	2023-09-23	11:49.0	Y
1845	1846.4	0	11025	Passeriformes	0.9719863	Turdidae	0.9589111	THSH	0.94578415	herthr	0.9999989	herthr	0.999998927	2023-09-23	11:49.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1939.6	1941.4	0	11025	Passeriformes	0.9720981	Passerellidae	0.9954181	SFHS	0.98968875	whtspa	0.9982217	whtspa	0.998221695	2023-09-23	13:23.6	Y
1939.6	1941.4	0	11025	Passeriformes	0.9720981	Passerellidae	0.9954181	SFHS	0.98968875	whtspa	0.9982217	whtspa	0.998221695	2023-09-23	13:23.6	Y
411.8	413	0	11025	Passeriformes	0.9713094	Parulidae	0.9546934			bawwar	0.9938822	bawwar	0.993882179	2023-09-23	45:53.8	Y
411.8	413	0	11025	Passeriformes	0.9713094	Parulidae	0.9546934			bawwar	0.9938822	bawwar	0.993882179	2023-09-23	45:53.8	Y
2128	2129.6	0	11025	Passeriformes	0.9690317	Parulidae	0.9462639	SBUF	0.9168049	palwar	0.99999976	palwar	0.999999762	2023-09-23	14:30.0	Y
2128	2129.6	0	11025	Passeriformes	0.9690317	Parulidae	0.9462639	SBUF	0.9168049	palwar	0.99999976	palwar	0.999999762	2023-09-23	14:30.0	Y
696.2	698	0	11025	Passeriformes	0.9696489	Parulidae	0.95047134	BZWA	0.98217946	comyel	0.99999964	comyel	0.999999642	2023-09-24	50:38.2	Y
696.2	698	0	11025	Passeriformes	0.9696489	Parulidae	0.95047134	BZWA	0.98217946	comyel	0.99999964	comyel	0.999999642	2023-09-24	50:38.2	Y
306.8	308.6	0	11025	Passeriformes	0.96948516	Passerellidae	0.9948271			daejun	0.99617755	daejun	0.996177554	2023-09-24	44:08.8	Y
306.8	308.6	0	11025	Passeriformes	0.96948516	Passerellidae	0.9948271			daejun	0.99617755	daejun	0.996177554	2023-09-24	44:08.8	Y
245	246.6	0	11025	Passeriformes	0.9717485	Passerellidae	0.9951154	SFHS	0.98904234	whtspa	0.99776113	whtspa	0.99776113	2023-09-24	43:07.0	Y
245	246.6	0	11025	Passeriformes	0.9717485	Passerellidae	0.9951154	SFHS	0.98904234	whtspa	0.99776113	whtspa	0.99776113	2023-09-24	43:07.0	Y
899.4	900.6	0	11025	Passeriformes	0.94923544	Turdidae	0.93425953	THSH	0.90999395	herthr	0.9999974	herthr	0.999997377	2023-09-24	54:02.4	Y
899.4	900.6	0	11025	Passeriformes	0.94923544	Turdidae	0.93425953	THSH	0.90999395	herthr	0.9999974	herthr	0.999997377	2023-09-24	54:02.4	Y
936.4	937.8	0	11025	Passeriformes	0.9705917	Turdidae	0.95703053	THSH	0.943316	herthr	0.9999989	herthr	0.999998927	2023-09-24	54:39.4	Y
936.4	937.8	0	11025	Passeriformes	0.9705917	Turdidae	0.95703053	THSH	0.943316	herthr	0.9999989	herthr	0.999998927	2023-09-24	54:39.4	Y
1581	1582.2	0	11025	Passeriformes	0.95497495	Turdidae	0.939548	THSH	0.9151464	herthr	0.9999945	herthr	0.999994516	2023-09-24	05:24.0	Y
966	967.6	0	11025	Passeriformes	0.97217065	Passerellidae	0.9955188	SFHS	0.9900518	whtspa	0.99827015	whtspa	0.998270154	2023-09-24	55:09.0	Y
966	967.6	0	11025	Passeriformes	0.97217065	Passerellidae	0.9955188	SFHS	0.9900518	whtspa	0.99827015	whtspa	0.998270154	2023-09-24	55:09.0	Y
1581	1582.2	0	11025	Passeriformes	0.95497495	Turdidae	0.939548	THSH	0.9151464	herthr	0.9999945	herthr	0.999994516	2023-09-24	05:24.0	Y
3080.8	3082.2	0	11025	Charadriiformes	0.98113364	Scolopacidae	0.9954958			shbdow	0.99947685	shbdow	0.99947685	2023-09-24	27:20.8	Y
3080.8	3082.2	0	11025	Charadriiformes	0.98113364	Scolopacidae	0.9954958			shbdow	0.99947685	shbdow	0.99947685	2023-09-24	27:20.8	Y
1638.2	1640	0	11025	Passeriformes	0.9722197	Parulidae	0.9564025			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	03:20.2	Y
1638.2	1640	0	11025	Passeriformes	0.9722197	Parulidae	0.9564025			bawwar	0.9999999	bawwar	0.999999881	2023-09-24	03:20.2	Y
2868.4	2870	0	11025	Passeriformes	0.9572959	Parulidae	0.9354667	SBUF	0.9070247	palwar	0.9999994	palwar	0.999999404	2023-09-24	23:50.4	Y
2868.4	2870	0	11025	Passeriformes	0.9572959	Parulidae	0.9354667	SBUF	0.9070247	palwar	0.9999994	palwar	0.999999404	2023-09-24	23:50.4	Y
1880.4	1881.6	0	11025	Passeriformes	0.97068554	Parulidae	0.9448034	MWAR	0.99817204	mouwar	0.90557545	mouwar	0.905575454	2023-09-24	07:22.4	Y
1797.4	1798.8	0	11025	Passeriformes	0.9721471	Passerellidae	0.99525946	DESP	0.9898189	savspa	0.98743457	savspa	0.987434566	2023-09-24	05:59.4	Y
3453	3454.6	0	11025	Passeriformes	0.9716328	Passerellidae	0.995076	SFHS	0.9890616	whtspa	0.9927528	whtspa	0.99275279	2023-09-24	33:35.0	Y
3211	3212.6	0	11025	Passeriformes	0.96932006	Turdidae	0.95667166	THSH	0.9435986	swathr	0.8787381	swathr	0.878738105	2023-09-25	29:33.0	Y
3211	3212.6	0	11025	Passeriformes	0.96932006	Turdidae	0.95667166	THSH	0.9435986	swathr	0.8787381	swathr	0.878738105	2023-09-25	29:33.0	Y
3246.2	3247.8	0	11025	Passeriformes	0.9721648	Passerellidae	0.99550027	SFHS	0.9900574	whtspa	0.9985703	whtspa	0.998570323	2023-09-25	30:08.2	Y
3246.2	3247.8	0	11025	Passeriformes	0.9721648	Passerellidae	0.99550027	SFHS	0.9900574	whtspa	0.9985703	whtspa	0.998570323	2023-09-25	30:08.2	Y
764	765.8	0	11025	Passeriformes	0.9703232	Passerellidae	0.995125			daejun	0.9967803	daejun	0.996780276	2023-09-25	46:44.0	Y
790.6	792.4	0	11025	Passeriformes	0.9636001	Passerellidae	0.9905184			daejun	0.9943815	daejun	0.994381487	2023-09-25	47:10.6	Y
827.4	830	0	11025	Passeriformes	0.9686586	Passerellidae	0.9922388			daejun	0.9958897	daejun	0.995889723	2023-09-25	47:47.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
837.8	842.2	0	11025	Passeriformes	0.97212595	Passerellidae	0.9955497			daejun	0.99699426	daejun	0.996994257	2023-09-25	47:57.8	Y
853.4	858	0	11025	Passeriformes	0.9722373	Passerellidae	0.9955916			daejun	0.99701166	daejun	0.997011662	2023-09-25	48:13.4	Y
893.8	895.4	0	11025	Passeriformes	0.9696899	Passerellidae	0.9946753			daejun	0.99652064	daejun	0.996520638	2023-09-25	48:53.8	Y
913.4	917.8	0	11025	Passeriformes	0.97223556	Passerellidae	0.9955914			daejun	0.99701214	daejun	0.997012138	2023-09-25	49:13.4	Y
980.4	981.8	0	11025	Passeriformes	0.9721286	Passerellidae	0.9954405			daejun	0.99695045	daejun	0.996950448	2023-09-25	50:20.4	Y
995.2	997	0	11025	Passeriformes	0.9720835	Passerellidae	0.99551266			daejun	0.9969831	daejun	0.996983111	2023-09-25	50:35.2	Y
1020.2	1022	0	11025	Passeriformes	0.9719196	Passerellidae	0.99549603			daejun	0.99698	daejun	0.996980011	2023-09-25	51:00.2	Y
1054.8	1056.4	0	11025	Passeriformes	0.97205395	Passerellidae	0.99545246			daejun	0.9969025	daejun	0.996902525	2023-09-25	51:34.8	Y
1081.4	1083.2	0	11025	Passeriformes	0.97221035	Passerellidae	0.99557906			daejun	0.9970048	daejun	0.997004807	2023-09-25	52:01.4	Y
1099.4	1102	0	11025	Passeriformes	0.8960826	Passerellidae	0.90033305			daejun	0.896642	daejun	0.896642029	2023-09-25	52:19.4	Y
1114.6	1116.2	0	11025	Passeriformes	0.9720024	Passerellidae	0.99551046			daejun	0.9969501	daejun	0.99695009	2023-09-25	52:34.6	Y
1123.2	1126	0	11025	Passeriformes	0.9718793	Passerellidae	0.99551755			daejun	0.99694544	daejun	0.996945441	2023-09-25	52:43.2	Y
1510.4	1513.4	0	11025	Passeriformes	0.9721967	Passerellidae	0.99557745			daejun	0.9969995	daejun	0.996999502	2023-09-25	59:10.4	Y
1531.6	1533	0	11025	Passeriformes	0.97135687	Passerellidae	0.9953212			daejun	0.9962829	daejun	0.996282876	2023-09-25	59:31.6	Y
518.4	520.2	0	11025	Passeriformes	0.9720782	Passerellidae	0.99538994	DESP	0.9916134	savspa	0.9982526	savspa	0.998252571	2023-09-25	42:40.4	Y
518.4	520.2	0	11025	Passeriformes	0.9720782	Passerellidae	0.99538994	DESP	0.9916134	savspa	0.9982526	savspa	0.998252571	2023-09-25	42:40.4	Y
762	763.6	0	11025	Passeriformes	0.9679598	Turdidae	0.9528796	THSH	0.93913656	swathr	0.8735937	swathr	0.873593688	2023-09-25	46:44.0	Y
762	763.6	0	11025	Passeriformes	0.9679598	Turdidae	0.9528796	THSH	0.93913656	swathr	0.8735937	swathr	0.873593688	2023-09-25	46:44.0	Y
929.6	931.4	0	11025	Passeriformes	0.97222364	Passerellidae	0.9955259	DESP	0.9918704	savspa	0.9984249	savspa	0.998424888	2023-09-25	49:31.6	Y
929.6	931.4	0	11025	Passeriformes	0.97222364	Passerellidae	0.9955259	DESP	0.9918704	savspa	0.9984249	savspa	0.998424888	2023-09-25	49:31.6	Y
1490.4	1492	0	11025	Passeriformes	0.96554804	Turdidae	0.94855654	THSH	0.9340528	swathr	0.85875386	swathr	0.85875386	2023-09-25	58:52.4	Y
1490.4	1492	0	11025	Passeriformes	0.96554804	Turdidae	0.94855654	THSH	0.9340528	swathr	0.85875386	swathr	0.85875386	2023-09-25	58:52.4	Y
2986.8	2988.6	0	11025	Passeriformes	0.97139376	Passerellidae	0.99511033	SFHS	0.98888063	whtspa	0.995063	whtspa	0.995063007	2023-09-25	23:48.8	Y
2986.8	2988.6	0	11025	Passeriformes	0.97139376	Passerellidae	0.99511033	SFHS	0.98888063	whtspa	0.995063	whtspa	0.995063007	2023-09-25	23:48.8	Y
1036.2	1038	0	11025	Passeriformes	0.97048014	Passerellidae	0.9900675	DESP	0.9823047	savspa	0.9882961	savspa	0.988296092	2023-09-25	51:18.2	Y
1036.2	1038	0	11025	Passeriformes	0.97048014	Passerellidae	0.9900675	DESP	0.9823047	savspa	0.9882961	savspa	0.988296092	2023-09-25	51:18.2	Y
1609.8	1611.4	0	11025	Passeriformes	0.9719001	Turdidae	0.9593598	THSH	0.94670165	swathr	0.8831776	swathr	0.883177578	2023-09-25	00:51.8	Y
1609.8	1611.4	0	11025	Passeriformes	0.9719001	Turdidae	0.9593598	THSH	0.94670165	swathr	0.8831776	swathr	0.883177578	2023-09-25	00:51.8	Y
240.8	242.2	0	11025	Passeriformes	0.9526093	Turdidae	0.9289684	THSH	0.90031874	herthr	0.9999945	herthr	0.999994516	2023-09-25	38:02.8	Y
240.8	242.2	0	11025	Passeriformes	0.9526093	Turdidae	0.9289684	THSH	0.90031874	herthr	0.9999945	herthr	0.999994516	2023-09-25	38:02.8	Y
2591.2	2593	0	11025	Passeriformes	0.9721788	Passerellidae	0.99545777	DESP	0.99180424	savspa	0.99835664	savspa	0.99835664	2023-09-26	15:13.2	Y
2591.2	2593	0	11025	Passeriformes	0.9721788	Passerellidae	0.99545777	DESP	0.99180424	savspa	0.99835664	savspa	0.99835664	2023-09-26	15:13.2	Y
3436	3437.4	0	11025	Charadriiformes	0.9521006	Scolopacidae	0.9825754			leasan	0.89922833	leasan	0.899228334	2023-09-27	29:19.0	Y
1192.4	1194.2	0	11025	Passeriformes	0.95839804	Turdidae	0.9483075	THSH	0.9341325	swathr	0.8713024	swathr	0.871302426	2023-09-26	51:55.4	Y
2224.8	2226.2	0	11025	Passeriformes	0.9362774	Turdidae	0.89006937	THSH	0.83627737	herthr	0.99999356	herthr	0.999993563	2023-09-28	07:07.8	Y
2224.8	2226.2	0	11025	Passeriformes	0.9362774	Turdidae	0.89006937	THSH	0.83627737	herthr	0.99999356	herthr	0.999993563	2023-09-28	07:07.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2559.8	2561.4	0	11025	Passeriformes	0.9703344	Turdidae	0.95404005			amerob	0.9999813	amerob	0.999981284	2023-09-28	10:39.8	Y
2559.8	2561.4	0	11025	Passeriformes	0.9703344	Turdidae	0.95404005			amerob	0.9999813	amerob	0.999981284	2023-09-28	10:39.8	Y
2006.2	2008	0	11025	Passeriformes	0.9691682	Parulidae	0.9514533	BZWA	0.9237304	comyel	0.9999722	comyel	0.999972224	2023-09-29	01:28.2	Y
2006.2	2008	0	11025	Passeriformes	0.9691682	Parulidae	0.9514533	BZWA	0.9237304	comyel	0.9999722	comyel	0.999972224	2023-09-29	01:28.2	Y
890.8	892.4	0	11025	Passeriformes	0.9711599	Passerellidae	0.9934105	SFHS	0.984697	whtspa	0.99409556	whtspa	0.994095564	2023-09-29	42:52.8	Y
890.8	892.4	0	11025	Passeriformes	0.9711599	Passerellidae	0.9934105	SFHS	0.984697	whtspa	0.99409556	whtspa	0.994095564	2023-09-29	42:52.8	Y
2923.8	2925.4	0	11025	Passeriformes	0.95643854	Turdidae	0.9355632	THSH	0.90846986	herthr	0.99999774	herthr	0.999997735	2023-09-29	16:47.8	Y
2923.8	2925.4	0	11025	Passeriformes	0.95643854	Turdidae	0.9355632	THSH	0.90846986	herthr	0.99999774	herthr	0.999997735	2023-09-29	16:47.8	Y
3287.8	3289.6	0	11025	Passeriformes	0.97214013	Passerellidae	0.9955004	SFHS	0.9900007	whtspa	0.997001	whtspa	0.997000992	2023-09-29	22:51.8	Y
3287.8	3289.6	0	11025	Passeriformes	0.97214013	Passerellidae	0.9955004	SFHS	0.9900007	whtspa	0.997001	whtspa	0.997000992	2023-09-29	22:51.8	Y
2634	2635.4	0	11025	Passeriformes	0.94110215	Turdidae	0.9266662	THSH	0.9008905	herthr	0.9999877	herthr	0.999987721	2023-09-29	09:54.0	Y
2634	2635.4	0	11025	Passeriformes	0.94110215	Turdidae	0.9266662	THSH	0.9008905	herthr	0.9999877	herthr	0.999987721	2023-09-29	09:54.0	Y
1927.6	1929	0	11025	Passeriformes	0.9522182	Turdidae	0.9132283	THSH	0.8734455	herthr	0.99993515	herthr	0.99993515	2023-09-29	58:09.6	Y
1927.6	1929	0	11025	Passeriformes	0.9522182	Turdidae	0.9132283	THSH	0.8734455	herthr	0.99993515	herthr	0.99993515	2023-09-29	58:09.6	Y
2383.4	2384.6	0	11025	Passeriformes	0.95415586	Turdidae	0.9271425	THSH	0.89016813	herthr	0.9999964	herthr	0.999996424	2023-09-30	05:46.4	Y
2383.4	2384.6	0	11025	Passeriformes	0.95415586	Turdidae	0.9271425	THSH	0.89016813	herthr	0.9999964	herthr	0.999996424	2023-09-30	05:46.4	Y
3354.2	3355.8	0	11025	Passeriformes	0.9349015	Turdidae	0.9027999	THSH	0.86232924	herthr	0.9999682	herthr	0.999968171	2023-09-30	21:57.2	Y
3414.6	3415.8	0	11025	Passeriformes	0.9684257	Turdidae	0.93784636	THSH	0.9197446	herthr	0.99999213	herthr	0.999992132	2023-09-30	22:57.6	Y
1095.8	1097.2	0	11025	Passeriformes	0.9707611	Passerellidae	0.994701	DESP	0.9912511	savspa	0.99826294	savspa	0.998262942	2023-09-29	44:18.8	Y
3354.2	3355.8	0	11025	Passeriformes	0.9349015	Turdidae	0.9027999	THSH	0.86232924	herthr	0.9999682	herthr	0.999968171	2023-09-30	21:57.2	Y
3414.6	3415.8	0	11025	Passeriformes	0.9684257	Turdidae	0.93784636	THSH	0.9197446	herthr	0.99999213	herthr	0.999992132	2023-09-30	22:57.6	Y
1095.8	1097.2	0	11025	Passeriformes	0.9707611	Passerellidae	0.994701	DESP	0.9912511	savspa	0.99826294	savspa	0.998262942	2023-09-29	44:18.8	Y
2289.4	2291	0	11025	Passeriformes	0.9722316	Parulidae	0.95641685			bawwar	0.99999976	bawwar	0.999999762	2023-09-30	04:11.4	Y
2289.4	2291	0	11025	Passeriformes	0.9722316	Parulidae	0.95641685			bawwar	0.99999976	bawwar	0.999999762	2023-09-30	04:11.4	Y
2087.2	2088.8	0	11025	Passeriformes	0.9719302	Passerellidae	0.9954951			daejun	0.99691844	daejun	0.99691844	2023-09-30	00:49.2	Y
2087.2	2088.8	0	11025	Passeriformes	0.9719302	Passerellidae	0.9954951			daejun	0.99691844	daejun	0.99691844	2023-09-30	00:49.2	Y
74.2	75.8	0	11025	Passeriformes	0.97199494	Parulidae	0.95482063	BZWA	0.9819743	comyel	0.9999999	comyel	0.999999881	2023-09-30	27:16.2	Y
74.2	75.8	0	11025	Passeriformes	0.97199494	Parulidae	0.95482063	BZWA	0.9819743	comyel	0.9999999	comyel	0.999999881	2023-09-30	27:16.2	Y
682.2	684	0	11025	Passeriformes	0.9722276	Parulidae	0.9563759			bawwar	0.99999976	bawwar	0.999999762	2023-09-30	37:24.2	Y
682.2	684	0	11025	Passeriformes	0.9722276	Parulidae	0.9563759			bawwar	0.99999976	bawwar	0.999999762	2023-09-30	37:24.2	Y
2746.4	2747.6	0	11025	Passeriformes	0.95526034	Turdidae	0.91639364	THSH	0.8834029	herthr	0.9999783	herthr	0.999978304	2023-09-30	11:49.4	Y
2746.4	2747.6	0	11025	Passeriformes	0.95526034	Turdidae	0.91639364	THSH	0.8834029	herthr	0.9999783	herthr	0.999978304	2023-09-30	11:49.4	Y
3045.4	3046.6	0	11025	Passeriformes	0.95619	Turdidae	0.92427236	THSH	0.89782983	herthr	0.9999969	herthr	0.999996901	2023-09-30	16:48.4	Y
3045.4	3046.6	0	11025	Passeriformes	0.95619	Turdidae	0.92427236	THSH	0.89782983	herthr	0.9999969	herthr	0.999996901	2023-09-30	16:48.4	Y
2637	2638.8	0	11025	Passeriformes	0.9714505	Passerellidae	0.9943389	DESP	0.98997307	savspa	0.9965035	savspa	0.996503472	2023-09-30	10:00.0	Y
2637	2638.8	0	11025	Passeriformes	0.9714505	Passerellidae	0.9943389	DESP	0.98997307	savspa	0.9965035	savspa	0.996503472	2023-09-30	10:00.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
668.6	669.8	0	11025	Passeriformes	0.9715702	Turdidae	0.9234247			amerob	0.99924445	amerob	0.999244452	2023-09-30	35:08.6	Y
673.6	675	0	11025	Passeriformes	0.9649221	Turdidae	0.9333326			amerob	0.99707246	amerob	0.997072458	2023-09-30	35:13.6	Y
668.6	669.8	0	11025	Passeriformes	0.9715702	Turdidae	0.9234247			amerob	0.99924445	amerob	0.999244452	2023-09-30	35:08.6	Y
1301.4	1302.6	0	11025	Passeriformes	0.963983	Turdidae	0.90761			amerob	0.9998425	amerob	0.999842525	2023-09-30	45:41.4	Y
673.6	675	0	11025	Passeriformes	0.9649221	Turdidae	0.9333326			amerob	0.99707246	amerob	0.997072458	2023-09-30	35:13.6	Y
1301.4	1302.6	0	11025	Passeriformes	0.963983	Turdidae	0.90761			amerob	0.9998425	amerob	0.999842525	2023-09-30	45:41.4	Y
12.6	17.2	0	11025	Passeriformes	0.97223794	Passerellidae	0.99559253			daejun	0.9970126	daejun	0.997012615	2023-09-30	24:12.6	Y
12.6	17.2	0	11025	Passeriformes	0.97223794	Passerellidae	0.99559253			daejun	0.9970126	daejun	0.997012615	2023-09-30	24:12.6	Y
3314	3315.8	0	11025	Passeriformes	0.97196805	Passerellidae	0.9954507	DESP	0.9916543	savspa	0.9983747	savspa	0.998374701	2023-09-30	19:16.0	Y
3314	3315.8	0	11025	Passeriformes	0.97196805	Passerellidae	0.9954507	DESP	0.9916543	savspa	0.9983747	savspa	0.998374701	2023-09-30	19:16.0	Y
1932.8	1934.4	0	11025	Passeriformes	0.96831167	Turdidae	0.9495825	THSH	0.9306647	herthr	0.9999982	herthr	0.999998212	2023-09-30	56:15.8	Y
1932.8	1934.4	0	11025	Passeriformes	0.96831167	Turdidae	0.9495825	THSH	0.9306647	herthr	0.9999982	herthr	0.999998212	2023-09-30	56:15.8	Y
1864	1865.4	0	11025	Charadriiformes	0.98054266	Scolopacidae	0.9952577			shbdow	0.99899894	shbdow	0.99899894	2023-09-30	55:07.0	Y
1864	1865.4	0	11025	Charadriiformes	0.98054266	Scolopacidae	0.9952577			shbdow	0.99899894	shbdow	0.99899894	2023-09-30	55:07.0	Y
152.6	154.2	0	11025	Passeriformes	0.9716367	Passerellidae	0.98878527	DESP	0.9581556	savspa	0.969011	savspa	0.969011009	2023-10-01	26:34.6	Y
152.6	154.2	0	11025	Passeriformes	0.9716367	Passerellidae	0.98878527	DESP	0.9581556	savspa	0.969011	savspa	0.969011009	2023-10-01	26:34.6	Y
861.6	863.4	0	11025	Passeriformes	0.9720972	Passerellidae	0.99524456	SFHS	0.98976994	whtspa	0.9983436	whtspa	0.998343587	2023-10-01	38:23.6	Y
861.6	863.4	0	11025	Passeriformes	0.9720972	Passerellidae	0.99524456	SFHS	0.98976994	whtspa	0.9983436	whtspa	0.998343587	2023-10-01	38:23.6	Y
1174.8	1176.6	0	11025	Passeriformes	0.9722187	Passerellidae	0.9955545	DESP	0.9918914	savspa	0.99847287	savspa	0.998472869	2023-10-01	41:37.8	Y
2923.8	2925.6	0	11025	Passeriformes	0.97043914	Passerellidae	0.9932467	DESP	0.9874379	savspa	0.9882875	savspa	0.988287508	2023-10-02	10:46.8	Y
1174.8	1176.6	0	11025	Passeriformes	0.9722187	Passerellidae	0.9955545	DESP	0.9918914	savspa	0.99847287	savspa	0.998472869	2023-10-01	41:37.8	Y
2923.8	2925.6	0	11025	Passeriformes	0.97043914	Passerellidae	0.9932467	DESP	0.9874379	savspa	0.9882875	savspa	0.988287508	2023-10-02	10:46.8	Y
3211.2	3212.6	0	11025	Passeriformes	0.969047	Turdidae	0.95138264	THSH	0.93218976	herthr	0.9999981	herthr	0.999998093	2023-10-02	15:34.2	Y
3269	3270.6	0	11025	Passeriformes	0.9706552	Turdidae	0.95648557	THSH	0.94184613	herthr	0.9999988	herthr	0.999998808	2023-10-02	16:32.0	Y
3318	3319.8	0	11025	Passeriformes	0.95156014	Turdidae	0.9036823	THSH	0.8445556	herthr	0.99998987	herthr	0.999989867	2023-10-02	17:21.0	Y
1275.4	1276.8	0	11025	Charadriiformes	0.9804552	Scolopacidae	0.9945357			leasan	0.98549557	leasan	0.985495567	2023-10-02	43:18.4	Y
1425.4	1427	0	11025	Charadriiformes	0.9812723	Scolopacidae	0.9954674			leasan	0.9999968	leasan	0.999996781	2023-10-02	45:48.4	Y
1392.4	1394	0	11025	Charadriiformes	0.8882013	Scolopacidae	0.95732105			shbdow	0.98478556	shbdow	0.984785557	2023-10-02	45:15.4	Y
2169.6	2171.2	0	11025	Passeriformes	0.9710245	Passerellidae	0.9948754	SFHS	0.98768985	whtspa	0.9947208	whtspa	0.994720817	2023-10-02	58:12.6	Y
1277.6	1279.6	0	11025	Charadriiformes	0.98128647	Scolopacidae	0.9955314			sposan	0.99950814	sposan	0.999508142	2023-10-02	40:19.6	Y
1277.6	1279.6	0	11025	Charadriiformes	0.98128647	Scolopacidae	0.9955314			sposan	0.99950814	sposan	0.999508142	2023-10-02	40:19.6	Y
385.8	387.6	0	11025	Passeriformes	0.9702563	Passerellidae	0.9924021	DESP	0.9798456	savspa	0.9958657	savspa	0.995865703	2023-10-02	25:28.8	Y
385.8	387.6	0	11025	Passeriformes	0.9702563	Passerellidae	0.9924021	DESP	0.9798456	savspa	0.9958657	savspa	0.995865703	2023-10-02	25:28.8	Y
2944.4	2945.8	0	11025	Passeriformes	0.8365827	Passerellidae	0.92410004			daejun	0.9811157	daejun	0.981115699	2023-10-04	04:04.4	Y
1467.8	1469.6	0	11025	Passeriformes	0.9640253	Parulidae	0.91287893	DEWA	0.9999571	norpar	0.9988544	norpar	0.998854399	2023-10-04	39:27.8	Y
2944.4	2945.8	0	11025	Passeriformes	0.8365827	Passerellidae	0.92410004			daejun	0.9811157	daejun	0.981115699	2023-10-04	04:04.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1467.8	1469.6	0	11025	Passeriformes	0.9640253	Parulidae	0.91287893	DEWA	0.9999571	norpar	0.9988544	norpar	0.998854399	2023-10-04	39:27.8	Y
3395.6	3397.2	0	11025	Charadriiformes	0.9807941	Scolopacidae	0.99500114			greyel	0.9992556	greyel	0.999255598	2023-10-04	11:37.6	Y
3395.6	3397.2	0	11025	Charadriiformes	0.9807941	Scolopacidae	0.99500114			greyel	0.9992556	greyel	0.999255598	2023-10-04	11:37.6	Y
3412.2	3413.4	0	11025	Charadriiformes	0.9680052	Scolopacidae	0.98713696			greyel	0.97848344	greyel	0.978483438	2023-10-04	11:54.2	Y
3412.2	3413.4	0	11025	Charadriiformes	0.9680052	Scolopacidae	0.98713696			greyel	0.97848344	greyel	0.978483438	2023-10-04	11:54.2	Y
1760.8	1762.6	0	11025	Passeriformes	0.96876097	Passerellidae	0.99306035	DESP	0.9878911	savspa	0.9958533	savspa	0.995853305	2023-10-04	44:22.8	Y
1760.8	1762.6	0	11025	Passeriformes	0.96876097	Passerellidae	0.99306035	DESP	0.9878911	savspa	0.9958533	savspa	0.995853305	2023-10-04	44:22.8	Y
1880.6	1882	0	11025	Passeriformes	0.97198933	Parulidae	0.9522879	DEWA	0.99978274	norpar	0.97833085	norpar	0.978330851	2023-10-06	42:20.6	Y
1880.6	1882	0	11025	Passeriformes	0.97198933	Parulidae	0.9522879	DEWA	0.99978274	norpar	0.97833085	norpar	0.978330851	2023-10-06	42:20.6	Y
3516.4	3517.8	0	11025	Passeriformes	0.97125804	Passerellidae	0.9949679	DESP	0.99099356	savspa	0.9975533	savspa	0.997553289	2023-10-06	09:38.4	Y
3516.4	3517.8	0	11025	Passeriformes	0.97125804	Passerellidae	0.9949679	DESP	0.99099356	savspa	0.9975533	savspa	0.997553289	2023-10-06	09:38.4	Y
3110.2	3112.8	0	11025	Charadriiformes	0.9813172	Scolopacidae	0.9956157			shbdow	0.999943	shbdow	0.999943018	2023-10-06	02:52.2	Y
3110.2	3112.8	0	11025	Charadriiformes	0.9813172	Scolopacidae	0.9956157			shbdow	0.999943	shbdow	0.999943018	2023-10-06	02:52.2	Y
2873.2	2874.6	0	11025	Passeriformes	0.9719795	Passerellidae	0.99496704	DESP	0.98941666	savspa	0.99297935	savspa	0.992979348	2023-10-06	58:55.2	Y
2873.2	2874.6	0	11025	Passeriformes	0.9719795	Passerellidae	0.99496704	DESP	0.98941666	savspa	0.99297935	savspa	0.992979348	2023-10-06	58:55.2	Y
2305.2	2307	0	11025	Passeriformes	0.97205395	Passerellidae	0.9954727	SFHS	0.9897077	whtspa	0.9982975	whtspa	0.998297513	2023-10-06	49:27.2	Y
2305.2	2307	0	11025	Passeriformes	0.97205395	Passerellidae	0.9954727	SFHS	0.9897077	whtspa	0.9982975	whtspa	0.998297513	2023-10-06	49:27.2	Y
1647.4	1648.8	0	11025	Passeriformes	0.96831155	Passerellidae	0.9940082	DESP	0.9875075	savspa	0.98587567	savspa	0.985875666	2023-10-07	38:29.4	Y
1647.4	1648.8	0	11025	Passeriformes	0.96831155	Passerellidae	0.9940082	DESP	0.9875075	savspa	0.98587567	savspa	0.985875666	2023-10-07	38:29.4	Y
1719.8	1721.6	0	11025	Passeriformes	0.97219455	Passerellidae	0.9953868	SFHS	0.98938036	whtspa	0.9965502	whtspa	0.996550202	2023-10-07	39:41.8	Y
1719.8	1721.6	0	11025	Passeriformes	0.97219455	Passerellidae	0.9953868	SFHS	0.98938036	whtspa	0.9965502	whtspa	0.996550202	2023-10-07	39:41.8	Y
452	453.4	0	11025	Passeriformes	0.96996593	Parulidae	0.953882	BZWA	0.9790548	comyel	0.99999905	comyel	0.999999046	2023-10-07	18:34.0	Y
452	453.4	0	11025	Passeriformes	0.96996593	Parulidae	0.953882	BZWA	0.9790548	comyel	0.99999905	comyel	0.999999046	2023-10-07	18:34.0	Y
1359.4	1361	0	11025	Passeriformes	0.9721901	Passerellidae	0.9954853	SFHS	0.989956	whtspa	0.9983449	whtspa	0.998344898	2023-10-07	33:42.4	Y
1359.4	1361	0	11025	Passeriformes	0.9721901	Passerellidae	0.9954853	SFHS	0.989956	whtspa	0.9983449	whtspa	0.998344898	2023-10-07	33:42.4	Y
1442.4	1444.2	0	11025	Passeriformes	0.9721219	Passerellidae	0.99555665			daejun	0.9969964	daejun	0.996996403	2023-10-07	35:04.4	Y
1442.4	1444.2	0	11025	Passeriformes	0.9721219	Passerellidae	0.99555665			daejun	0.9969964	daejun	0.996996403	2023-10-07	35:04.4	Y
1149.2	1150.6	0	11025	Passeriformes	0.96871525	Turdidae	0.95165753	THSH	0.9335525	herthr	0.99999344	herthr	0.999993443	2023-10-07	30:11.2	Y
1149.2	1150.6	0	11025	Passeriformes	0.96871525	Turdidae	0.95165753	THSH	0.9335525	herthr	0.99999344	herthr	0.999993443	2023-10-07	30:11.2	Y
817.6	819.6	0	11025	Passeriformes	0.97219783	Passerellidae	0.9953329	SFHS	0.9883455	whtspa	0.99809295	whtspa	0.998092949	2023-10-07	24:39.6	Y
817.6	819.6	0	11025	Passeriformes	0.97219783	Passerellidae	0.9953329	SFHS	0.9883455	whtspa	0.99809295	whtspa	0.998092949	2023-10-07	24:39.6	Y
3482.8	3484.6	0	11025	Passeriformes	0.9721648	Passerellidae	0.99480695	CUPS	0.98398215	chispa	0.94219744	chispa	0.942197442	2023-10-08	07:04.8	Y
3040	3041.8	0	11025	Passeriformes	0.9608909	Passerellidae	0.9938167	SFHS	0.9853888	whtspa	0.99273384	whtspa	0.992733836	2023-10-08	59:42.0	Y
3040	3041.8	0	11025	Passeriformes	0.9608909	Passerellidae	0.9938167	SFHS	0.9853888	whtspa	0.99273384	whtspa	0.992733836	2023-10-08	59:42.0	Y
3482.8	3484.6	0	11025	Passeriformes	0.9721648	Passerellidae	0.99480695	CUPS	0.98398215	chispa	0.94219744	chispa	0.942197442	2023-10-08	07:04.8	Y
727.8	729.2	0	11025	Passeriformes	0.9471687	Turdidae	0.94345546	THSH	0.9253301	herthr	0.9999968	herthr	0.999996781	2023-10-08	21:10.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
727.8	729.2	0	11025	Passeriformes	0.9471687	Turdidae	0.94345546	THSH	0.9253301	herthr	0.9999968	herthr	0.999996781	2023-10-08	21:10.8	Y
1977.4	1978.8	0	11025	Passeriformes	0.96719253	Turdidae	0.94031507	THSH	0.91920805	herthr	0.99999845	herthr	0.99999845	2023-10-08	42:00.4	Y
1977.4	1978.8	0	11025	Passeriformes	0.96719253	Turdidae	0.94031507	THSH	0.91920805	herthr	0.99999845	herthr	0.99999845	2023-10-08	42:00.4	Y
1994.2	1995.8	0	11025	Passeriformes	0.968777	Turdidae	0.95356816	THSH	0.9379722	herthr	0.9999976	herthr	0.999997616	2023-10-08	42:17.2	Y
1994.2	1995.8	0	11025	Passeriformes	0.968777	Turdidae	0.95356816	THSH	0.9379722	herthr	0.9999976	herthr	0.999997616	2023-10-08	42:17.2	Y
2436.8	2438.4	0	11025	Passeriformes	0.9712217	Passerellidae	0.99513346	SFHS	0.989082	whtspa	0.99157494	whtspa	0.991574943	2023-10-08	49:39.8	Y
2539.8	2541.4	0	11025	Passeriformes	0.9647404	Turdidae	0.9489415	THSH	0.91956794	herthr	0.9999964	herthr	0.999996424	2023-10-08	51:22.8	Y
2436.8	2438.4	0	11025	Passeriformes	0.9712217	Passerellidae	0.99513346	SFHS	0.989082	whtspa	0.99157494	whtspa	0.991574943	2023-10-08	49:39.8	Y
2539.8	2541.4	0	11025	Passeriformes	0.9647404	Turdidae	0.9489415	THSH	0.91956794	herthr	0.9999964	herthr	0.999996424	2023-10-08	51:22.8	Y
1241	1242.8	0	11025	Passeriformes	0.97193974	Passerellidae	0.9954802			daejun	0.99690574	daejun	0.996905744	2023-10-08	27:41.0	Y
1241	1242.8	0	11025	Passeriformes	0.97193974	Passerellidae	0.9954802			daejun	0.99690574	daejun	0.996905744	2023-10-08	27:41.0	Y
1255.4	1257	0	11025	Passeriformes	0.97208303	Turdidae	0.9594351	THSH	0.94670135	herthr	0.9999989	herthr	0.999998927	2023-10-09	27:57.4	Y
1255.4	1257	0	11025	Passeriformes	0.97208303	Turdidae	0.9594351	THSH	0.94670135	herthr	0.9999989	herthr	0.999998927	2023-10-09	27:57.4	Y
2031.6	2033.2	0	11025	Passeriformes	0.96248364	Turdidae	0.9328361	THSH	0.90275085	herthr	0.9999981	herthr	0.999998093	2023-10-09	40:53.6	Y
2031.6	2033.2	0	11025	Passeriformes	0.96248364	Turdidae	0.9328361	THSH	0.90275085	herthr	0.9999981	herthr	0.999998093	2023-10-09	40:53.6	Y
1896.2	1897.6	0	11025	Passeriformes	0.96156526	Passerellidae	0.9921823			daejun	0.99555737	daejun	0.995557368	2023-10-09	36:36.2	Y
1896.2	1897.6	0	11025	Passeriformes	0.96156526	Passerellidae	0.9921823			daejun	0.99555737	daejun	0.995557368	2023-10-09	36:36.2	Y
2219.2	2222.4	0	11025	Passeriformes	0.9716403	Passerellidae	0.99540824			daejun	0.9969343	daejun	0.996934295	2023-10-09	41:59.2	Y
2219.2	2222.4	0	11025	Passeriformes	0.9716403	Passerellidae	0.99540824			daejun	0.9969343	daejun	0.996934295	2023-10-09	41:59.2	Y
2600	2601.2	0	11025	Passeriformes	0.9114792	Passerellidae	0.9800468			daejun	0.9908982	daejun	0.990898192	2023-10-09	48:20.0	Y
2600	2601.2	0	11025	Passeriformes	0.9114792	Passerellidae	0.9800468			daejun	0.9908982	daejun	0.990898192	2023-10-09	48:20.0	Y
187.4	188.8	0	11025	Passeriformes	0.9375334	Parulidae	0.91296023	BZWA	0.95875514	comyel	0.99996305	comyel	0.999963045	2023-10-10	08:09.4	Y
187.4	188.8	0	11025	Passeriformes	0.9375334	Parulidae	0.91296023	BZWA	0.95875514	comyel	0.99996305	comyel	0.999963045	2023-10-10	08:09.4	Y
443.6	445	0	11025	Passeriformes	0.9679776	Turdidae	0.95209455			amerob	0.99999285	amerob	0.999992847	2023-10-10	10:23.6	Y
443.6	445	0	11025	Passeriformes	0.9679776	Turdidae	0.95209455			amerob	0.99999285	amerob	0.999992847	2023-10-10	10:23.6	Y
3312	3313.8	0	11025	Passeriformes	0.9708561	Passerellidae	0.99453187	SFHS	0.98598796	whtspa	0.99695575	whtspa	0.996955752	2023-10-10	58:14.0	Y
3312	3313.8	0	11025	Passeriformes	0.9708561	Passerellidae	0.99453187	SFHS	0.98598796	whtspa	0.99695575	whtspa	0.996955752	2023-10-10	58:14.0	Y
3077.4	3079.2	0	11025	Passeriformes	0.9711684	Passerellidae	0.99505866	SFHS	0.989258	whtspa	0.99807453	whtspa	0.998074532	2023-10-11	52:19.4	Y
3077.4	3079.2	0	11025	Passeriformes	0.9711684	Passerellidae	0.99505866	SFHS	0.989258	whtspa	0.99807453	whtspa	0.998074532	2023-10-11	52:19.4	Y
2770.6	2772.4	0	11025	Passeriformes	0.9649708	Turdidae	0.9475543	THSH	0.9293606	herthr	0.9999933	herthr	0.999993324	2023-10-12	47:12.6	Y
2770.6	2772.4	0	11025	Passeriformes	0.9649708	Turdidae	0.9475543	THSH	0.9293606	herthr	0.9999933	herthr	0.999993324	2023-10-12	47:12.6	Y
2846.8	2848.4	0	11025	Passeriformes	0.9690822	Turdidae	0.95346665	THSH	0.93753964	herthr	0.9999988	herthr	0.999998808	2023-10-12	48:28.8	Y
2846.8	2848.4	0	11025	Passeriformes	0.9690822	Turdidae	0.95346665	THSH	0.93753964	herthr	0.9999988	herthr	0.999998808	2023-10-12	48:28.8	Y
2947.6	2949	0	11025	Passeriformes	0.9708053	Turdidae	0.95596904	THSH	0.94128937	herthr	0.9999974	herthr	0.999997377	2023-10-12	48:09.6	Y
2947.6	2949	0	11025	Passeriformes	0.9708053	Turdidae	0.95596904	THSH	0.94128937	herthr	0.9999974	herthr	0.999997377	2023-10-12	48:09.6	Y
986.6	988.4	0	11025	Passeriformes	0.9721933	Passerellidae	0.99548656	SFHS	0.9899913	whtspa	0.9985221	whtspa	0.998522103	2023-10-12	15:28.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
986.6	988.4	0	11025	Passeriformes	0.9721933	Passerellidae	0.99548656	SFHS	0.9899913	whtspa	0.9985221	whtspa	0.998522103	2023-10-12	15:28.6	Y
29	30.8	0	11025	Passeriformes	0.9719081	Passerellidae	0.9954145	SFHS	0.98945206	whtspa	0.9981146	whtspa	0.998114586	2023-10-15	55:31.0	Y
29	30.8	0	11025	Passeriformes	0.9719081	Passerellidae	0.9954145	SFHS	0.98945206	whtspa	0.9981146	whtspa	0.998114586	2023-10-15	55:31.0	Y
1161.6	1163.2	0	11025	Passeriformes	0.9696796	Parulidae	0.94876146			bawwar	0.9738495	bawwar	0.973849475	2023-10-16	10:23.6	Y
1161.6	1163.2	0	11025	Passeriformes	0.9696796	Parulidae	0.94876146			bawwar	0.9738495	bawwar	0.973849475	2023-10-16	10:23.6	Y
2601.2	2603	0	11025	Passeriformes	0.94036967	Turdidae	0.89424896	THSH	0.83701503	herthr	0.9999976	herthr	0.999997616	2023-10-17	32:23.2	Y
2601.2	2603	0	11025	Passeriformes	0.94036967	Turdidae	0.89424896	THSH	0.83701503	herthr	0.9999976	herthr	0.999997616	2023-10-17	32:23.2	Y
2039.8	2041.4	0	11025	Passeriformes	0.97209394	Passerellidae	0.99544036	SFHS	0.9897537	whtspa	0.9967242	whtspa	0.996724188	2023-10-17	23:01.8	Y
2039.8	2041.4	0	11025	Passeriformes	0.97209394	Passerellidae	0.99544036	SFHS	0.9897537	whtspa	0.9967242	whtspa	0.996724188	2023-10-17	23:01.8	Y
1320.8	1322.4	0	11025	Passeriformes	0.97196364	Parulidae	0.9475461	DEWA	0.9999765	norpar	0.99889743	norpar	0.998897433	2023-10-18	09:00.8	Y
3281.2	3283	0	11025	Passeriformes	0.9368552	Parulidae	0.9039796	BZWA	0.9679364	comyel	0.9999975	comyel	0.999997497	2023-10-20	39:43.2	Y
3281.2	3283	0	11025	Passeriformes	0.9368552	Parulidae	0.9039796	BZWA	0.9679364	comyel	0.9999975	comyel	0.999997497	2023-10-20	39:43.2	Y
2086.6	2087.8	0	11025	Charadriiformes	0.98114026	Scolopacidae	0.9955973			shbdow	0.99992156	shbdow	0.99992156	2023-10-20	19:48.6	Y
2086.6	2087.8	0	11025	Charadriiformes	0.98114026	Scolopacidae	0.9955973			shbdow	0.99992156	shbdow	0.99992156	2023-10-20	19:48.6	Y
706.6	707.8	0	11025	Charadriiformes	0.9693665	Scolopacidae	0.9921291			shbdow	0.9419325	shbdow	0.941932499	2023-10-20	54:48.6	Y
706.6	707.8	0	11025	Charadriiformes	0.9693665	Scolopacidae	0.9921291			shbdow	0.9419325	shbdow	0.941932499	2023-10-20	54:48.6	Y
985	986.8	0	11025	Passeriformes	0.97078156	Parulidae	0.95314056	BZWA	0.97914916	comyel	0.98339593	comyel	0.983395934	2023-10-21	59:28.0	Y
985	986.8	0	11025	Passeriformes	0.97078156	Parulidae	0.95314056	BZWA	0.97914916	comyel	0.98339593	comyel	0.983395934	2023-10-21	59:28.0	Y
2675.4	2677	0	11025	Passeriformes	0.9711359	Passerellidae	0.99521893	CUPS	0.98854196	amtspa	0.9989881	amtspa	0.998988092	2023-10-21	27:37.4	Y
2675.4	2677	0	11025	Passeriformes	0.9711359	Passerellidae	0.99521893	CUPS	0.98854196	amtspa	0.9989881	amtspa	0.998988092	2023-10-21	27:37.4	Y
3461.4	3463	0	11025	Passeriformes	0.9403008	Parulidae	0.9280229	BZWA	0.90746725	comyel	0.99953973	comyel	0.999539733	2023-10-22	38:43.4	Y
3461.4	3463	0	11025	Passeriformes	0.9403008	Parulidae	0.9280229	BZWA	0.90746725	comyel	0.99953973	comyel	0.999539733	2023-10-22	38:43.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
846.4	848	0	11025	Passeriformes	0.9719559	Parulidae	0.95527285			wlswar	0.99565095	wlswar	0.995650947	2024-04-05	14:08.4	Y
632	633.6	0	11025	Passeriformes	0.971306	Passerellidae	0.99379563	CUPS	0.9609793	chispa	0.84566027	chispa	0.845660269	2024-04-10	10:34.0	Y
810.4	812.2	0	11025	Passeriformes	0.97197556	Passerellidae	0.995484	CUPS	0.9870461	chispa	0.94020975	chispa	0.940209746	2024-04-11	13:32.4	Y
2467.2	2468.8	0	11025	Passeriformes	0.9718222	Passerellidae	0.9953892	CUPS	0.98400056	chispa	0.93876565	chispa	0.938765645	2024-04-11	41:09.2	Y
2122.2	2124	0	11025	Passeriformes	0.97178775	Motacillidae	0.9350128			amepip	0.9560745	amepip	0.956074476	2024-04-13	35:24.2	Y
3427.4	3429	0	11025	Passeriformes	0.96486837	Passerellidae	0.9937836	HSSP	0.98978126	whcspa	0.9887138	whcspa	0.988713801	2024-04-13	57:09.4	Y
3510.8	3512.6	0	11025	Passeriformes	0.9688584	Passerellidae	0.9951199	HSSP	0.9901872	whcspa	0.8730505	whcspa	0.873050511	2024-04-13	58:32.8	Y
3113.4	3115.2	0	11025	Passeriformes	0.97206813	Passerellidae	0.99551904	SFHS	0.98997504	whtspa	0.9982687	whtspa	0.998268723	2024-04-14	51:55.4	Y
3496.2	3497.6	0	11025	Passeriformes	0.97117764	Passerellidae	0.9951674	SFHS	0.9890232	whtspa	0.9931979	whtspa	0.993197918	2024-04-14	58:18.2	Y
3554	3555.6	0	11025	Charadriiformes	0.97570807	Scolopacidae	0.9935714			sposan	0.99892646	sposan	0.998926461	2024-04-15	59:16.0	Y
3191.2	3192.4	0	11025	Passeriformes	0.9720295	Turdidae	0.9596205			amerob	0.99999976	amerob	0.999999762	2024-04-15	53:13.2	Y
2476.6	2478	0	11025	Passeriformes	0.9719205	Passerellidae	0.9954503	CUPS	0.9883376	chispa	0.9563282	chispa	0.956328213	2024-04-15	41:18.6	Y
2556.4	2557.6	0	11025	Passeriformes	0.97193277	Passerellidae	0.9954348	CUPS	0.98503613	chispa	0.93150723	chispa	0.93150723	2024-04-15	42:38.4	Y
2599.2	2601	0	11025	Passeriformes	0.972131	Passerellidae	0.99552506	CUPS	0.9880166	chispa	0.9511687	chispa	0.951168716	2024-04-15	43:21.2	Y
1882.2	1884	0	11025	Charadriiformes	0.9790951	Scolopacidae	0.9952571			shbdow	0.99965286	shbdow	0.999652863	2024-04-15	31:24.2	Y
2350.4	2351.6	0	11025	Passeriformes	0.9602393	Passerellidae	0.9933583	HSSP	0.99257255	whcspa	0.99102986	whcspa	0.991029859	2024-04-15	39:12.4	Y
2686.2	2687.8	0	11025	Passeriformes	0.9583328	Passerellidae	0.99055064	HSSP	0.9936632	whcspa	0.9959453	whcspa	0.995945275	2024-04-15	44:48.2	Y
3081	3082.6	0	11025	Passeriformes	0.9659761	Passerellidae	0.9917721	HSSP	0.98993707	whcspa	0.9843418	whcspa	0.9843418	2024-04-15	51:23.0	Y
3110.8	3112.2	0	11025	Passeriformes	0.9714813	Passerellidae	0.9951454	HSSP	0.9892748	whcspa	0.99357706	whcspa	0.993577063	2024-04-15	51:52.8	Y
3137.4	3139	0	11025	Passeriformes	0.96847546	Passerellidae	0.98086953	HSSP	0.9835897	whcspa	0.9561921	whcspa	0.956192076	2024-04-15	52:19.4	Y
2548.2	2549.8	0	11025	Passeriformes	0.9721692	Turdidae	0.95852804			amerob	0.9999995	amerob	0.999999523	2024-04-16	42:30.2	Y
2676.6	2678	0	11025	Passeriformes	0.96738786	Turdidae	0.9585193			amerob	0.99999905	amerob	0.999999046	2024-04-16	44:38.6	Y
3105.6	3106.8	0	11025	Passeriformes	0.9636054	Turdidae	0.95630074			amerob	0.9993086	amerob	0.999308586	2024-04-16	51:47.6	Y
1690.8	1692.2	0	11025	Passeriformes	0.965162	Passerellidae	0.99283594	SFHS	0.9810761	whtspa	0.9860377	whtspa	0.986037672	2024-04-16	28:12.8	Y
1812	1813.8	0	11025	Passeriformes	0.96299565	Passerellidae	0.9937982	SFHS	0.9856924	whtspa	0.9960575	whtspa	0.99605751	2024-04-16	30:14.0	Y
2446.8	2448.2	0	11025	Passeriformes	0.968136	Passerellidae	0.9941802	SFHS	0.98209125	whtspa	0.9954769	whtspa	0.995476902	2024-04-16	40:48.8	Y
3426.8	3428.6	0	11025	Passeriformes	0.89364654	Passerellidae	0.9861996			daejun	0.9687533	daejun	0.968753278	2024-04-17	57:08.8	Y
1440	1441.4	0	11025	Passeriformes	0.9555883	Passerellidae	0.9920774			daejun	0.9944424	daejun	0.994442403	2024-04-17	24:02.0	Y
3146.8	3148.4	0	11025	Passeriformes	0.95517886	Passerellidae	0.992305			daejun	0.99510765	daejun	0.995107651	2024-04-17	52:28.8	Y
3367.6	3369.2	0	11025	Passeriformes	0.9607206	Passerellidae	0.9940613			daejun	0.99536836	daejun	0.995368361	2024-04-17	56:09.6	Y
3378.8	3380.6	0	11025	Passeriformes	0.9712191	Passerellidae	0.99519616			daejun	0.9965036	daejun	0.996503592	2024-04-17	56:20.8	Y
3114	3115.8	0	11025	Passeriformes	0.97164017	Passerellidae	0.99546164			daejun	0.99681866	daejun	0.996818662	2024-04-17	51:56.0	Y
1355.4	1357.6	0	11025	Passeriformes	0.9709926	Passerellidae	0.9953441			daejun	0.9969495	daejun	0.996949494	2024-04-17	22:37.4	Y
3094.8	3096.8	0	11025	Passeriformes	0.9719577	Passerellidae	0.9954977			daejun	0.99694973	daejun	0.996949732	2024-04-17	51:36.8	Y
3359.4	3361.2	0	11025	Passeriformes	0.9721258	Passerellidae	0.9954644			daejun	0.99696225	daejun	0.996962249	2024-04-17	56:01.4	Y
2500.2	2501.6	0	11025	Passeriformes	0.97179675	Turdidae	0.95384556			amerob	0.99999535	amerob	0.999995351	2024-04-20	41:42.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3365.6	3366.8	0	11025	Passeriformes	0.95264304	Passerellidae	0.9911083			daejun	0.9883464	daejun	0.988346398	2024-04-20	56:07.6	Y
1273.4	1275.2	0	11025	Passeriformes	0.97123563	Turdidae	0.95976424			amerob	0.9999999	amerob	0.999999881	2024-04-20	21:15.4	Y
1283.8	1285.2	0	11025	Passeriformes	0.97199684	Turdidae	0.9518019			amerob	0.9998976	amerob	0.999897599	2024-04-20	21:25.8	Y
1290.8	1292.4	0	11025	Passeriformes	0.97200304	Turdidae	0.95550287			amerob	0.9999583	amerob	0.999958277	2024-04-20	21:32.8	Y
1311.8	1313.4	0	11025	Passeriformes	0.9718507	Turdidae	0.9547617			amerob	0.99998605	amerob	0.999986053	2024-04-20	21:53.8	Y
1386.2	1387.8	0	11025	Passeriformes	0.97203445	Turdidae	0.9591508			amerob	0.9999982	amerob	0.999998212	2024-04-20	23:08.2	Y
2942.4	2945	0	11025	Passeriformes	0.97212344	Turdidae	0.9598198			amerob	0.9999999	amerob	0.999999881	2024-04-20	49:04.4	Y
2950.2	2951.8	0	11025	Passeriformes	0.9719215	Turdidae	0.9514893			amerob	0.99999654	amerob	0.999996543	2024-04-20	49:12.2	Y
3176.2	3177.4	0	11025	Passeriformes	0.9718893	Turdidae	0.9429312			amerob	0.999871	amerob	0.999871016	2024-04-20	52:58.2	Y
3191.2	3193	0	11025	Passeriformes	0.97214913	Turdidae	0.95977664			amerob	0.9999999	amerob	0.999999881	2024-04-20	53:13.2	Y
3199.6	3201.2	0	11025	Passeriformes	0.97205293	Turdidae	0.9590982			amerob	0.99999976	amerob	0.999999762	2024-04-20	53:21.6	Y
3212.4	3213.6	0	11025	Passeriformes	0.95219797	Parulidae	0.85427606	DEWA	0.99993694	norpar	0.9966197	norpar	0.996619701	2024-04-20	53:34.4	Y
3216	3217.6	0	11025	Passeriformes	0.97069633	Parulidae	0.9390781	DEWA	0.99988997	norpar	0.99700886	norpar	0.99700886	2024-04-20	53:38.0	Y
3222.8	3224.6	0	11025	Passeriformes	0.97153	Parulidae	0.9505998	DEWA	0.9999769	norpar	0.99977976	norpar	0.999779761	2024-04-20	53:44.8	Y
3225.2	3227	0	11025	Passeriformes	0.9721196	Parulidae	0.94656044	DEWA	0.9999739	norpar	0.9993549	norpar	0.999354899	2024-04-20	53:47.2	Y
211	212.8	0	11025	Charadriiformes	0.97697496	Scolopacidae	0.9937908			sposan	0.99923503	sposan	0.999235034	2024-04-21	03:33.0	Y
2699.2	2700.8	0	11025	Passeriformes	0.97210306	Passerellidae	0.9954627	SFHS	0.9898553	whtspa	0.99764687	whtspa	0.997646868	2024-04-21	45:01.2	Y
1728.2	1729.6	0	11025	Passeriformes	0.9713217	Turdidae	0.9597151			amerob	0.9999999	amerob	0.999999881	2024-04-22	28:50.2	Y
1732	1733.2	0	11025	Passeriformes	0.9722012	Turdidae	0.95858717			amerob	0.99999964	amerob	0.999999642	2024-04-22	28:54.0	Y
1737.8	1739.8	0	11025	Passeriformes	0.9722297	Turdidae	0.9594609			amerob	0.9999995	amerob	0.999999523	2024-04-22	28:59.8	Y
492.6	494	0	11025	Passeriformes	0.96826583	Turdidae	0.9501366	THSH	0.932042	herthr	0.99999857	herthr	0.999998569	2024-04-22	08:14.6	Y
570.6	572	0	11025	Passeriformes	0.95692235	Turdidae	0.9224379	THSH	0.90029997	herthr	0.99999785	herthr	0.999997854	2024-04-22	09:32.6	Y
428.2	429.8	0	11025	Passeriformes	0.9711811	Passerellidae	0.9952495	SFHS	0.98846775	whtspa	0.9901828	whtspa	0.990182817	2024-04-22	07:10.2	Y
3341.4	3343	0	11025	Passeriformes	0.97162795	Turdidae	0.95470226			amerob	0.9999964	amerob	0.999996424	2024-04-24	55:43.4	Y
2467	2468.4	0	11025	Charadriiformes	0.97201073	Scolopacidae	0.98984116			greyel	0.93425006	greyel	0.934250057	2024-04-24	41:09.0	Y
72.2	73.6	0	11025	Passeriformes	0.9699811	Turdidae	0.9498083			amerob	0.9994549	amerob	0.999454916	2024-04-24	01:14.2	Y
1812.8	1814.4	0	11025	Charadriiformes	0.9793626	Scolopacidae	0.99494934			uplsan	0.8740418	uplsan	0.874041796	2024-04-24	30:14.8	Y
3462.6	3464	0	11025	Passeriformes	0.91796327	Passerellidae	0.9795339	SFHS	0.9393007	whtspa	0.9773975	whtspa	0.977397501	2024-04-25	57:44.6	Y
3339.2	3340.6	0	11025	Passeriformes	0.9721315	Turdidae	0.9528053			amerob	0.99999213	amerob	0.999992132	2024-04-25	55:41.2	Y
2713.6	2714.8	0	11025	Passeriformes	0.96465176	Turdidae	0.9501262	THSH	0.93462366	herthr	0.9999988	herthr	0.999998808	2024-04-25	45:15.6	Y
1793.8	1795	0	11025	Passeriformes	0.9715134	Passerellidae	0.99524754	DESP	0.98969823	savspa	0.97730815	savspa	0.977308154	2024-04-26	29:57.8	Y
2967.2	2968.8	0	11025	Passeriformes	0.9693312	Parulidae	0.95031005	BZWA	0.9789373	comyel	0.99999917	comyel	0.999999166	2024-04-26	49:29.2	Y
2336	2337.8	0	11025	Passeriformes	0.97178346	Passerellidae	0.9945673	DESP	0.989256	savspa	0.99688184	savspa	0.996881843	2024-04-28	39:00.0	Y
2770.4	2772.2	0	11025	Passeriformes	0.972048	Passerellidae	0.9955363	DESP	0.9919121	savspa	0.9984281	savspa	0.998428106	2024-04-28	46:14.4	Y
1175	1176.8	0	11025	Passeriformes	0.9721314	Passerellidae	0.99549234	DESP	0.9917812	savspa	0.9980446	savspa	0.99804461	2024-04-28	19:37.0	Y
2754.2	2756	0	11025	Passeriformes	0.9720144	Passerellidae	0.9954932	DESP	0.9917497	savspa	0.9973073	savspa	0.997307301	2024-04-28	45:56.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2376.4	2377.8	0	11025	Passeriformes	0.972162	Turdidae	0.95939595			amerob	0.99999964	amerob	0.999999642	2024-04-28	39:38.4	Y
2481.6	2482.8	0	11025	Passeriformes	0.9595723	Turdidae	0.93692553	THSH	0.91361547	herthr	0.99999833	herthr	0.999998331	2024-04-28	41:23.6	Y
2466.2	2467.6	0	11025	Charadriiformes	0.9809442	Scolopacidae	0.9954531			sposan	0.9991779	sposan	0.999177873	2024-04-28	41:08.2	Y
2483	2484.6	0	11025	Charadriiformes	0.97820866	Scolopacidae	0.99445134			sposan	0.9963174	sposan	0.996317387	2024-04-28	41:25.0	Y
3063	3064.4	0	11025	Charadriiformes	0.9792995	Scolopacidae	0.99458283			sposan	0.9989398	sposan	0.998939812	2024-04-30	51:05.0	Y
3472	3473.2	0	11025	Charadriiformes	0.9123183	Scolopacidae	0.91082144			sposan	0.92512625	sposan	0.925126255	2024-04-30	57:54.0	Y
279.2	280.6	0	11025	Charadriiformes	0.98072994	Scolopacidae	0.9954698			shbdow	0.9991007	shbdow	0.999100685	2024-05-07	04:41.2	Y
132.2	134.2	0	11025	Passeriformes	0.96626186	Turdidae	0.95090413	THSH	0.9332744	herthr	0.9999981	herthr	0.999998093	2024-06-15	02:14.2	Y
137.2	138.6	0	11025	Passeriformes	0.9662347	Turdidae	0.94306535	THSH	0.92281663	herthr	0.9999976	herthr	0.999997616	2024-06-15	02:19.2	Y
1231.6	1233	0	11025	Passeriformes	0.9017821	Turdidae	0.87042093	THSH	0.81101644	herthr	0.9999951	herthr	0.999995112	2024-06-16	20:33.6	Y
962	963.2	0	11025	Passeriformes	0.9672775	Turdidae	0.8794734	THSH	0.829801	herthr	0.9999902	herthr	0.999990225	2024-06-17	16:04.0	Y
1637	1638.4	0	11025	Passeriformes	0.9586656	Turdidae	0.93776256	THSH	0.91774625	herthr	0.99999666	herthr	0.999996662	2024-06-17	27:19.0	Y
640.6	642.2	0	11025	Passeriformes	0.9536637	Turdidae	0.93873686	THSH	0.9171824	herthr	0.99999833	herthr	0.999998331	2024-06-18	10:42.6	Y
690	691.6	0	11025	Passeriformes	0.96750546	Turdidae	0.9515239	THSH	0.93533105	herthr	0.9999987	herthr	0.999998689	2024-06-18	11:32.0	Y
1212.2	1214.2	0	11025	Charadriiformes	0.981406	Scolopacidae	0.9956357			sposan	0.99953043	sposan	0.999530435	2024-06-19	20:14.2	Y
293	294.6	0	11025	Charadriiformes	0.976823	Scolopacidae	0.99436545			greyel	0.9981248	greyel	0.998124778	2024-06-19	04:55.0	Y
3235.8	3237.2	0	11025	Charadriiformes	0.97884834	Scolopacidae	0.9933422			sposan	0.9349645	sposan	0.934964478	2024-06-20	53:57.8	Y
1796	1798.2	0	11025	Charadriiformes	0.9810755	Scolopacidae	0.9951552			sposan	0.9990243	sposan	0.999024272	2024-06-21	29:59.0	Y
828.8	830.2	0	11025	Passeriformes	0.97031486	Parulidae	0.953499			bawwar	0.99999845	bawwar	0.99999845	2024-06-21	13:50.8	Y
499.8	501	0	11025	Passeriformes	0.9654117	Turdidae	0.9552493			amerob	0.9993979	amerob	0.999397874	2024-06-21	08:21.8	Y
2609.8	2611.2	0	11025	Passeriformes	0.96865493	Parulidae	0.94985086			bawwar	0.999985	bawwar	0.99998498	2024-06-22	43:31.8	Y
860.8	862	0	11025	Passeriformes	0.97222096	Turdidae	0.95961446			amerob	0.9999999	amerob	0.999999881	2024-06-22	14:22.8	Y
1224.4	1225.6	0	11025	Charadriiformes	0.9811655	Scolopacidae	0.9956306			uplsan	0.999268	uplsan	0.999267995	2024-06-23	20:26.4	Y
2075	2076.4	0	11025	Charadriiformes	0.9814175	Scolopacidae	0.9956691			greyel	0.9687723	greyel	0.968772292	2024-06-26	34:37.0	Y
1549.6	1551.4	0	11025	Passeriformes	0.9721342	Passerellidae	0.9955356	CUPS	0.9889816	chispa	0.9588882	chispa	0.958888173	2024-10-03	25:51.6	Y
3186	3187.6	0	11025	Charadriiformes	0.9437957	Scolopacidae	0.99138933			shbdow	0.9983937	shbdow	0.998393714	2024-10-03	53:08.0	Y
1868.8	1870.6	0	11025	Passeriformes	0.9720457	Parulidae	0.9555203	BZWA	0.98263526	comyel	0.9999999	comyel	0.999999881	2024-10-04	31:10.8	Y
1657	1658.8	0	11025	Passeriformes	0.97118425	Parulidae	0.95278394	BZWA	0.97392964	comyel	0.99999976	comyel	0.999999762	2024-10-04	27:39.0	Y
1611.6	1613.2	0	11025	Charadriiformes	0.9774529	Scolopacidae	0.9948678			shbdow	0.9998129	shbdow	0.999812901	2024-10-05	26:53.6	Y
2754.2	2756	0	11025	Passeriformes	0.97121	Passerellidae	0.9939744	DESP	0.98757976	savspa	0.9967758	savspa	0.996775806	2024-10-05	45:56.2	Y
3095.4	3097.2	0	11025	Passeriformes	0.9721665	Passerellidae	0.9955562	DESP	0.9919355	savspa	0.9984207	savspa	0.998420715	2024-10-05	51:37.4	Y
3106.6	3108.4	0	11025	Passeriformes	0.9721514	Passerellidae	0.99553776	DESP	0.9918475	savspa	0.99357915	savspa	0.993579149	2024-10-05	51:48.6	Y
3122	3124	0	11025	Passeriformes	0.97197706	Passerellidae	0.99531186	DESP	0.99143183	savspa	0.9982145	savspa	0.998214483	2024-10-05	52:04.0	Y
3246.4	3250	0	11025	Passeriformes	0.9722333	Passerellidae	0.99558866			daejun	0.9970107	daejun	0.997010708	2024-10-05	54:09.4	Y
3251	3256	0	11025	Passeriformes	0.9722382	Passerellidae	0.99559265			daejun	0.99701273	daejun	0.997012734	2024-10-05	54:14.0	Y
3256	3257.8	0	11025	Passeriformes	0.9722382	Passerellidae	0.99559265			daejun	0.99701273	daejun	0.997012734	2024-10-05	54:19.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3261.8	3263.6	0	11025	Passeriformes	0.91225547	Passerellidae	0.9619682			daejun	0.9729188	daejun	0.972918808	2024-10-05	54:24.8	Y
3272	3273.8	0	11025	Passeriformes	0.9719464	Passerellidae	0.9954651			daejun	0.99682695	daejun	0.996826947	2024-10-05	54:35.0	Y
3278	3280.2	0	11025	Passeriformes	0.9720866	Passerellidae	0.99546236			daejun	0.99677366	daejun	0.99677366	2024-10-05	54:41.0	Y
3284.6	3287.2	0	11025	Passeriformes	0.9693644	Passerellidae	0.995274			daejun	0.99664515	daejun	0.996645153	2024-10-05	54:47.6	Y
3289.2	3291	0	11025	Passeriformes	0.9710787	Passerellidae	0.9954177			daejun	0.9969387	daejun	0.996938705	2024-10-05	54:52.2	Y
3295.8	3298.6	0	11025	Passeriformes	0.97006387	Passerellidae	0.9946096			daejun	0.9960573	daejun	0.996057272	2024-10-05	54:58.8	Y
3345	3346.6	0	11025	Passeriformes	0.97014433	Passerellidae	0.9952774	HSSP	0.99771404	graspa	0.9982961	graspa	0.998296082	2024-10-05	55:48.0	Y
1165.6	1167.6	0	11025	Passeriformes	0.9158605	Passerellidae	0.980317			daejun	0.9945069	daejun	0.994506896	2024-10-06	19:28.6	Y
1167.8	1170.6	0	11025	Passeriformes	0.9012985	Passerellidae	0.9721859			daejun	0.99085677	daejun	0.990856767	2024-10-06	19:30.8	Y
172.8	174.6	0	11025	Passeriformes	0.97182876	Passerellidae	0.99541795	DESP	0.9915147	savspa	0.9978661	savspa	0.997866094	2024-10-10	02:54.8	Y
186.4	188.2	0	11025	Passeriformes	0.9619011	Passerellidae	0.9928803	DESP	0.9877044	savspa	0.9970259	savspa	0.997025907	2024-10-10	03:08.4	Y
586.4	588.2	0	11025	Passeriformes	0.9718999	Passerellidae	0.9955304	CUPS	0.9890176	chispa	0.95856625	chispa	0.958566248	2024-10-11	09:48.4	Y
874.6	876.4	0	11025	Passeriformes	0.97199845	Passerellidae	0.99538666	DESP	0.9914615	savspa	0.9975211	savspa	0.997521102	2024-10-11	14:36.6	Y
1145.2	1147	0	11025	Passeriformes	0.9719554	Parulidae	0.9556217	SBUF	0.94166934	btbwar	0.9327518	btbwar	0.932751775	2024-10-12	19:08.2	Y
3330.4	3332	0	11025	Charadriiformes	0.98137903	Scolopacidae	0.9956494			greyel	0.9997956	greyel	0.999795616	2024-10-12	55:32.4	Y
1964	1965.4	0	11025	Passeriformes	0.9715542	Passerellidae	0.9952585	CUPS	0.98675144	chispa	0.9424021	chispa	0.942402124	2024-10-12	32:46.0	Y
660.2	662	0	11025	Passeriformes	0.9714415	Turdidae	0.9585767	THSH	0.9457562	swathr	0.8821978	swathr	0.882197797	2024-10-12	11:00.2	Y
240.6	242.4	0	11025	Passeriformes	0.9719297	Passerellidae	0.9953442	SFHS	0.98997587	whtspa	0.9983216	whtspa	0.998321593	2024-10-13	04:02.6	Y
243.4	245	0	11025	Passeriformes	0.97206277	Passerellidae	0.99540687	SFHS	0.9899046	whtspa	0.9984125	whtspa	0.99841249	2024-10-13	04:05.4	Y
246.4	248	0	11025	Passeriformes	0.94868827	Passerellidae	0.9913033	SFHS	0.9797931	whtspa	0.9846428	whtspa	0.984642804	2024-10-13	04:08.4	Y
252.8	254.6	0	11025	Passeriformes	0.9714405	Passerellidae	0.9953062	SFHS	0.9896464	whtspa	0.9972193	whtspa	0.997219324	2024-10-13	04:14.8	Y
3561	3562.8	0	11025	Passeriformes	0.9714874	Passerellidae	0.9954034	SFHS	0.988708	whtspa	0.9980532	whtspa	0.998053193	2024-10-14	59:21.0	Y
3566.6	3568.2	0	11025	Passeriformes	0.96412593	Passerellidae	0.99066156	SFHS	0.9762902	whtspa	0.98820704	whtspa	0.988207042	2024-10-14	59:26.6	Y
179.6	181.4	0	11025	Passeriformes	0.9716495	Turdidae	0.9583038	THSH	0.9446421	herthr	0.99999905	herthr	0.999999046	2024-10-14	03:01.6	Y
719.6	721.2	0	11025	Passeriformes	0.96595454	Turdidae	0.9212141	THSH	0.8847897	herthr	0.99999654	herthr	0.999996543	2024-10-14	12:01.6	Y
735	736.2	0	11025	Passeriformes	0.94063795	Turdidae	0.8912599	THSH	0.84340584	herthr	0.99998903	herthr	0.999989033	2024-10-14	12:17.0	Y
955.8	957	0	11025	Passeriformes	0.96442145	Turdidae	0.9437955	THSH	0.92471117	herthr	0.9999968	herthr	0.999996781	2024-10-14	15:57.8	Y
1168.8	1170.4	0	11025	Passeriformes	0.94977117	Turdidae	0.9321103	THSH	0.90805817	herthr	0.9999956	herthr	0.999995589	2024-10-14	19:30.8	Y
1181.2	1182.8	0	11025	Passeriformes	0.9714912	Turdidae	0.9575963	THSH	0.9427962	herthr	0.9999988	herthr	0.999998808	2024-10-14	19:43.2	Y
2993.2	2994.8	0	11025	Passeriformes	0.9662615	Passerellidae	0.99290943	SFHS	0.981625	whtspa	0.99413127	whtspa	0.994131267	2024-10-14	49:55.2	Y
2161.8	2163.4	0	11025	Passeriformes	0.9157177	Turdidae	0.902073	THSH	0.86024934	herthr	0.9999982	herthr	0.999998212	2024-10-14	36:03.8	Y
2177.8	2179.2	0	11025	Passeriformes	0.96899194	Turdidae	0.9512029	THSH	0.9326845	herthr	0.9999988	herthr	0.999998808	2024-10-14	36:19.8	Y
3495.8	3497.6	0	11025	Passeriformes	0.9722115	Passerellidae	0.99554294	SFHS	0.99003875	whtspa	0.9985636	whtspa	0.998563588	2024-10-14	58:17.8	Y
2463.4	2465	0	11025	Passeriformes	0.96671295	Passerellidae	0.99401975	SFHS	0.98560274	whtspa	0.9941537	whtspa	0.994153678	2024-10-14	41:05.4	Y
408	409.6	0	11025	Passeriformes	0.96752834	Turdidae	0.9494432	THSH	0.9318552	herthr	0.9999956	herthr	0.999995589	2024-10-14	06:50.0	Y
857.2	858.6	0	11025	Passeriformes	0.96032876	Turdidae	0.91212255	THSH	0.8815707	herthr	0.99964225	herthr	0.999642253	2024-10-14	14:19.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
867	868.8	0	11025	Passeriformes	0.9678427	Turdidae	0.9382862	THSH	0.9132866	herthr	0.99999785	herthr	0.999997854	2024-10-14	14:29.0	Y
889.6	891	0	11025	Passeriformes	0.96574426	Turdidae	0.9495508	THSH	0.9290073	herthr	0.9999982	herthr	0.999998212	2024-10-14	14:51.6	Y
1752.8	1754.4	0	11025	Passeriformes	0.96888304	Passerellidae	0.99492955	SFHS	0.9811431	whtspa	0.9954892	whtspa	0.99548918	2024-10-15	29:15.8	Y
2812.2	2813.6	0	11025	Passeriformes	0.9590251	Turdidae	0.9331984	THSH	0.91786385	swathr	0.81818986	swathr	0.818189859	2024-10-15	46:54.2	Y
1793.8	1795.6	0	11025	Passeriformes	0.97220933	Passerellidae	0.99554765	SFHS	0.99001956	whtspa	0.99840325	whtspa	0.998403251	2024-10-16	29:56.8	Y
2459	2460.6	0	11025	Passeriformes	0.9704377	Passerellidae	0.9951474	SFHS	0.98817134	whtspa	0.99599683	whtspa	0.995996833	2024-10-16	41:01.0	Y
2881.6	2883	0	11025	Passeriformes	0.9712461	Turdidae	0.95683503	THSH	0.9431783	herthr	0.99999845	herthr	0.99999845	2024-10-16	48:03.6	Y
2268.6	2270.4	0	11025	Passeriformes	0.97218835	Passerellidae	0.9955426	SFHS	0.99011874	whtspa	0.9985525	whtspa	0.998552501	2024-10-16	37:50.6	Y
3263.8	3265.2	0	11025	Passeriformes	0.96510315	Turdidae	0.9498627	THSH	0.93361443	herthr	0.99999607	herthr	0.999996066	2024-10-17	54:26.8	Y
127.8	129.6	0	11025	Charadriiformes	0.9642474	Scolopacidae	0.9901743			shbdow	0.9990388	shbdow	0.999038815	2024-10-18	02:09.8	Y
1043.2	1044.8	0	11025	Passeriformes	0.97100663	Parulidae	0.95271987	BZWA	0.98093903	comyel	0.9999999	comyel	0.999999881	2024-10-21	17:25.2	Y
1403.8	1405.4	0	11025	Passeriformes	0.9641378	Parulidae	0.9363461	BZWA	0.96409166	comyel	0.9999958	comyel	0.999995828	2024-10-21	23:25.8	Y
1671.8	1673.6	0	11025	Passeriformes	0.97172606	Parulidae	0.95526826	BZWA	0.98003685	comyel	0.9999994	comyel	0.999999404	2024-10-24	27:51.8	Y
105.4	107	0	11025	Passeriformes	0.97051316	Parulidae	0.9535827	BZWA	0.9683744	comyel	0.99999535	comyel	0.999995351	2024-10-27	28:16.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
147.8	149.6	0	11025	Passeriformes	0.97220254	Parulidae	0.9547313	ZEEP	0.95270157	norwat	0.9999708	norwat	0.999970794	2024-08-14	02:29.8	Y
147.8	149.6	0	11025	Passeriformes	0.97220254	Parulidae	0.9547313	ZEEP	0.95270157	norwat	0.9999708	norwat	0.999970794	2024-08-14	02:29.8	Y
1249.8	1251.2	0	11025	Passeriformes	0.9719793	Parulidae	0.89794785	ZEEP	0.95293546	norwat	0.9999739	norwat	0.999973893	2024-08-14	20:53.8	Y
1249.8	1251.2	0	11025	Passeriformes	0.9719793	Parulidae	0.89794785	ZEEP	0.95293546	norwat	0.9999739	norwat	0.999973893	2024-08-14	20:53.8	Y
533.6	535.2	0	11025	Passeriformes	0.97209364	Parulidae	0.95458084	SBUF	0.9177583	palwar	0.99999964	palwar	0.999999642	2024-08-14	08:57.6	Y
533.6	535.2	0	11025	Passeriformes	0.97209364	Parulidae	0.95458084	SBUF	0.9177583	palwar	0.99999964	palwar	0.999999642	2024-08-14	08:57.6	Y
2243.4	2245.2	0	11025	Charadriiformes	0.97207	Scolopacidae	0.9933073			leasan	0.99999595	leasan	0.999995947	2024-08-15	37:25.4	Y
1941.4	1943.2	0	11025	Passeriformes	0.96981096	Turdidae	0.95787406	THSH	0.94521517	swathr	0.8802295	swathr	0.880229473	2024-08-15	32:23.4	Y
1941.4	1943.2	0	11025	Passeriformes	0.96981096	Turdidae	0.95787406	THSH	0.94521517	swathr	0.8802295	swathr	0.880229473	2024-08-15	32:23.4	Y
2243.4	2245.2	0	11025	Charadriiformes	0.97207	Scolopacidae	0.9933073			leasan	0.99999595	leasan	0.999995947	2024-08-15	37:25.4	Y
1671.2	1672.8	0	11025	Passeriformes	0.9713122	Parulidae	0.9523169			amered	0.89276487	amered	0.892764866	2024-08-15	27:55.2	Y
363.6	365.2	0	11025	Passeriformes	0.9721532	Turdidae	0.95969284			amerob	0.9999999	amerob	0.999999881	2024-08-15	06:07.6	Y
3555	3556.6	0	11025	Passeriformes	0.9618656	Passerellidae	0.9899441			daejun	0.9943605	daejun	0.994360507	2024-08-15	59:19.0	Y
1325.2	1326.8	0	11025	Passeriformes	0.97188145	Sittidae	0.98414904			rebnut	0.99784064	rebnut	0.997840643	2024-08-15	22:09.2	Y
2902.8	2904	0	11025	Passeriformes	0.96531004	Turdidae	0.95071757	THSH	0.9361527	swathr	0.86779803	swathr	0.86779803	2024-08-15	48:26.8	Y
2119	2120.8	0	11025	Passeriformes	0.9716561	Passerellidae	0.9953334	SFHS	0.98976666	whtspa	0.9981956	whtspa	0.998195589	2024-08-15	35:23.0	Y
181.6	183	0	11025	Passeriformes	0.96963847	Parulidae	0.937446	ZEEP	0.9532181	norwat	0.9999906	norwat	0.999990582	2024-08-15	03:05.6	Y
181.6	183	0	11025	Passeriformes	0.96963847	Parulidae	0.937446	ZEEP	0.9532181	norwat	0.9999906	norwat	0.999990582	2024-08-15	03:05.6	Y
2620.4	2622	0	11025	Passeriformes	0.97218937	Parulidae	0.95495224	ZEEP	0.96065164	norwat	0.9999999	norwat	0.999999881	2024-08-16	43:42.4	Y
2620.4	2622	0	11025	Passeriformes	0.97218937	Parulidae	0.95495224	ZEEP	0.96065164	norwat	0.9999999	norwat	0.999999881	2024-08-16	43:42.4	Y
3546	3547.8	0	11025	Passeriformes	0.97222376	Parulidae	0.95635545			bawwar	0.9999999	bawwar	0.999999881	2024-08-16	59:08.0	Y
2664.8	2667.6	0	11025	Passeriformes	0.9722111	Passerellidae	0.99553937	SFHS	0.98995215	whtspa	0.9983321	whtspa	0.998332083	2024-08-16	44:26.8	Y
2664.8	2667.6	0	11025	Passeriformes	0.9722111	Passerellidae	0.99553937	SFHS	0.98995215	whtspa	0.9983321	whtspa	0.998332083	2024-08-16	44:26.8	Y
3546	3547.8	0	11025	Passeriformes	0.97222376	Parulidae	0.95635545			bawwar	0.9999999	bawwar	0.999999881	2024-08-16	59:08.0	Y
2933.4	2934.6	0	11025	Passeriformes	0.97080964	Turdidae	0.947664			amerob	0.99937457	amerob	0.999374568	2024-08-16	48:57.4	Y
16.2	17.6	0	11025	Passeriformes	0.97220135	Turdidae	0.956907	THSH	0.9436667	swathr	0.86475277	swathr	0.864752769	2024-08-16	00:20.2	Y
1208.2	1209.8	0	11025	Passeriformes	0.9721087	Turdidae	0.9593685			amerob	0.9999999	amerob	0.999999881	2024-08-17	20:12.2	Y
3506.6	3507.8	0	11025	Passeriformes	0.9721957	Turdidae	0.9596932			amerob	0.9999999	amerob	0.999999881	2024-08-17	58:30.6	Y
3516.6	3518.2	0	11025	Passeriformes	0.97139424	Turdidae	0.95873934			amerob	0.99999917	amerob	0.999999166	2024-08-17	58:40.6	Y
1208.2	1209.8	0	11025	Passeriformes	0.9721087	Turdidae	0.9593685			amerob	0.9999999	amerob	0.999999881	2024-08-17	20:12.2	Y
3506.6	3507.8	0	11025	Passeriformes	0.9721957	Turdidae	0.9596932			amerob	0.9999999	amerob	0.999999881	2024-08-17	58:30.6	Y
3516.6	3518.2	0	11025	Passeriformes	0.97139424	Turdidae	0.95873934			amerob	0.99999917	amerob	0.999999166	2024-08-17	58:40.6	Y
19	20.8	0	11025	Passeriformes	0.9698851	Parulidae	0.95211595			bawwar	0.9999585	bawwar	0.999958515	2024-08-18	00:23.0	Y
19	20.8	0	11025	Passeriformes	0.9698851	Parulidae	0.95211595			bawwar	0.9999585	bawwar	0.999958515	2024-08-18	00:23.0	Y
1464.2	1465.8	0	11025	Passeriformes	0.9722377	Parulidae	0.95649475			bawwar	0.9999999	bawwar	0.999999881	2024-08-18	24:28.2	Y
864	865.8	0	11025	Passeriformes	0.969786	Parulidae	0.9504399	BZWA	0.96467507	comyel	0.9999964	comyel	0.999996424	2024-08-18	14:28.0	Y
864	865.8	0	11025	Passeriformes	0.969786	Parulidae	0.9504399	BZWA	0.96467507	comyel	0.9999964	comyel	0.999996424	2024-08-18	14:28.0	Y
1464.2	1465.8	0	11025	Passeriformes	0.9722377	Parulidae	0.95649475			bawwar	0.9999999	bawwar	0.999999881	2024-08-18	24:28.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2793.4	2795	0	11025	Passeriformes	0.97101045	Passerellidae	0.995167	SFHS	0.9870755	whtspa	0.9968346	whtspa	0.996834576	2024-08-18	46:37.4	Y
2793.4	2795	0	11025	Passeriformes	0.97101045	Passerellidae	0.995167	SFHS	0.9870755	whtspa	0.9968346	whtspa	0.996834576	2024-08-18	46:37.4	Y
3161.8	3163	0	11025	Passeriformes	0.97215736	Turdidae	0.9506679			amerob	0.9995011	amerob	0.999501109	2024-08-19	52:46.8	Y
3465.4	3466.6	0	11025	Passeriformes	0.97079784	Turdidae	0.9074915			amerob	0.99802554	amerob	0.998025537	2024-08-19	57:50.4	Y
2350.8	2352.4	0	11025	Passeriformes	0.9683598	Parulidae	0.95386195			bawwar	0.99999607	bawwar	0.999996066	2024-08-19	39:15.8	Y
2350.8	2352.4	0	11025	Passeriformes	0.9683598	Parulidae	0.95386195			bawwar	0.99999607	bawwar	0.999996066	2024-08-19	39:15.8	Y
3161.8	3163	0	11025	Passeriformes	0.97215736	Turdidae	0.9506679			amerob	0.9995011	amerob	0.999501109	2024-08-19	52:46.8	Y
3457.8	3459.4	0	11025	Passeriformes	0.9720443	Passerellidae	0.9953046	SFHS	0.9897223	whtspa	0.9984434	whtspa	0.998443425	2024-08-19	57:42.8	Y
3457.8	3459.4	0	11025	Passeriformes	0.9720443	Passerellidae	0.9953046	SFHS	0.9897223	whtspa	0.9984434	whtspa	0.998443425	2024-08-19	57:42.8	Y
3465.4	3466.6	0	11025	Passeriformes	0.97079784	Turdidae	0.9074915			amerob	0.99802554	amerob	0.998025537	2024-08-19	57:50.4	Y
146.6	148.4	0	11025	Passeriformes	0.96789706	Parulidae	0.92061895	ZEEP	0.9453206	norwat	0.9999881	norwat	0.999988079	2024-08-19	02:28.6	Y
146.6	148.4	0	11025	Passeriformes	0.96789706	Parulidae	0.92061895	ZEEP	0.9453206	norwat	0.9999881	norwat	0.999988079	2024-08-19	02:28.6	Y
1686.4	1687.8	0	11025	Passeriformes	0.9684411	Parulidae	0.94349116	ZEEP	0.95535475	norwat	0.99996305	norwat	0.999963045	2024-08-19	28:08.4	Y
2493.2	2494.8	0	11025	Passeriformes	0.94862914	Parulidae	0.90248245	ZEEP	0.88755685	camwar	0.99968684	camwar	0.999686837	2024-08-19	41:35.2	Y
1686.4	1687.8	0	11025	Passeriformes	0.9684411	Parulidae	0.94349116	ZEEP	0.95535475	norwat	0.99996305	norwat	0.999963045	2024-08-19	28:08.4	Y
2471	2472.8	0	11025	Passeriformes	0.97205645	Passerellidae	0.9954267	DESP	0.9915251	savspa	0.99235064	savspa	0.992350638	2024-08-19	41:13.0	Y
2471	2472.8	0	11025	Passeriformes	0.97205645	Passerellidae	0.9954267	DESP	0.9915251	savspa	0.99235064	savspa	0.992350638	2024-08-19	41:13.0	Y
2493.2	2494.8	0	11025	Passeriformes	0.94862914	Parulidae	0.90248245	ZEEP	0.88755685	camwar	0.99968684	camwar	0.999686837	2024-08-19	41:35.2	Y
280.4	282.2	0	11025	Passeriformes	0.97056544	Parulidae	0.95268655	BZWA	0.9683696	comyel	0.99999905	comyel	0.999999046	2024-08-19	04:44.4	Y
280.4	282.2	0	11025	Passeriformes	0.97056544	Parulidae	0.95268655	BZWA	0.9683696	comyel	0.99999905	comyel	0.999999046	2024-08-19	04:44.4	Y
992.2	994	0	11025	Passeriformes	0.97186345	Parulidae	0.9531223	BZWA	0.97840834	comyel	0.99999964	comyel	0.999999642	2024-08-19	16:36.2	Y
992.2	994	0	11025	Passeriformes	0.97186345	Parulidae	0.9531223	BZWA	0.97840834	comyel	0.99999964	comyel	0.999999642	2024-08-19	16:36.2	Y
1082.6	1084.4	0	11025	Passeriformes	0.9721977	Parulidae	0.95320106	ZEEP	0.95544714	norwat	0.9999995	norwat	0.999999523	2024-08-19	18:06.6	Y
1698.4	1700.2	0	11025	Passeriformes	0.97175926	Parulidae	0.92254674	ZEEP	0.91553724	norwat	0.99997854	norwat	0.999978542	2024-08-19	28:22.4	Y
3076	3077.4	0	11025	Passeriformes	0.97148263	Parulidae	0.95433193	BZWA	0.9788664	comyel	0.99747914	comyel	0.997479141	2024-08-19	51:20.0	Y
3304.6	3305.8	0	11025	Passeriformes	0.9720978	Parulidae	0.95183885	ZEEP	0.9600993	norwat	0.99987674	norwat	0.999876738	2024-08-19	55:08.6	Y
1698.4	1700.2	0	11025	Passeriformes	0.97175926	Parulidae	0.92254674	ZEEP	0.91553724	norwat	0.99997854	norwat	0.999978542	2024-08-19	28:22.4	Y
1082.6	1084.4	0	11025	Passeriformes	0.9721977	Parulidae	0.95320106	ZEEP	0.95544714	norwat	0.9999995	norwat	0.999999523	2024-08-19	18:06.6	Y
3076	3077.4	0	11025	Passeriformes	0.97148263	Parulidae	0.95433193	BZWA	0.9788664	comyel	0.99747914	comyel	0.997479141	2024-08-19	51:20.0	Y
3304.6	3305.8	0	11025	Passeriformes	0.9720978	Parulidae	0.95183885	ZEEP	0.9600993	norwat	0.99987674	norwat	0.999876738	2024-08-19	55:08.6	Y
802.2	803.6	0	11025	Passeriformes	0.9382669	Turdidae	0.94913405			amerob	0.9669544	amerob	0.96695441	2024-08-20	13:26.2	Y
830.8	832.4	0	11025	Passeriformes	0.97195745	Turdidae	0.9598258			amerob	0.9999999	amerob	0.999999881	2024-08-20	13:54.8	Y
839.4	840.8	0	11025	Passeriformes	0.9703563	Turdidae	0.9565834			amerob	0.99999404	amerob	0.99999404	2024-08-20	14:03.4	Y
2541.6	2542.8	0	11025	Passeriformes	0.9700926	Turdidae	0.9574078			amerob	0.9999956	amerob	0.999995589	2024-08-20	42:25.6	Y
1751	1752.6	0	11025	Passeriformes	0.972222	Parulidae	0.9564139			bawwar	0.99999976	bawwar	0.999999762	2024-08-20	29:15.0	Y
1651.2	1652.6	0	11025	Passeriformes	0.97121674	Parulidae	0.9426901	SBUF	0.9202265	palwar	0.9999999	palwar	0.999999881	2024-08-20	27:35.2	Y
1025.4	1027.2	0	11025	Passeriformes	0.9720776	Passerellidae	0.9954353	SFHS	0.98996514	whtspa	0.99652904	whtspa	0.996529043	2024-08-20	17:09.4	Y
2136.8	2138.4	0	11025	Charadriiformes	0.98131084	Scolopacidae	0.99564517			sposan	0.9953099	sposan	0.995309889	2024-08-22	35:38.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2136.8	2138.4	0	11025	Charadriiformes	0.98131084	Scolopacidae	0.99564517			sposan	0.9953099	sposan	0.995309889	2024-08-22	35:38.8	Y
3326	3327.8	0	11025	Passeriformes	0.969613	Parulidae	0.94876045			bawwar	0.9994178	bawwar	0.999417782	2024-08-22	55:30.0	Y
3326	3327.8	0	11025	Passeriformes	0.969613	Parulidae	0.94876045			bawwar	0.9994178	bawwar	0.999417782	2024-08-22	55:30.0	Y
1015.8	1017.4	0	11025	Passeriformes	0.9708858	Parulidae	0.9518838	BZWA	0.9817977	chswar	0.9591358	chswar	0.959135771	2024-08-22	16:59.8	Y
1015.8	1017.4	0	11025	Passeriformes	0.9708858	Parulidae	0.9518838	BZWA	0.9817977	chswar	0.9591358	chswar	0.959135771	2024-08-22	16:59.8	Y
363	364.6	0	11025	Passeriformes	0.95504314	Parulidae	0.9321264	BZWA	0.95696187	comyel	0.999653	comyel	0.999652982	2024-08-22	06:07.0	Y
363	364.6	0	11025	Passeriformes	0.95504314	Parulidae	0.9321264	BZWA	0.95696187	comyel	0.999653	comyel	0.999652982	2024-08-22	06:07.0	Y
257.4	258.8	0	11025	Passeriformes	0.96641356	Passerellidae	0.99289507			daejun	0.9943288	daejun	0.994328797	2024-08-22	04:21.4	Y
257.4	258.8	0	11025	Passeriformes	0.96641356	Passerellidae	0.99289507			daejun	0.9943288	daejun	0.994328797	2024-08-22	04:21.4	Y
341.2	343	0	11025	Passeriformes	0.9720029	Passerellidae	0.9954928	SFHS	0.9900095	whtspa	0.998103	whtspa	0.998103023	2024-08-22	05:45.2	Y
341.2	343	0	11025	Passeriformes	0.9720029	Passerellidae	0.9954928	SFHS	0.9900095	whtspa	0.998103	whtspa	0.998103023	2024-08-22	05:45.2	Y
880.4	882.2	0	11025	Passeriformes	0.97220844	Parulidae	0.9556769			bawwar	0.9999999	bawwar	0.999999881	2024-08-22	14:42.4	Y
880.4	882.2	0	11025	Passeriformes	0.97220844	Parulidae	0.9556769			bawwar	0.9999999	bawwar	0.999999881	2024-08-22	14:42.4	Y
720.6	722	0	11025	Charadriiformes	0.97664195	Scolopacidae	0.9945279			sposan	0.9619295	sposan	0.9619295	2024-08-22	12:02.6	Y
720.6	722	0	11025	Charadriiformes	0.97664195	Scolopacidae	0.9945279			sposan	0.9619295	sposan	0.9619295	2024-08-22	12:02.6	Y
766.4	767.8	0	11025	Charadriiformes	0.9724668	Scolopacidae	0.9931606			sposan	0.99137235	sposan	0.991372347	2024-08-22	12:48.4	Y
766.4	767.8	0	11025	Charadriiformes	0.9724668	Scolopacidae	0.9931606			sposan	0.99137235	sposan	0.991372347	2024-08-22	12:48.4	Y
2141	2142.4	0	11025	Passeriformes	0.9716432	Parulidae	0.9560387			bawwar	0.9979838	bawwar	0.997983813	2024-08-23	35:45.0	Y
1566.4	1567.8	0	11025	Passeriformes	0.9715893	Passerellidae	0.99533975			daejun	0.99682814	daejun	0.996828139	2024-08-23	26:10.4	Y
1233.2	1235	0	11025	Passeriformes	0.970573	Passerellidae	0.99435633	SFHS	0.9866388	whtspa	0.9973922	whtspa	0.997392178	2024-08-23	20:37.2	Y
1233.2	1235	0	11025	Passeriformes	0.970573	Passerellidae	0.99435633	SFHS	0.9866388	whtspa	0.9973922	whtspa	0.997392178	2024-08-23	20:37.2	Y
1566.4	1567.8	0	11025	Passeriformes	0.9715893	Passerellidae	0.99533975			daejun	0.99682814	daejun	0.996828139	2024-08-23	26:10.4	Y
2141	2142.4	0	11025	Passeriformes	0.9716432	Parulidae	0.9560387			bawwar	0.9979838	bawwar	0.997983813	2024-08-23	35:45.0	Y
2749.4	2751	0	11025	Passeriformes	0.9371715	Passerellidae	0.9883309			daejun	0.99160916	daejun	0.991609156	2024-08-23	45:53.4	Y
2749.4	2751	0	11025	Passeriformes	0.9371715	Passerellidae	0.9883309			daejun	0.99160916	daejun	0.991609156	2024-08-23	45:53.4	Y
940.8	942.2	0	11025	Passeriformes	0.97069407	Parulidae	0.9308964	ZEEP	0.93749976	norwat	0.99986136	norwat	0.99986136	2024-08-23	15:44.8	Y
1988.4	1989.8	0	11025	Passeriformes	0.97196907	Passerellidae	0.99530655	DESP	0.9911509	savspa	0.98926616	savspa	0.989266157	2024-08-23	33:12.4	Y
2001.4	2003.2	0	11025	Passeriformes	0.97102857	Passerellidae	0.995037	DESP	0.97828865	savspa	0.9863732	savspa	0.986373186	2024-08-23	33:25.4	Y
3512.4	3513.8	0	11025	Passeriformes	0.9672514	Parulidae	0.9268144			bawwar	0.99880517	bawwar	0.998805165	2024-08-23	58:36.4	Y
940.8	942.2	0	11025	Passeriformes	0.97069407	Parulidae	0.9308964	ZEEP	0.93749976	norwat	0.99986136	norwat	0.99986136	2024-08-23	15:44.8	Y
1988.4	1989.8	0	11025	Passeriformes	0.97196907	Passerellidae	0.99530655	DESP	0.9911509	savspa	0.98926616	savspa	0.989266157	2024-08-23	33:12.4	Y
2001.4	2003.2	0	11025	Passeriformes	0.97102857	Passerellidae	0.995037	DESP	0.97828865	savspa	0.9863732	savspa	0.986373186	2024-08-23	33:25.4	Y
3512.4	3513.8	0	11025	Passeriformes	0.9672514	Parulidae	0.9268144			bawwar	0.99880517	bawwar	0.998805165	2024-08-23	58:36.4	Y
1196.4	1198.2	0	11025	Passeriformes	0.97194034	Parulidae	0.9462315	ZEEP	0.9534181	norwat	0.9999974	norwat	0.999997377	2024-08-24	19:58.4	Y
1196.4	1198.2	0	11025	Passeriformes	0.97194034	Parulidae	0.9462315	ZEEP	0.9534181	norwat	0.9999974	norwat	0.999997377	2024-08-24	19:58.4	Y
2559.6	2561.4	0	11025	Passeriformes	0.96723	Passerellidae	0.99249345	CUPS	0.98289526	amtspa	0.9984883	amtspa	0.998488307	2024-08-24	42:41.6	Y
2559.6	2561.4	0	11025	Passeriformes	0.96723	Passerellidae	0.99249345	CUPS	0.98289526	amtspa	0.9984883	amtspa	0.998488307	2024-08-24	42:41.6	Y
37	38.8	0	11025	Passeriformes	0.9695296	Parulidae	0.9466177	BZWA	0.96980584	comyel	0.99936885	comyel	0.999368846	2024-08-24	00:39.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
37	38.8	0	11025	Passeriformes	0.9695296	Parulidae	0.9466177	BZWA	0.96980584	comyel	0.99936885	comyel	0.999368846	2024-08-24	00:39.0	Y
3178.6	3180.4	0	11025	Passeriformes	0.95832044	Parulidae	0.9218384	SBUF	0.8991923	palwar	0.999998	palwar	0.999997973	2024-08-24	53:00.6	Y
3178.6	3180.4	0	11025	Passeriformes	0.95832044	Parulidae	0.9218384	SBUF	0.8991923	palwar	0.999998	palwar	0.999997973	2024-08-24	53:00.6	Y
3483.6	3485.4	0	11025	Passeriformes	0.97141266	Parulidae	0.951818			amered	0.89640707	amered	0.896407068	2024-08-25	58:05.6	Y
1133.6	1135.4	0	11025	Passeriformes	0.9721753	Parulidae	0.9562976			bawwar	0.9999999	bawwar	0.999999881	2024-08-25	18:55.6	Y
1159.6	1161.2	0	11025	Passeriformes	0.9699102	Parulidae	0.9466252	BZWA	0.9546599	comyel	0.99999976	comyel	0.999999762	2024-08-25	19:21.6	Y
2032.2	2034	0	11025	Passeriformes	0.9712167	Parulidae	0.9509094	BZWA	0.9803387	comyel	0.99999976	comyel	0.999999762	2024-08-25	33:54.2	Y
346.6	348	0	11025	Passeriformes	0.96160066	Turdidae	0.9463789	THSH	0.93200064	swathr	0.86689854	swathr	0.866898537	2024-08-25	05:48.6	Y
513	514.8	0	11025	Passeriformes	0.97148705	Passerellidae	0.99535024	SFHS	0.9892707	whtspa	0.99768	whtspa	0.997680008	2024-08-25	08:35.0	Y
500.4	502.2	0	11025	Passeriformes	0.97221553	Parulidae	0.95631284			bawwar	0.9999999	bawwar	0.999999881	2024-08-25	08:22.4	Y
500.4	502.2	0	11025	Passeriformes	0.97221553	Parulidae	0.95631284			bawwar	0.9999999	bawwar	0.999999881	2024-08-25	08:22.4	Y
569.4	570.6	0	11025	Charadriiformes	0.9791475	Scolopacidae	0.9947826			sposan	0.9891945	sposan	0.989194512	2024-08-25	09:31.4	Y
1553.2	1554.8	0	11025	Charadriiformes	0.9803665	Scolopacidae	0.99520785			sposan	0.99906975	sposan	0.99906975	2024-08-25	25:55.2	Y
569.4	570.6	0	11025	Charadriiformes	0.9791475	Scolopacidae	0.9947826			sposan	0.9891945	sposan	0.989194512	2024-08-25	09:31.4	Y
1553.2	1554.8	0	11025	Charadriiformes	0.9803665	Scolopacidae	0.99520785			sposan	0.99906975	sposan	0.99906975	2024-08-25	25:55.2	Y
149.8	151.6	0	11025	Passeriformes	0.96596557	Parulidae	0.9428187	BZWA	0.9526515	comyel	0.9999666	comyel	0.999966621	2024-08-25	02:31.8	Y
149.8	151.6	0	11025	Passeriformes	0.96596557	Parulidae	0.9428187	BZWA	0.9526515	comyel	0.9999666	comyel	0.999966621	2024-08-25	02:31.8	Y
3172	3173.6	0	11025	Passeriformes	0.9721748	Parulidae	0.9555788	MWAR	0.9986927	mouwar	0.97781825	mouwar	0.977818251	2024-08-25	52:54.0	Y
3172	3173.6	0	11025	Passeriformes	0.9721748	Parulidae	0.9555788	MWAR	0.9986927	mouwar	0.97781825	mouwar	0.977818251	2024-08-25	52:54.0	Y
3183.4	3184.6	0	11025	Passeriformes	0.9701259	Parulidae	0.94844604	MWAR	0.99726856	mouwar	0.8919691	mouwar	0.891969085	2024-08-25	53:05.4	Y
3183.4	3184.6	0	11025	Passeriformes	0.9701259	Parulidae	0.94844604	MWAR	0.99726856	mouwar	0.8919691	mouwar	0.891969085	2024-08-25	53:05.4	Y
3347.6	3349	0	11025	Passeriformes	0.97222304	Parulidae	0.95426774	MWAR	0.9991142	mouwar	0.9928013	mouwar	0.992801309	2024-08-25	55:49.6	Y
3347.6	3349	0	11025	Passeriformes	0.97222304	Parulidae	0.95426774	MWAR	0.9991142	mouwar	0.9928013	mouwar	0.992801309	2024-08-25	55:49.6	Y
2342.8	2344.2	0	11025	Charadriiformes	0.97847486	Scolopacidae	0.99427176			shbdow	0.99990475	shbdow	0.999904752	2024-08-25	39:04.8	Y
2342.8	2344.2	0	11025	Charadriiformes	0.97847486	Scolopacidae	0.99427176			shbdow	0.99990475	shbdow	0.999904752	2024-08-25	39:04.8	Y
1120	1121.8	0	11025	Passeriformes	0.9722235	Parulidae	0.9562302	BZWA	0.9832113	comyel	0.9999999	comyel	0.999999881	2024-08-25	18:44.0	Y
1120	1121.8	0	11025	Passeriformes	0.9722235	Parulidae	0.9562302	BZWA	0.9832113	comyel	0.9999999	comyel	0.999999881	2024-08-25	18:44.0	Y
1958.4	1960.2	0	11025	Passeriformes	0.970988	Parulidae	0.93413883	BZWA	0.9727032	comyel	0.9999994	comyel	0.999999404	2024-08-25	32:42.4	Y
1958.4	1960.2	0	11025	Passeriformes	0.970988	Parulidae	0.93413883	BZWA	0.9727032	comyel	0.9999994	comyel	0.999999404	2024-08-25	32:42.4	Y
1130.2	1132	0	11025	Passeriformes	0.97176516	Passerellidae	0.9953343	SFHS	0.98950547	whtspa	0.9982994	whtspa	0.99829942	2024-08-25	18:54.2	Y
1130.2	1132	0	11025	Passeriformes	0.97176516	Passerellidae	0.9953343	SFHS	0.98950547	whtspa	0.9982994	whtspa	0.99829942	2024-08-25	18:54.2	Y
3404.8	3406.6	0	11025	Passeriformes	0.9719586	Parulidae	0.9544131	BZWA	0.9809574	comyel	0.99999964	comyel	0.999999642	2024-08-26	56:46.8	Y
2543.8	2545	0	11025	Passeriformes	0.9555785	Turdidae	0.949628	THSH	0.93457043	swathr	0.84149504	swathr	0.841495037	2024-08-26	42:25.8	Y
2543.8	2545	0	11025	Passeriformes	0.9555785	Turdidae	0.949628	THSH	0.93457043	swathr	0.84149504	swathr	0.841495037	2024-08-26	42:25.8	Y
3404.8	3406.6	0	11025	Passeriformes	0.9719586	Parulidae	0.9544131	BZWA	0.9809574	comyel	0.99999964	comyel	0.999999642	2024-08-26	56:46.8	Y
3167	3168.6	0	11025	Passeriformes	0.972039	Parulidae	0.9536948	BZWA	0.97739124	comyel	0.9999999	comyel	0.999999881	2024-08-26	52:49.0	Y
3167	3168.6	0	11025	Passeriformes	0.972039	Parulidae	0.9536948	BZWA	0.97739124	comyel	0.9999999	comyel	0.999999881	2024-08-26	52:49.0	Y
1709.6	1710.8	0	11025	Passeriformes	0.9713099	Turdidae	0.95090854			amerob	0.999972	amerob	0.999971986	2024-08-26	28:33.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1732.4	1733.8	0	11025	Passeriformes	0.94330525	Turdidae	0.944423			amerob	0.9906414	amerob	0.990641415	2024-08-26	28:56.4	Y
1709.6	1710.8	0	11025	Passeriformes	0.9713099	Turdidae	0.95090854			amerob	0.999972	amerob	0.999971986	2024-08-26	28:33.6	Y
1732.4	1733.8	0	11025	Passeriformes	0.94330525	Turdidae	0.944423			amerob	0.9906414	amerob	0.990641415	2024-08-26	28:56.4	Y
807.6	809	0	11025	Passeriformes	0.97090775	Passerellidae	0.99515307			daejun	0.9964954	daejun	0.996495426	2024-08-26	13:31.6	Y
1568	1570.2	0	11025	Passeriformes	0.96956956	Passerellidae	0.99479127			daejun	0.99672675	daejun	0.996726751	2024-08-26	26:12.0	Y
2056.2	2057.4	0	11025	Passeriformes	0.9649416	Passerellidae	0.99454236			daejun	0.99586535	daejun	0.995865345	2024-08-26	34:20.2	Y
2471.6	2472.8	0	11025	Passeriformes	0.97192335	Passerellidae	0.9955407			daejun	0.99699116	daejun	0.996991158	2024-08-26	41:15.6	Y
2955.4	2957.2	0	11025	Passeriformes	0.9664953	Passerellidae	0.9947891			daejun	0.9962968	daejun	0.996296823	2024-08-26	49:19.4	Y
1436.6	1438.2	0	11025	Passeriformes	0.97194684	Parulidae	0.9096649	ZEEP	0.954754	norwat	0.999752	norwat	0.999751985	2024-08-26	24:00.6	Y
2686.6	2689	0	11025	Passeriformes	0.9722322	Sittidae	0.98457503			rebnut	0.9981698	rebnut	0.99816978	2024-08-26	44:50.6	Y
2287	2288.2	0	11025	Passeriformes	0.96574056	Passerellidae	0.99326295	SFHS	0.9817254	whtspa	0.99005365	whtspa	0.990053654	2024-08-26	38:11.0	Y
807.6	809	0	11025	Passeriformes	0.97090775	Passerellidae	0.99515307			daejun	0.9964954	daejun	0.996495426	2024-08-26	13:31.6	Y
1568	1570.2	0	11025	Passeriformes	0.96956956	Passerellidae	0.99479127			daejun	0.99672675	daejun	0.996726751	2024-08-26	26:12.0	Y
2056.2	2057.4	0	11025	Passeriformes	0.9649416	Passerellidae	0.99454236			daejun	0.99586535	daejun	0.995865345	2024-08-26	34:20.2	Y
2471.6	2472.8	0	11025	Passeriformes	0.97192335	Passerellidae	0.9955407			daejun	0.99699116	daejun	0.996991158	2024-08-26	41:15.6	Y
2955.4	2957.2	0	11025	Passeriformes	0.9664953	Passerellidae	0.9947891			daejun	0.9962968	daejun	0.996296823	2024-08-26	49:19.4	Y
1436.6	1438.2	0	11025	Passeriformes	0.97194684	Parulidae	0.9096649	ZEEP	0.954754	norwat	0.999752	norwat	0.999751985	2024-08-26	24:00.6	Y
2686.6	2689	0	11025	Passeriformes	0.9722322	Sittidae	0.98457503			rebnut	0.9981698	rebnut	0.99816978	2024-08-26	44:50.6	Y
2287	2288.2	0	11025	Passeriformes	0.96574056	Passerellidae	0.99326295	SFHS	0.9817254	whtspa	0.99005365	whtspa	0.990053654	2024-08-26	38:11.0	Y
1516.4	1517.8	0	11025	Passeriformes	0.97125536	Parulidae	0.9518544	BZWA	0.956423	comyel	0.9999738	comyel	0.999973774	2024-08-27	25:18.4	Y
1524.6	1526.2	0	11025	Passeriformes	0.97223526	Parulidae	0.9563692			bawwar	0.9999999	bawwar	0.999999881	2024-08-27	25:26.6	Y
1037.6	1039	0	11025	Passeriformes	0.97168523	Parulidae	0.9544328	BZWA	0.981054	comyel	0.9999999	comyel	0.999999881	2024-08-27	17:19.6	Y
1037.6	1039	0	11025	Passeriformes	0.97168523	Parulidae	0.9544328	BZWA	0.981054	comyel	0.9999999	comyel	0.999999881	2024-08-27	17:19.6	Y
1516.4	1517.8	0	11025	Passeriformes	0.97125536	Parulidae	0.9518544	BZWA	0.956423	comyel	0.9999738	comyel	0.999973774	2024-08-27	25:18.4	Y
1524.6	1526.2	0	11025	Passeriformes	0.97223526	Parulidae	0.9563692			bawwar	0.9999999	bawwar	0.999999881	2024-08-27	25:26.6	Y
1580.6	1582.4	0	11025	Passeriformes	0.971575	Passerellidae	0.9947978	DESP	0.9898577	savspa	0.99775535	savspa	0.997755349	2024-08-27	26:22.6	Y
1580.6	1582.4	0	11025	Passeriformes	0.971575	Passerellidae	0.9947978	DESP	0.9898577	savspa	0.99775535	savspa	0.997755349	2024-08-27	26:22.6	Y
2701.4	2703	0	11025	Passeriformes	0.9581833	Passerellidae	0.99136907			daejun	0.9958074	daejun	0.995807409	2024-08-27	45:03.4	Y
2701.4	2703	0	11025	Passeriformes	0.9581833	Passerellidae	0.99136907			daejun	0.9958074	daejun	0.995807409	2024-08-27	45:03.4	Y
481	482.8	0	11025	Passeriformes	0.96950734	Passerellidae	0.994551	SFHS	0.98729867	whtspa	0.9978575	whtspa	0.997857511	2024-08-27	08:03.0	Y
481	482.8	0	11025	Passeriformes	0.96950734	Passerellidae	0.994551	SFHS	0.98729867	whtspa	0.9978575	whtspa	0.997857511	2024-08-27	08:03.0	Y
1760.2	1762	0	11025	Charadriiformes	0.98148876	Scolopacidae	0.9957224			greyel	0.99980444	greyel	0.999804437	2024-08-27	29:22.2	Y
1760.2	1762	0	11025	Charadriiformes	0.98148876	Scolopacidae	0.9957224			greyel	0.99980444	greyel	0.999804437	2024-08-27	29:22.2	Y
1860	1861.4	0	11025	Passeriformes	0.97095126	Parulidae	0.94429916	SBUF	0.89892733	palwar	0.99999905	palwar	0.999999046	2024-08-27	31:02.0	Y
1860	1861.4	0	11025	Passeriformes	0.97095126	Parulidae	0.94429916	SBUF	0.89892733	palwar	0.99999905	palwar	0.999999046	2024-08-27	31:02.0	Y
3363.6	3365.4	0	11025	Passeriformes	0.97217697	Passerellidae	0.99555016	SFHS	0.99004424	whtspa	0.9982383	whtspa	0.998238325	2024-08-27	56:05.6	Y
3363.6	3365.4	0	11025	Passeriformes	0.97217697	Passerellidae	0.99555016	SFHS	0.99004424	whtspa	0.9982383	whtspa	0.998238325	2024-08-27	56:05.6	Y
385.2	386.6	0	11025	Passeriformes	0.9435029	Passerellidae	0.98144984			daejun	0.98999435	daejun	0.989994347	2024-08-27	06:30.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1157.6	1158.8	0	11025	Passeriformes	0.9650782	Passerellidae	0.99335057			daejun	0.9953831	daejun	0.995383084	2024-08-27	19:22.6	Y
1699.4	1704.4	0	11025	Passeriformes	0.97190607	Passerellidae	0.9955373			daejun	0.99699533	daejun	0.99699533	2024-08-27	28:24.4	Y
1482.2	1483.6	0	11025	Charadriiformes	0.96892786	Scolopacidae	0.9820409			leasan	0.99997616	leasan	0.999976158	2024-08-27	24:47.2	Y
1426	1427.6	0	11025	Passeriformes	0.9722201	Passerellidae	0.9955622	SWLI	0.997074	linspa	0.99293846	linspa	0.992938459	2024-08-27	23:51.0	Y
1434.4	1435.8	0	11025	Passeriformes	0.9722226	Passerellidae	0.9955363	SWLI	0.99707913	linspa	0.91829556	linspa	0.918295562	2024-08-27	23:59.4	Y
1437.8	1439.2	0	11025	Passeriformes	0.97222304	Passerellidae	0.9955835	SWLI	0.99709916	linspa	0.99410456	linspa	0.994104564	2024-08-27	24:02.8	Y
1247.6	1249	0	11025	Passeriformes	0.9720211	Passerellidae	0.995317	DESP	0.98773885	savspa	0.97354096	savspa	0.973540962	2024-08-27	20:52.6	Y
459.8	461.6	0	11025	Passeriformes	0.97220653	Passerellidae	0.9955468	SFHS	0.9901231	whtspa	0.99579936	whtspa	0.995799363	2024-08-27	07:44.8	Y
785	787.4	0	11025	Passeriformes	0.97206306	Passerellidae	0.99549085			daejun	0.99694663	daejun	0.996946633	2024-08-28	13:09.0	Y
785	787.4	0	11025	Passeriformes	0.97206306	Passerellidae	0.99549085			daejun	0.99694663	daejun	0.996946633	2024-08-28	13:09.0	Y
2869.4	2871.2	0	11025	Passeriformes	0.970989	Passerellidae	0.9950964	SFHS	0.98889077	whtspa	0.9974396	whtspa	0.997439623	2024-08-28	47:53.4	Y
3205.6	3207	0	11025	Passeriformes	0.9586354	Passerellidae	0.9913756			daejun	0.9945258	daejun	0.99452579	2024-08-28	53:29.6	Y
2869.4	2871.2	0	11025	Passeriformes	0.970989	Passerellidae	0.9950964	SFHS	0.98889077	whtspa	0.9974396	whtspa	0.997439623	2024-08-28	47:53.4	Y
3205.6	3207	0	11025	Passeriformes	0.9586354	Passerellidae	0.9913756			daejun	0.9945258	daejun	0.99452579	2024-08-28	53:29.6	Y
460.4	462.2	0	11025	Charadriiformes	0.9814927	Scolopacidae	0.9957306			solsan	0.976224	solsan	0.976224005	2024-08-29	07:42.4	Y
460.4	462.2	0	11025	Charadriiformes	0.9814927	Scolopacidae	0.9957306			solsan	0.976224	solsan	0.976224005	2024-08-29	07:42.4	Y
415.6	417.2	0	11025	Passeriformes	0.97208846	Passerellidae	0.99545634	SFHS	0.98970616	whtspa	0.9959941	whtspa	0.995994091	2024-08-30	06:57.6	Y
1298.2	1299.8	0	11025	Passeriformes	0.97125536	Parulidae	0.95213217			bawwar	0.9999993	bawwar	0.999999285	2024-08-30	21:40.2	Y
787.4	789	0	11025	Passeriformes	0.9606438	Passerellidae	0.98875			daejun	0.9929817	daejun	0.992981672	2024-08-30	13:09.4	Y
415.6	417.2	0	11025	Passeriformes	0.97208846	Passerellidae	0.99545634	SFHS	0.98970616	whtspa	0.9959941	whtspa	0.995994091	2024-08-30	06:57.6	Y
787.4	789	0	11025	Passeriformes	0.9606438	Passerellidae	0.98875			daejun	0.9929817	daejun	0.992981672	2024-08-30	13:09.4	Y
1298.2	1299.8	0	11025	Passeriformes	0.97125536	Parulidae	0.95213217			bawwar	0.9999993	bawwar	0.999999285	2024-08-30	21:40.2	Y
1984.6	1986	0	11025	Passeriformes	0.97183424	Parulidae	0.9300073	ZEEP	0.94360936	norwat	0.9998683	norwat	0.999868274	2024-08-31	33:08.6	Y
3495.4	3498.4	0	11025	Passeriformes	0.97222984	Passerellidae	0.9955863			daejun	0.9970106	daejun	0.997010589	2024-09-02	58:19.4	Y
42.4	43.8	0	11025	Passeriformes	0.96116537	Turdidae	0.95180976	THSH	0.9371849	swathr	0.8676356	swathr	0.867635608	2024-09-02	00:46.4	Y
63.8	65.4	0	11025	Passeriformes	0.9590658	Turdidae	0.940889	THSH	0.9244649	swathr	0.863032	swathr	0.863031983	2024-09-02	01:07.8	Y
380	381.8	0	11025	Passeriformes	0.9491524	Passerellidae	0.99236155	SFHS	0.98626536	whtspa	0.99741167	whtspa	0.997411668	2024-09-02	06:24.0	Y
1480.4	1482	0	11025	Passeriformes	0.9700897	Parulidae	0.95406336			bawwar	0.999979	bawwar	0.999979019	2024-09-03	24:42.4	Y
1480.4	1482	0	11025	Passeriformes	0.9700897	Parulidae	0.95406336			bawwar	0.999979	bawwar	0.999979019	2024-09-03	24:42.4	Y
1375.6	1377.4	0	11025	Passeriformes	0.9705809	Parulidae	0.94788533	BZWA	0.9809008	comyel	0.9999995	comyel	0.999999523	2024-09-03	22:57.6	Y
1375.6	1377.4	0	11025	Passeriformes	0.9705809	Parulidae	0.94788533	BZWA	0.9809008	comyel	0.9999995	comyel	0.999999523	2024-09-03	22:57.6	Y
919.8	921	0	11025	Passeriformes	0.89037865	Passerellidae	0.9878792			daejun	0.99293256	daejun	0.992932558	2024-09-04	15:23.8	Y
919.8	921	0	11025	Passeriformes	0.89037865	Passerellidae	0.9878792			daejun	0.99293256	daejun	0.992932558	2024-09-04	15:23.8	Y
2028	2029.4	0	11025	Passeriformes	0.9616488	Turdidae	0.94085217	THSH	0.9182387	herthr	0.99999607	herthr	0.999996066	2024-09-04	33:52.0	Y
2028	2029.4	0	11025	Passeriformes	0.9616488	Turdidae	0.94085217	THSH	0.9182387	herthr	0.99999607	herthr	0.999996066	2024-09-04	33:52.0	Y
514.2	516	0	11025	Passeriformes	0.96723133	Passerellidae	0.99437076			daejun	0.99647576	daejun	0.996475756	2024-09-04	08:36.2	Y
514.2	516	0	11025	Passeriformes	0.96723133	Passerellidae	0.99437076			daejun	0.99647576	daejun	0.996475756	2024-09-04	08:36.2	Y
2064.8	2066.8	0	11025	Charadriiformes	0.98147595	Scolopacidae	0.99572396			solsan	0.97564554	solsan	0.975645542	2024-09-04	34:26.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2064.8	2066.8	0	11025	Charadriiformes	0.98147595	Scolopacidae	0.99572396			solsan	0.97564554	solsan	0.975645542	2024-09-04	34:26.8	Y
372.8	374	0	11025	Passeriformes	0.9710442	Passerellidae	0.9951751	SFHS	0.9883201	whtspa	0.9979109	whtspa	0.997910917	2024-09-04	06:14.8	Y
372.8	374	0	11025	Passeriformes	0.9710442	Passerellidae	0.9951751	SFHS	0.9883201	whtspa	0.9979109	whtspa	0.997910917	2024-09-04	06:14.8	Y
3539.6	3541.2	0	11025	Passeriformes	0.97223526	Parulidae	0.9564585			bawwar	0.9999862	bawwar	0.999986172	2024-09-04	59:01.6	Y
3539.6	3541.2	0	11025	Passeriformes	0.97223526	Parulidae	0.9564585			bawwar	0.9999862	bawwar	0.999986172	2024-09-04	59:01.6	Y
819	820.6	0	11025	Passeriformes	0.97096115	Passerellidae	0.99460286	SFHS	0.98825383	whtspa	0.99780446	whtspa	0.997804463	2024-09-04	13:41.0	Y
819	820.6	0	11025	Passeriformes	0.97096115	Passerellidae	0.99460286	SFHS	0.98825383	whtspa	0.99780446	whtspa	0.997804463	2024-09-04	13:41.0	Y
15.2	17	0	11025	Passeriformes	0.9720491	Parulidae	0.9562119			bawwar	0.99996245	bawwar	0.999962449	2024-09-04	00:17.2	Y
15.2	17	0	11025	Passeriformes	0.9720491	Parulidae	0.9562119			bawwar	0.99996245	bawwar	0.999962449	2024-09-04	00:17.2	Y
195.6	196.8	0	11025	Passeriformes	0.97123635	Parulidae	0.95342124	BZWA	0.9812924	comyel	0.9999999	comyel	0.999999881	2024-09-04	03:17.6	Y
2747.6	2749.4	0	11025	Passeriformes	0.97144663	Parulidae	0.9531451	BZWA	0.9199881	comyel	0.9999951	comyel	0.999995112	2024-09-04	45:49.6	Y
682.4	684	0	11025	Charadriiformes	0.9811226	Scolopacidae	0.9955455			shbdow	0.99991226	shbdow	0.999912262	2024-09-04	11:24.4	Y
3512.2	3513.4	0	11025	Charadriiformes	0.9441458	Scolopacidae	0.9856209			shbdow	0.99182105	shbdow	0.991821051	2024-09-04	58:34.2	Y
2993.6	2995.2	0	11025	Passeriformes	0.97212857	Parulidae	0.9563624			bawwar	0.9999994	bawwar	0.999999404	2024-09-05	49:57.6	Y
1208.6	1210	0	11025	Passeriformes	0.9721619	Passerellidae	0.9955556			daejun	0.9969842	daejun	0.996984184	2024-09-05	20:12.6	Y
1628.4	1630	0	11025	Passeriformes	0.9692234	Passerellidae	0.9953496			daejun	0.99442494	daejun	0.994424939	2024-09-05	27:12.4	Y
2550	2551.8	0	11025	Passeriformes	0.970676	Passerellidae	0.9951219	SFHS	0.98902446	whtspa	0.997888	whtspa	0.997888029	2024-09-05	42:34.0	Y
2762.4	2763.6	0	11025	Passeriformes	0.9710358	Passerellidae	0.99521303	DESP	0.9905719	savspa	0.9910591	savspa	0.991059124	2024-09-06	46:04.4	Y
2762.4	2763.6	0	11025	Passeriformes	0.9710358	Passerellidae	0.99521303	DESP	0.9905719	savspa	0.9910591	savspa	0.991059124	2024-09-06	46:04.4	Y
765	766.8	0	11025	Passeriformes	0.9720152	Parulidae	0.9555399			bawwar	0.99999964	bawwar	0.999999642	2024-09-06	12:47.0	Y
765	766.8	0	11025	Passeriformes	0.9720152	Parulidae	0.9555399			bawwar	0.99999964	bawwar	0.999999642	2024-09-06	12:47.0	Y
785.4	787.4	0	11025	Charadriiformes	0.9659594	Scolopacidae	0.9925054			shbdow	0.9994017	shbdow	0.999401689	2024-09-06	13:07.4	Y
785.4	787.4	0	11025	Charadriiformes	0.9659594	Scolopacidae	0.9925054			shbdow	0.9994017	shbdow	0.999401689	2024-09-06	13:07.4	Y
1959.2	1961	0	11025	Passeriformes	0.9720881	Passerellidae	0.99527305	SFHS	0.9893891	whtspa	0.99824655	whtspa	0.998246551	2024-09-06	32:41.2	Y
1959.2	1961	0	11025	Passeriformes	0.9720881	Passerellidae	0.99527305	SFHS	0.9893891	whtspa	0.99824655	whtspa	0.998246551	2024-09-06	32:41.2	Y
3042.2	3044	0	11025	Passeriformes	0.9722364	Parulidae	0.95646834			bawwar	0.99999976	bawwar	0.999999762	2024-09-06	50:44.2	Y
3042.2	3044	0	11025	Passeriformes	0.9722364	Parulidae	0.95646834			bawwar	0.99999976	bawwar	0.999999762	2024-09-06	50:44.2	Y
3174	3175.4	0	11025	Passeriformes	0.9720639	Parulidae	0.9556213			bawwar	0.9993678	bawwar	0.999367774	2024-09-06	52:56.0	Y
3174	3175.4	0	11025	Passeriformes	0.9720639	Parulidae	0.9556213			bawwar	0.9993678	bawwar	0.999367774	2024-09-06	52:56.0	Y
2732.8	2734.2	0	11025	Charadriiformes	0.9704062	Scolopacidae	0.99302715			shbdow	0.9998692	shbdow	0.999869227	2024-09-06	45:34.8	Y
2732.8	2734.2	0	11025	Charadriiformes	0.9704062	Scolopacidae	0.99302715			shbdow	0.9998692	shbdow	0.999869227	2024-09-06	45:34.8	Y
1706.8	1708.6	0	11025	Passeriformes	0.9721904	Passerellidae	0.9955395	SFHS	0.9900448	whtspa	0.99833715	whtspa	0.99833715	2024-09-06	28:28.8	Y
1706.8	1708.6	0	11025	Passeriformes	0.9721904	Passerellidae	0.9955395	SFHS	0.9900448	whtspa	0.99833715	whtspa	0.99833715	2024-09-06	28:28.8	Y
674.2	676	0	11025	Passeriformes	0.97194046	Parulidae	0.95544344			amered	0.9017245	amered	0.901724517	2024-09-06	11:16.2	Y
1377.2	1378.6	0	11025	Charadriiformes	0.95435137	Scolopacidae	0.96525204			leasan	0.99048525	leasan	0.990485251	2024-09-06	22:59.2	Y
2392.6	2394.4	0	11025	Passeriformes	0.971066	Parulidae	0.95206	MWAR	0.99784696	mouwar	0.9721531	mouwar	0.972153127	2024-09-06	39:54.6	Y
3179.8	3181.6	0	11025	Passeriformes	0.9721147	Parulidae	0.95305675	ZEEP	0.96132714	norwat	0.99999964	norwat	0.999999642	2024-09-06	53:01.8	Y
1032.6	1034.2	0	11025	Passeriformes	0.97111267	Parulidae	0.954837	SBUF	0.9323504	ovenbi1	0.97368526	ovenbi1	0.973685265	2024-09-06	17:14.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3021.8	3023.6	0	11025	Passeriformes	0.9642385	Passerellidae	0.99392045	DESP	0.9890133	savspa	0.9964283	savspa	0.996428311	2024-09-06	50:23.8	Y
2237.8	2239.6	0	11025	Passeriformes	0.9719462	Turdidae	0.95956594	THSH	0.9468926	swathr	0.8849556	swathr	0.884955585	2024-09-06	37:19.8	Y
1906.4	1908	0	11025	Passeriformes	0.9722205	Passerellidae	0.9955657	SFHS	0.99010277	whtspa	0.9979475	whtspa	0.997947514	2024-09-06	31:48.4	Y
695.6	697.2	0	11025	Passeriformes	0.97220075	Parulidae	0.95622456			bawwar	0.99999976	bawwar	0.999999762	2024-09-06	11:39.6	Y
695.6	697.2	0	11025	Passeriformes	0.97220075	Parulidae	0.95622456			bawwar	0.99999976	bawwar	0.999999762	2024-09-06	11:39.6	Y
619	620.8	0	11025	Passeriformes	0.9722333	Parulidae	0.95645636			bawwar	0.9999999	bawwar	0.999999881	2024-09-07	10:21.0	Y
619	620.8	0	11025	Passeriformes	0.9722333	Parulidae	0.95645636			bawwar	0.9999999	bawwar	0.999999881	2024-09-07	10:21.0	Y
1990.2	1992	0	11025	Passeriformes	0.97189575	Parulidae	0.95502585	BZWA	0.9819812	comyel	0.9999993	comyel	0.999999285	2024-09-07	33:12.2	Y
1990.2	1992	0	11025	Passeriformes	0.97189575	Parulidae	0.95502585	BZWA	0.9819812	comyel	0.9999993	comyel	0.999999285	2024-09-07	33:12.2	Y
2277.6	2279.4	0	11025	Passeriformes	0.9721121	Parulidae	0.95574063	BZWA	0.9730576	comyel	0.9999994	comyel	0.999999404	2024-09-07	37:59.6	Y
2277.6	2279.4	0	11025	Passeriformes	0.9721121	Parulidae	0.95574063	BZWA	0.9730576	comyel	0.9999994	comyel	0.999999404	2024-09-07	37:59.6	Y
129	132.6	0	11025	Passeriformes	0.97198	Passerellidae	0.9955273	SFHS	0.9898353	whtspa	0.9983944	whtspa	0.99839443	2024-09-07	02:11.0	Y
129	132.6	0	11025	Passeriformes	0.97198	Passerellidae	0.9955273	SFHS	0.9898353	whtspa	0.9983944	whtspa	0.99839443	2024-09-07	02:11.0	Y
3400.2	3402	0	11025	Passeriformes	0.9722269	Parulidae	0.95634174	BZWA	0.9831451	comyel	0.9999999	comyel	0.999999881	2024-09-07	56:42.2	Y
3400.2	3402	0	11025	Passeriformes	0.9722269	Parulidae	0.95634174	BZWA	0.9831451	comyel	0.9999999	comyel	0.999999881	2024-09-07	56:42.2	Y
2540.2	2541.8	0	11025	Passeriformes	0.97219783	Parulidae	0.9552751	ZEEP	0.9614748	norwat	0.99993086	norwat	0.999930859	2024-09-07	42:22.2	Y
2540.2	2541.8	0	11025	Passeriformes	0.97219783	Parulidae	0.9552751	ZEEP	0.9614748	norwat	0.99993086	norwat	0.999930859	2024-09-07	42:22.2	Y
3206.2	3208	0	11025	Passeriformes	0.9720533	Passerellidae	0.99528474	DESP	0.9914458	savspa	0.99808025	savspa	0.998080254	2024-09-07	53:28.2	Y
3206.2	3208	0	11025	Passeriformes	0.9720533	Passerellidae	0.99528474	DESP	0.9914458	savspa	0.99808025	savspa	0.998080254	2024-09-07	53:28.2	Y
2705.4	2707	0	11025	Passeriformes	0.97072124	Turdidae	0.9573486	THSH	0.94285315	herthr	0.99999845	herthr	0.99999845	2024-09-07	45:07.4	Y
2968	2969.4	0	11025	Passeriformes	0.97194415	Passerellidae	0.9948841	DESP	0.9876452	savspa	0.99620676	savspa	0.99620676	2024-09-07	49:30.0	Y
1932.4	1934.2	0	11025	Passeriformes	0.9706726	Passerellidae	0.99483347	SFHS	0.9884574	whtspa	0.9971209	whtspa	0.997120917	2024-09-07	32:14.4	Y
1932.4	1934.2	0	11025	Passeriformes	0.9706726	Passerellidae	0.99483347	SFHS	0.9884574	whtspa	0.9971209	whtspa	0.997120917	2024-09-07	32:14.4	Y
2705.4	2707	0	11025	Passeriformes	0.97072124	Turdidae	0.9573486	THSH	0.94285315	herthr	0.99999845	herthr	0.99999845	2024-09-07	45:07.4	Y
2968	2969.4	0	11025	Passeriformes	0.97194415	Passerellidae	0.9948841	DESP	0.9876452	savspa	0.99620676	savspa	0.99620676	2024-09-07	49:30.0	Y
2141.8	2143.2	0	11025	Passeriformes	0.9722	Parulidae	0.9562734			bawwar	0.96505964	bawwar	0.965059638	2024-09-07	35:45.8	Y
115	116.6	0	11025	Passeriformes	0.972082	Passerellidae	0.9954705	SFHS	0.9898135	whtspa	0.99745995	whtspa	0.997459948	2024-09-07	01:59.0	Y
433.2	435	0	11025	Passeriformes	0.9709843	Passerellidae	0.9952586			daejun	0.9966683	daejun	0.996668279	2024-09-07	07:17.2	Y
115	116.6	0	11025	Passeriformes	0.972082	Passerellidae	0.9954705	SFHS	0.9898135	whtspa	0.99745995	whtspa	0.997459948	2024-09-07	01:59.0	Y
433.2	435	0	11025	Passeriformes	0.9709843	Passerellidae	0.9952586			daejun	0.9966683	daejun	0.996668279	2024-09-07	07:17.2	Y
2141.8	2143.2	0	11025	Passeriformes	0.9722	Parulidae	0.9562734			bawwar	0.96505964	bawwar	0.965059638	2024-09-07	35:45.8	Y
3342.6	3344.2	0	11025	Passeriformes	0.9722119	Parulidae	0.95641285			bawwar	0.9999999	bawwar	0.999999881	2024-09-07	55:44.6	Y
3342.6	3344.2	0	11025	Passeriformes	0.9722119	Parulidae	0.95641285			bawwar	0.9999999	bawwar	0.999999881	2024-09-07	55:44.6	Y
291.4	293.2	0	11025	Passeriformes	0.97200036	Parulidae	0.9524315	SBUF	0.9366152	palwar	0.9999999	palwar	0.999999881	2024-09-08	04:53.4	Y
33.6	35.4	0	11025	Passeriformes	0.9720024	Passerellidae	0.9953694	DESP	0.9916586	savspa	0.9982526	savspa	0.998252571	2024-09-08	00:35.6	Y
33.6	35.4	0	11025	Passeriformes	0.9720024	Passerellidae	0.9953694	DESP	0.9916586	savspa	0.9982526	savspa	0.998252571	2024-09-08	00:35.6	Y
291.4	293.2	0	11025	Passeriformes	0.97200036	Parulidae	0.9524315	SBUF	0.9366152	palwar	0.9999999	palwar	0.999999881	2024-09-08	04:53.4	Y
3014.8	3016.6	0	11025	Passeriformes	0.9721972	Passerellidae	0.9955232	SFHS	0.9900551	whtspa	0.9984225	whtspa	0.998422503	2024-09-08	50:16.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3014.8	3016.6	0	11025	Passeriformes	0.9721972	Passerellidae	0.9955232	SFHS	0.9900551	whtspa	0.9984225	whtspa	0.998422503	2024-09-08	50:16.8	Y
1036.4	1038	0	11025	Passeriformes	0.9721788	Parulidae	0.9484775			bawwar	0.9997553	bawwar	0.999755323	2024-09-09	33:26.4	Y
3387.4	3389	0	11025	Passeriformes	0.9720563	Passerellidae	0.9954732	SFHS	0.9898262	whtspa	0.99851865	whtspa	0.998518646	2024-09-09	12:37.4	Y
1036.4	1038	0	11025	Passeriformes	0.9721788	Parulidae	0.9484775			bawwar	0.9997553	bawwar	0.999755323	2024-09-09	33:26.4	Y
3387.4	3389	0	11025	Passeriformes	0.9720563	Passerellidae	0.9954732	SFHS	0.9898262	whtspa	0.99851865	whtspa	0.998518646	2024-09-09	12:37.4	Y
137.6	139.4	0	11025	Passeriformes	0.9594655	Turdidae	0.9414878	THSH	0.9185417	herthr	0.99999785	herthr	0.999997854	2024-09-30	33:33.6	Y
137.6	139.4	0	11025	Passeriformes	0.9594655	Turdidae	0.9414878	THSH	0.9185417	herthr	0.99999785	herthr	0.999997854	2024-09-30	33:33.6	Y
176	177.6	0	11025	Passeriformes	0.96410674	Turdidae	0.94933814	THSH	0.9302479	herthr	0.9999982	herthr	0.999998212	2024-09-30	34:12.0	Y
176	177.6	0	11025	Passeriformes	0.96410674	Turdidae	0.94933814	THSH	0.9302479	herthr	0.9999982	herthr	0.999998212	2024-09-30	34:12.0	Y
182.6	184.4	0	11025	Passeriformes	0.97160745	Turdidae	0.95795095	THSH	0.9445097	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:18.6	Y
182.6	184.4	0	11025	Passeriformes	0.97160745	Turdidae	0.95795095	THSH	0.9445097	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:18.6	Y
188.6	190.2	0	11025	Passeriformes	0.9705292	Turdidae	0.95685107	THSH	0.9428597	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:24.6	Y
188.6	190.2	0	11025	Passeriformes	0.9705292	Turdidae	0.95685107	THSH	0.9428597	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:24.6	Y
190.6	192.4	0	11025	Passeriformes	0.97181004	Turdidae	0.95855814	THSH	0.94538134	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:26.6	Y
190.6	192.4	0	11025	Passeriformes	0.97181004	Turdidae	0.95855814	THSH	0.94538134	herthr	0.9999989	herthr	0.999998927	2024-09-30	34:26.6	Y
200	201.8	0	11025	Passeriformes	0.96365565	Turdidae	0.9453644	THSH	0.9245586	herthr	0.9999987	herthr	0.999998689	2024-09-30	34:36.0	Y
200	201.8	0	11025	Passeriformes	0.96365565	Turdidae	0.9453644	THSH	0.9245586	herthr	0.9999987	herthr	0.999998689	2024-09-30	34:36.0	Y
203.4	205	0	11025	Passeriformes	0.9717145	Turdidae	0.95852697	THSH	0.94526654	herthr	0.9999987	herthr	0.999998689	2024-09-30	34:39.4	Y
203.4	205	0	11025	Passeriformes	0.9717145	Turdidae	0.95852697	THSH	0.94526654	herthr	0.9999987	herthr	0.999998689	2024-09-30	34:39.4	Y
3397.8	3399.6	0	11025	Passeriformes	0.97194946	Parulidae	0.9535901	BZWA	0.95539045	comyel	0.99999857	comyel	0.999998569	2024-10-04	56:39.8	Y
3397.8	3399.6	0	11025	Passeriformes	0.97194946	Parulidae	0.9535901	BZWA	0.95539045	comyel	0.99999857	comyel	0.999998569	2024-10-04	56:39.8	Y
1311.6	1313.2	0	11025	Passeriformes	0.97013736	Parulidae	0.9516448	BZWA	0.9049263	comyel	0.99788207	comyel	0.997882068	2024-10-05	21:56.6	Y
1311.6	1313.2	0	11025	Passeriformes	0.97013736	Parulidae	0.9516448	BZWA	0.9049263	comyel	0.99788207	comyel	0.997882068	2024-10-05	21:56.6	Y
1590.4	1592	0	11025	Passeriformes	0.9699101	Turdidae	0.9545633	THSH	0.94003373	herthr	0.99999845	herthr	0.99999845	2024-10-05	26:35.4	Y
1590.4	1592	0	11025	Passeriformes	0.9699101	Turdidae	0.9545633	THSH	0.94003373	herthr	0.99999845	herthr	0.99999845	2024-10-05	26:35.4	Y
2963.8	2965.4	0	11025	Passeriformes	0.9703432	Passerellidae	0.9950341	SFHS	0.9881464	whtspa	0.9972218	whtspa	0.997221828	2024-10-05	49:28.8	Y
2963.8	2965.4	0	11025	Passeriformes	0.9703432	Passerellidae	0.9950341	SFHS	0.9881464	whtspa	0.9972218	whtspa	0.997221828	2024-10-05	49:28.8	Y
1992.6	1994	0	11025	Passeriformes	0.96339494	Turdidae	0.93891746			amerob	0.99952674	amerob	0.999526739	2024-10-05	33:14.6	Y
1992.6	1994	0	11025	Passeriformes	0.96339494	Turdidae	0.93891746			amerob	0.99952674	amerob	0.999526739	2024-10-05	33:14.6	Y
2102.2	2103.6	0	11025	Passeriformes	0.96487635	Turdidae	0.9190429			amerob	0.98220277	amerob	0.982202768	2024-10-05	35:04.2	Y
2102.2	2103.6	0	11025	Passeriformes	0.96487635	Turdidae	0.9190429			amerob	0.98220277	amerob	0.982202768	2024-10-05	35:04.2	Y
47.4	49	0	11025	Passeriformes	0.96367294	Parulidae	0.9300006	BZWA	0.9463365	comyel	0.99988055	comyel	0.999880552	2024-10-05	00:49.4	Y
47.4	49	0	11025	Passeriformes	0.96367294	Parulidae	0.9300006	BZWA	0.9463365	comyel	0.99988055	comyel	0.999880552	2024-10-05	00:49.4	Y
1968.4	1970.2	0	11025	Passeriformes	0.9718946	Turdidae	0.95721114	THSH	0.9426662	herthr	0.99999857	herthr	0.999998569	2024-10-06	32:52.4	Y
1968.4	1970.2	0	11025	Passeriformes	0.9718946	Turdidae	0.95721114	THSH	0.9426662	herthr	0.99999857	herthr	0.999998569	2024-10-06	32:52.4	Y
1449	1450.2	0	11025	Passeriformes	0.96961236	Turdidae	0.95071316			amerob	0.9999145	amerob	0.999914527	2024-10-06	24:11.0	Y
1449	1450.2	0	11025	Passeriformes	0.96961236	Turdidae	0.95071316			amerob	0.9999145	amerob	0.999914527	2024-10-06	24:11.0	Y
1459.6	1461	0	11025	Passeriformes	0.97146434	Turdidae	0.95896995			amerob	0.9999982	amerob	0.999998212	2024-10-06	24:21.6	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1459.6	1461	0	11025	Passeriformes	0.97146434	Turdidae	0.95896995			amerob	0.9999982	amerob	0.999998212	2024-10-06	24:21.6	Y
1505	1506.6	0	11025	Passeriformes	0.9703352	Turdidae	0.9552941			amerob	0.99998546	amerob	0.999985456	2024-10-06	25:07.0	Y
1505	1506.6	0	11025	Passeriformes	0.9703352	Turdidae	0.9552941			amerob	0.99998546	amerob	0.999985456	2024-10-06	25:07.0	Y
2618	2619.8	0	11025	Passeriformes	0.97220266	Turdidae	0.95964825			amerob	0.9999999	amerob	0.999999881	2024-10-06	43:40.0	Y
2618	2619.8	0	11025	Passeriformes	0.97220266	Turdidae	0.95964825			amerob	0.9999999	amerob	0.999999881	2024-10-06	43:40.0	Y
1172.2	1173.6	0	11025	Passeriformes	0.9691584	Turdidae	0.9591669			amerob	0.9999995	amerob	0.999999523	2024-10-08	19:34.2	Y
1172.2	1173.6	0	11025	Passeriformes	0.9691584	Turdidae	0.9591669			amerob	0.9999995	amerob	0.999999523	2024-10-08	19:34.2	Y
2101.6	2103	0	11025	Passeriformes	0.93647796	Turdidae	0.90310496	THSH	0.8657868	herthr	0.9999902	herthr	0.999990225	2024-10-08	35:03.6	Y
2101.6	2103	0	11025	Passeriformes	0.93647796	Turdidae	0.90310496	THSH	0.8657868	herthr	0.9999902	herthr	0.999990225	2024-10-08	35:03.6	Y
183.4	185.2	0	11025	Passeriformes	0.97202253	Passerellidae	0.9954175	DESP	0.9917217	savspa	0.9983303	savspa	0.998330295	2024-10-08	03:05.4	Y
183.4	185.2	0	11025	Passeriformes	0.97202253	Passerellidae	0.9954175	DESP	0.9917217	savspa	0.9983303	savspa	0.998330295	2024-10-08	03:05.4	Y
1532.4	1534	0	11025	Passeriformes	0.96016663	Turdidae	0.9357765	THSH	0.9127348	herthr	0.99999845	herthr	0.99999845	2024-10-09	25:37.4	Y
1532.4	1534	0	11025	Passeriformes	0.96016663	Turdidae	0.9357765	THSH	0.9127348	herthr	0.99999845	herthr	0.99999845	2024-10-09	25:37.4	Y
1546.6	1548	0	11025	Passeriformes	0.9437839	Turdidae	0.9324043	THSH	0.9078364	herthr	0.99999714	herthr	0.999997139	2024-10-09	25:51.6	Y
1546.6	1548	0	11025	Passeriformes	0.9437839	Turdidae	0.9324043	THSH	0.9078364	herthr	0.99999714	herthr	0.999997139	2024-10-09	25:51.6	Y
1552.2	1553.8	0	11025	Passeriformes	0.9709517	Turdidae	0.95608604	THSH	0.94247437	herthr	0.9999988	herthr	0.999998808	2024-10-09	25:57.2	Y
1552.2	1553.8	0	11025	Passeriformes	0.9709517	Turdidae	0.95608604	THSH	0.94247437	herthr	0.9999988	herthr	0.999998808	2024-10-09	25:57.2	Y
1599.6	1601.4	0	11025	Passeriformes	0.9631968	Turdidae	0.9509039	THSH	0.9354032	herthr	0.99999833	herthr	0.999998331	2024-10-09	26:44.6	Y
1599.6	1601.4	0	11025	Passeriformes	0.9631968	Turdidae	0.9509039	THSH	0.9354032	herthr	0.99999833	herthr	0.999998331	2024-10-09	26:44.6	Y
1608.4	1609.8	0	11025	Passeriformes	0.97208214	Turdidae	0.9368376	THSH	0.92044723	herthr	0.99999774	herthr	0.999997735	2024-10-09	26:53.4	Y
1608.4	1609.8	0	11025	Passeriformes	0.97208214	Turdidae	0.9368376	THSH	0.92044723	herthr	0.99999774	herthr	0.999997735	2024-10-09	26:53.4	Y
1623.6	1625.2	0	11025	Passeriformes	0.96504927	Turdidae	0.9295139	THSH	0.8983018	herthr	0.9999969	herthr	0.999996901	2024-10-09	27:08.6	Y
1623.6	1625.2	0	11025	Passeriformes	0.96504927	Turdidae	0.9295139	THSH	0.8983018	herthr	0.9999969	herthr	0.999996901	2024-10-09	27:08.6	Y
1768	1769.6	0	11025	Passeriformes	0.9711661	Turdidae	0.9566208	THSH	0.9422275	herthr	0.99999845	herthr	0.99999845	2024-10-09	29:33.0	Y
1768	1769.6	0	11025	Passeriformes	0.9711661	Turdidae	0.9566208	THSH	0.9422275	herthr	0.99999845	herthr	0.99999845	2024-10-09	29:33.0	Y
2061.8	2063.6	0	11025	Passeriformes	0.96788174	Turdidae	0.94739956	THSH	0.9294372	herthr	0.99999225	herthr	0.999992251	2024-10-09	34:26.8	Y
2061.8	2063.6	0	11025	Passeriformes	0.96788174	Turdidae	0.94739956	THSH	0.9294372	herthr	0.99999225	herthr	0.999992251	2024-10-09	34:26.8	Y
514.6	516.2	0	11025	Passeriformes	0.9718935	Turdidae	0.95903915	THSH	0.94626755	herthr	0.99999905	herthr	0.999999046	2024-10-10	08:38.6	Y
514.6	516.2	0	11025	Passeriformes	0.9718935	Turdidae	0.95903915	THSH	0.94626755	herthr	0.99999905	herthr	0.999999046	2024-10-10	08:38.6	Y
1284	1285.8	0	11025	Passeriformes	0.97220606	Passerellidae	0.9955817			daejun	0.9970034	daejun	0.997003376	2024-10-11	21:26.0	Y
1284	1285.8	0	11025	Passeriformes	0.97220606	Passerellidae	0.9955817			daejun	0.9970034	daejun	0.997003376	2024-10-11	21:26.0	Y
996	997.8	0	11025	Passeriformes	0.97211784	Passerellidae	0.99552673			daejun	0.99696857	daejun	0.996968567	2024-10-13	16:38.0	Y
996	997.8	0	11025	Passeriformes	0.97211784	Passerellidae	0.99552673			daejun	0.99696857	daejun	0.996968567	2024-10-13	16:38.0	Y
2441.6	2443.4	0	11025	Passeriformes	0.9721923	Passerellidae	0.9955308	SFHS	0.9898247	whtspa	0.99837744	whtspa	0.998377442	2024-10-13	40:43.6	Y
2441.6	2443.4	0	11025	Passeriformes	0.9721923	Passerellidae	0.9955308	SFHS	0.9898247	whtspa	0.99837744	whtspa	0.998377442	2024-10-13	40:43.6	Y
142.6	144.2	0	11025	Passeriformes	0.970699	Turdidae	0.95738614	THSH	0.9432848	herthr	0.9999982	herthr	0.999998212	2024-10-14	02:24.6	Y
155.2	157	0	11025	Passeriformes	0.97128254	Turdidae	0.95214975	THSH	0.9356917	herthr	0.99999833	herthr	0.999998331	2024-10-14	02:37.2	Y
155.2	157	0	11025	Passeriformes	0.97128254	Turdidae	0.95214975	THSH	0.9356917	herthr	0.99999833	herthr	0.999998331	2024-10-14	02:37.2	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
160.8	162	0	11025	Passeriformes	0.96986324	Turdidae	0.9552897	THSH	0.9402343	herthr	0.9999975	herthr	0.999997497	2024-10-14	02:42.8	Y
160.8	162	0	11025	Passeriformes	0.96986324	Turdidae	0.9552897	THSH	0.9402343	herthr	0.9999975	herthr	0.999997497	2024-10-14	02:42.8	Y
835.2	837.4	0	11025	Passeriformes	0.9640088	Passerellidae	0.9938975			daejun	0.9956838	daejun	0.995683789	2024-10-14	13:57.2	Y
2114	2115.8	0	11025	Passeriformes	0.9721734	Passerellidae	0.99557376			daejun	0.9970048	daejun	0.997004807	2024-10-14	35:16.0	Y
2458.4	2459.8	0	11025	Passeriformes	0.970665	Turdidae	0.95938694			amerob	0.99999964	amerob	0.999999642	2024-10-14	41:00.4	Y
2458.4	2459.8	0	11025	Passeriformes	0.970665	Turdidae	0.95938694			amerob	0.99999964	amerob	0.999999642	2024-10-14	41:00.4	Y
2466.2	2468.6	0	11025	Passeriformes	0.9718884	Turdidae	0.9581522			amerob	0.9999995	amerob	0.999999523	2024-10-14	41:08.2	Y
2476.2	2477.4	0	11025	Passeriformes	0.97156537	Turdidae	0.95775795			amerob	0.99999547	amerob	0.99999547	2024-10-14	41:18.2	Y
2476.2	2477.4	0	11025	Passeriformes	0.97156537	Turdidae	0.95775795			amerob	0.99999547	amerob	0.99999547	2024-10-14	41:18.2	Y
2479.6	2481	0	11025	Passeriformes	0.9711912	Turdidae	0.9589847			amerob	0.9999994	amerob	0.999999404	2024-10-14	41:21.6	Y
835.2	837.4	0	11025	Passeriformes	0.9640088	Passerellidae	0.9938975			daejun	0.9956838	daejun	0.995683789	2024-10-14	13:57.2	Y
2114	2115.8	0	11025	Passeriformes	0.9721734	Passerellidae	0.99557376			daejun	0.9970048	daejun	0.997004807	2024-10-14	35:16.0	Y
142.6	144.2	0	11025	Passeriformes	0.970699	Turdidae	0.95738614	THSH	0.9432848	herthr	0.9999982	herthr	0.999998212	2024-10-14	02:24.6	Y
2466.2	2468.6	0	11025	Passeriformes	0.9718884	Turdidae	0.9581522			amerob	0.9999995	amerob	0.999999523	2024-10-14	41:08.2	Y
2479.6	2481	0	11025	Passeriformes	0.9711912	Turdidae	0.9589847			amerob	0.9999994	amerob	0.999999404	2024-10-14	41:21.6	Y
3571	3572.6	0	11025	Passeriformes	0.9680227	Passerellidae	0.9944464			daejun	0.9963219	daejun	0.996321917	2024-10-14	59:33.0	Y
3571	3572.6	0	11025	Passeriformes	0.9680227	Passerellidae	0.9944464			daejun	0.9963219	daejun	0.996321917	2024-10-14	59:33.0	Y
2664.4	2666	0	11025	Passeriformes	0.9562777	Turdidae	0.9403494	THSH	0.9150909	herthr	0.999995	herthr	0.999994993	2024-10-16	44:26.4	Y
2664.4	2666	0	11025	Passeriformes	0.9562777	Turdidae	0.9403494	THSH	0.9150909	herthr	0.999995	herthr	0.999994993	2024-10-16	44:26.4	Y
2986.2	2988	0	11025	Passeriformes	0.97223544	Turdidae	0.9598435			amerob	0.9999999	amerob	0.999999881	2024-10-17	49:48.2	Y
2986.2	2988	0	11025	Passeriformes	0.97223544	Turdidae	0.9598435			amerob	0.9999999	amerob	0.999999881	2024-10-17	49:48.2	Y
2762.2	2764	0	11025	Passeriformes	0.96073073	Passerellidae	0.99163616			daejun	0.99335915	daejun	0.993359149	2024-10-17	46:04.2	Y
2762.2	2764	0	11025	Passeriformes	0.96073073	Passerellidae	0.99163616			daejun	0.99335915	daejun	0.993359149	2024-10-17	46:04.2	Y
1817.4	1818.6	0	11025	Passeriformes	0.9685976	Turdidae	0.95218307			amerob	0.9994174	amerob	0.999417424	2024-10-20	30:19.4	Y
1817.4	1818.6	0	11025	Passeriformes	0.9685976	Turdidae	0.95218307			amerob	0.9994174	amerob	0.999417424	2024-10-20	30:19.4	Y
2245.6	2246.8	0	11025	Passeriformes	0.9621927	Turdidae	0.8956332			amerob	0.93566436	amerob	0.935664356	2024-10-20	37:27.6	Y
2245.6	2246.8	0	11025	Passeriformes	0.9621927	Turdidae	0.8956332			amerob	0.93566436	amerob	0.935664356	2024-10-20	37:27.6	Y
2642.8	2644.2	0	11025	Passeriformes	0.971187	Turdidae	0.95952094			amerob	0.99999964	amerob	0.999999642	2024-10-20	44:04.8	Y
2642.8	2644.2	0	11025	Passeriformes	0.971187	Turdidae	0.95952094			amerob	0.99999964	amerob	0.999999642	2024-10-20	44:04.8	Y
2746	2747.2	0	11025	Passeriformes	0.9715328	Turdidae	0.94863987			amerob	0.99993694	amerob	0.999936938	2024-10-20	45:48.0	Y
2746	2747.2	0	11025	Passeriformes	0.9715328	Turdidae	0.94863987			amerob	0.99993694	amerob	0.999936938	2024-10-20	45:48.0	Y
2863.8	2865.6	0	11025	Passeriformes	0.97223514	Passerellidae	0.99558973			daejun	0.99701107	daejun	0.997011065	2024-10-20	47:45.8	Y
2863.8	2865.6	0	11025	Passeriformes	0.97223514	Passerellidae	0.99558973			daejun	0.99701107	daejun	0.997011065	2024-10-20	47:45.8	Y
2921.6	2926.6	0	11025	Passeriformes	0.9722338	Passerellidae	0.9955909			daejun	0.997012	daejun	0.997012019	2024-10-20	48:43.6	Y
2921.6	2926.6	0	11025	Passeriformes	0.9722338	Passerellidae	0.9955909			daejun	0.997012	daejun	0.997012019	2024-10-20	48:43.6	Y
3421.6	3423	0	11025	Charadriiformes	0.97953904	Scolopacidae	0.995262			shbdow	0.9999244	shbdow	0.999924421	2024-10-20	57:03.6	Y
3421.6	3423	0	11025	Charadriiformes	0.97953904	Scolopacidae	0.995262			shbdow	0.9999244	shbdow	0.999924421	2024-10-20	57:03.6	Y
3510.8	3512.2	0	11025	Charadriiformes	0.9790116	Scolopacidae	0.9949096			greyel	0.9993006	greyel	0.999300599	2024-10-22	58:32.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3510.8	3512.2	0	11025	Charadriiformes	0.9790116	Scolopacidae	0.9949096			greyel	0.9993006	greyel	0.999300599	2024-10-22	58:32.8	Y
3178.8	3180	0	11025	Passeriformes	0.9688702	Turdidae	0.9537279			amerob	0.99998295	amerob	0.999982953	2024-10-22	53:00.8	Y
3178.8	3180	0	11025	Passeriformes	0.9688702	Turdidae	0.9537279			amerob	0.99998295	amerob	0.999982953	2024-10-22	53:00.8	Y
641.8	643.6	0	11025	Charadriiformes	0.9814709	Scolopacidae	0.9956934			greyel	0.99980205	greyel	0.999802053	2024-10-22	10:41.8	Y
641.8	643.6	0	11025	Charadriiformes	0.9814709	Scolopacidae	0.9956934			greyel	0.99980205	greyel	0.999802053	2024-10-22	10:41.8	Y
644.4	646.4	0	11025	Charadriiformes	0.98145515	Scolopacidae	0.99569964			greyel	0.99977404	greyel	0.999774039	2024-10-22	10:44.4	Y
644.4	646.4	0	11025	Charadriiformes	0.98145515	Scolopacidae	0.99569964			greyel	0.99977404	greyel	0.999774039	2024-10-22	10:44.4	Y
647.8	649.6	0	11025	Charadriiformes	0.9805211	Scolopacidae	0.9953219			greyel	0.99960214	greyel	0.999602139	2024-10-22	10:47.8	Y
647.8	649.6	0	11025	Charadriiformes	0.9805211	Scolopacidae	0.9953219			greyel	0.99960214	greyel	0.999602139	2024-10-22	10:47.8	Y
652.4	653.6	0	11025	Charadriiformes	0.97618514	Scolopacidae	0.9944089			greyel	0.99841976	greyel	0.998419762	2024-10-22	10:52.4	Y
652.4	653.6	0	11025	Charadriiformes	0.97618514	Scolopacidae	0.9944089			greyel	0.99841976	greyel	0.998419762	2024-10-22	10:52.4	Y
271	272.6	0	11025	Charadriiformes	0.9801427	Scolopacidae	0.995304			shbdow	0.9998921	shbdow	0.999892116	2024-10-22	04:33.0	Y
271	272.6	0	11025	Charadriiformes	0.9801427	Scolopacidae	0.995304			shbdow	0.9998921	shbdow	0.999892116	2024-10-22	04:33.0	Y
273.8	275.6	0	11025	Charadriiformes	0.96473044	Scolopacidae	0.9923382			shbdow	0.99898285	shbdow	0.998982847	2024-10-22	04:35.8	Y
273.8	275.6	0	11025	Charadriiformes	0.96473044	Scolopacidae	0.9923382			shbdow	0.99898285	shbdow	0.998982847	2024-10-22	04:35.8	Y
277.8	279.2	0	11025	Charadriiformes	0.9467712	Scolopacidae	0.98823845			shbdow	0.99891424	shbdow	0.998914242	2024-10-22	04:39.8	Y
277.8	279.2	0	11025	Charadriiformes	0.9467712	Scolopacidae	0.98823845			shbdow	0.99891424	shbdow	0.998914242	2024-10-22	04:39.8	Y
2215.4	2216.8	0	11025	Charadriiformes	0.97503	Scolopacidae	0.9943914			shbdow	0.9996829	shbdow	0.999682903	2024-10-24	36:57.4	Y
2215.4	2216.8	0	11025	Charadriiformes	0.97503	Scolopacidae	0.9943914			shbdow	0.9996829	shbdow	0.999682903	2024-10-24	36:57.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1708.2	1710	0	11025	Passeriformes	0.97190833	Passerellidae	0.9954861	HSSP	0.99776244	graspa	0.9983236	graspa	0.998323619	2024-04-05	28:28.2	Y
2280.8	2282.2	0	11025	Passeriformes	0.95805323	Passerellidae	0.9927343			daejun	0.9949477	daejun	0.994947672	2024-04-07	38:04.8	Y
2293.4	2295.2	0	11025	Passeriformes	0.9722162	Passerellidae	0.9955841			daejun	0.99700934	daejun	0.997009337	2024-04-07	38:17.4	Y
2315.6	2317.4	0	11025	Passeriformes	0.96729887	Passerellidae	0.99403304			daejun	0.9958643	daejun	0.995864272	2024-04-07	38:39.6	Y
2319.8	2321.8	0	11025	Passeriformes	0.97205496	Passerellidae	0.99552876			daejun	0.99699616	daejun	0.996996164	2024-04-07	38:43.8	Y
2322.6	2324.4	0	11025	Passeriformes	0.9722252	Passerellidae	0.99557847			daejun	0.9970054	daejun	0.997005403	2024-04-07	38:46.6	Y
3573	3574.4	0	11025	Passeriformes	0.9253725	Passerellidae	0.9875152			daejun	0.9939805	daejun	0.993980527	2024-04-13	59:35.0	Y
3576.8	3578.4	0	11025	Passeriformes	0.9719834	Passerellidae	0.9955272			daejun	0.9969608	daejun	0.996960819	2024-04-13	59:38.8	Y
3578.8	3580.6	0	11025	Passeriformes	0.96822226	Passerellidae	0.9946955			daejun	0.99514467	daejun	0.995144665	2024-04-13	59:40.8	Y
3191	3192.6	0	11025	Passeriformes	0.9711888	Passerellidae	0.9952324	SFHS	0.98726267	whtspa	0.99237555	whtspa	0.992375553	2024-04-15	53:13.0	Y
555.4	557	0	11025	Passeriformes	0.9651788	Passerellidae	0.9935127	CUPS	0.9694392	chispa	0.87402654	chispa	0.874026537	2024-04-15	09:17.4	Y
2626.8	2628.2	0	11025	Charadriiformes	0.9577052	Scolopacidae	0.9882284			shbdow	0.9908827	shbdow	0.990882695	2024-04-15	43:48.8	Y
400.4	403.4	0	11025	Passeriformes	0.9691635	Passerellidae	0.994932			daejun	0.99618894	daejun	0.996188939	2024-04-15	06:42.4	Y
404.2	406	0	11025	Passeriformes	0.9632367	Passerellidae	0.99342644			daejun	0.9957497	daejun	0.995749712	2024-04-15	06:46.2	Y
1069.2	1071	0	11025	Passeriformes	0.9674229	Passerellidae	0.9946866	SFHS	0.9881125	whtspa	0.98490345	whtspa	0.984903455	2024-04-15	17:51.2	Y
418	419.4	0	11025	Charadriiformes	0.95683	Scolopacidae	0.9877751			shbdow	0.9977397	shbdow	0.997739673	2024-04-16	07:00.0	Y
3100	3101.8	0	11025	Passeriformes	0.9722305	Passerellidae	0.99558675			daejun	0.99700934	daejun	0.997009337	2024-04-17	51:42.0	Y
3105.8	3107.6	0	11025	Passeriformes	0.9708047	Passerellidae	0.9952331			daejun	0.9967585	daejun	0.996758521	2024-04-17	51:47.8	Y
3108.4	3110	0	11025	Passeriformes	0.9655838	Passerellidae	0.9929639			daejun	0.99509096	daejun	0.995090961	2024-04-17	51:50.4	Y
2672.6	2673.8	0	11025	Charadriiformes	0.97725916	Scolopacidae	0.99337304			greyel	0.9943212	greyel	0.994321227	2024-04-17	44:34.6	Y
290.6	291.8	0	11025	Charadriiformes	0.9813949	Scolopacidae	0.995628			greyel	0.99034965	greyel	0.99034965	2024-04-19	04:52.6	Y
249	251	0	11025	Charadriiformes	0.9814563	Scolopacidae	0.9956874			shbdow	0.9998903	shbdow	0.999890327	2024-04-19	04:11.0	Y
254	256.2	0	11025	Charadriiformes	0.98126006	Scolopacidae	0.9955448			shbdow	0.99972445	shbdow	0.999724448	2024-04-19	04:16.0	Y
269.8	271.4	0	11025	Charadriiformes	0.9807662	Scolopacidae	0.9954006			shbdow	0.9905426	shbdow	0.990542591	2024-04-19	04:31.8	Y
275.4	277.2	0	11025	Charadriiformes	0.9811459	Scolopacidae	0.9955379			shbdow	0.9988907	shbdow	0.998890698	2024-04-19	04:37.4	Y
279.2	281.4	0	11025	Charadriiformes	0.98058987	Scolopacidae	0.99527514			shbdow	0.9993893	shbdow	0.999389291	2024-04-19	04:41.2	Y
283.6	285.4	0	11025	Charadriiformes	0.98128295	Scolopacidae	0.9955778			shbdow	0.99973184	shbdow	0.999731839	2024-04-19	04:45.6	Y
287.2	288.4	0	11025	Charadriiformes	0.9805993	Scolopacidae	0.99519557			shbdow	0.9450818	shbdow	0.94508177	2024-04-19	04:49.2	Y
289.4	291.2	0	11025	Charadriiformes	0.98144597	Scolopacidae	0.9956808			shbdow	0.99988854	shbdow	0.999888539	2024-04-19	04:51.4	Y
293.6	295.2	0	11025	Charadriiformes	0.9814447	Scolopacidae	0.9956897			shbdow	0.9997372	shbdow	0.999737203	2024-04-19	04:55.6	Y
300.8	302.2	0	11025	Charadriiformes	0.981217	Scolopacidae	0.9955571			shbdow	0.999648	shbdow	0.999647975	2024-04-19	05:02.8	Y
328.4	330.2	0	11025	Charadriiformes	0.98106146	Scolopacidae	0.99549943			shbdow	0.9998436	shbdow	0.999843597	2024-04-19	05:30.4	Y
331.6	333.6	0	11025	Charadriiformes	0.9811048	Scolopacidae	0.9954358			shbdow	0.9998753	shbdow	0.999875307	2024-04-19	05:33.6	Y
336.2	337.8	0	11025	Charadriiformes	0.98134124	Scolopacidae	0.99563545			shbdow	0.9996043	shbdow	0.999604285	2024-04-19	05:38.2	Y
340.2	341.4	0	11025	Charadriiformes	0.98097503	Scolopacidae	0.99539363			shbdow	0.9989336	shbdow	0.998933613	2024-04-19	05:42.2	Y
1083.2	1085.8	0	11025	Charadriiformes	0.9814751	Scolopacidae	0.99571437			uplsan	0.99946517	uplsan	0.999465168	2024-04-19	18:05.2	Y
1037.4	1039	0	11025	Passeriformes	0.97217226	Passerellidae	0.9955226	CUPS	0.9886966	chispa	0.95504445	chispa	0.955044448	2024-04-20	17:19.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3341.4	3342.8	0	11025	Charadriiformes	0.977957	Scolopacidae	0.9945549			uplsan	0.9984982	uplsan	0.998498201	2024-04-23	55:43.4	Y
3302.4	3303.6	0	11025	Charadriiformes	0.9803421	Scolopacidae	0.9946455			greyel	0.9876863	greyel	0.987686276	2024-04-23	55:04.4	Y
3508	3509.6	0	11025	Passeriformes	0.97203416	Passerellidae	0.99543977	SFHS	0.98964065	whtspa	0.9837426	whtspa	0.983742595	2024-04-24	58:30.0	Y
2773.6	2775.4	0	11025	Passeriformes	0.9722333	Turdidae	0.9598357			amerob	0.9999999	amerob	0.999999881	2024-04-24	46:15.6	Y
2777.2	2778.6	0	11025	Passeriformes	0.9693932	Turdidae	0.95811945			amerob	0.99999666	amerob	0.999996662	2024-04-24	46:19.2	Y
2779.6	2781.2	0	11025	Passeriformes	0.9722344	Turdidae	0.95982856			amerob	0.9999999	amerob	0.999999881	2024-04-24	46:21.6	Y
1253	1254.2	0	11025	Charadriiformes	0.98146987	Scolopacidae	0.99568707			uplsan	0.9990005	uplsan	0.99900049	2024-04-24	20:55.0	Y
3095.8	3097.4	0	11025	Passeriformes	0.9721858	Turdidae	0.95293623			amerob	0.9999924	amerob	0.999992371	2024-04-25	51:37.8	Y
54.4	56.2	0	11025	Passeriformes	0.9719225	Passerellidae	0.99536276	DESP	0.99156886	savspa	0.99829763	savspa	0.998297632	2024-04-28	00:58.4	Y
464.4	466.2	0	11025	Passeriformes	0.9680113	Passerellidae	0.9940633	DESP	0.9891616	savspa	0.9975211	savspa	0.997521102	2024-04-28	07:46.4	Y
2836.4	2838.2	0	11025	Passeriformes	0.971482	Passerellidae	0.9952069	SFHS	0.98956084	whtspa	0.99810046	whtspa	0.99810046	2024-04-28	47:18.4	Y
2827.8	2829.6	0	11025	Passeriformes	0.97184914	Passerellidae	0.995235	SFHS	0.9889016	whtspa	0.99825233	whtspa	0.998252332	2024-04-28	47:09.8	Y
1873.6	1875.4	0	11025	Passeriformes	0.9708454	Turdidae	0.9569232	THSH	0.94287604	herthr	0.9999989	herthr	0.999998927	2024-04-30	31:15.6	Y
265.2	266.4	0	11025	Charadriiformes	0.980925	Scolopacidae	0.9954112			greyel	0.99963796	greyel	0.999637961	2024-05-01	04:27.2	Y
284.4	286.4	0	11025	Charadriiformes	0.9791749	Scolopacidae	0.9941042			greyel	0.9985746	greyel	0.998574615	2024-05-01	04:46.4	Y
2081.6	2083.4	0	11025	Passeriformes	0.97067934	Passerellidae	0.99523467	SFHS	0.9889065	whtspa	0.983133	whtspa	0.983133018	2024-05-02	34:43.6	Y
176	177.4	0	11025	Passeriformes	0.95370835	Turdidae	0.9409018	THSH	0.9200107	herthr	0.99999714	herthr	0.999997139	2024-05-12	12:37.0	Y
2386.6	2387.8	0	11025	Passeriformes	0.9658106	Turdidae	0.94553834			amerob	0.99899226	amerob	0.998992264	2024-05-16	39:49.6	Y
1567.2	1568.6	0	11025	Passeriformes	0.9718266	Turdidae	0.9588218	THSH	0.9456497	herthr	0.9999987	herthr	0.999998689	2024-05-16	26:11.2	Y
1890	1891.8	0	11025	Passeriformes	0.97052795	Turdidae	0.9582693	THSH	0.9451239	herthr	0.9999989	herthr	0.999998927	2024-05-16	31:34.0	Y
2043	2044.6	0	11025	Passeriformes	0.97038966	Turdidae	0.9559849	THSH	0.9411153	herthr	0.99999833	herthr	0.999998331	2024-05-16	34:07.0	Y
2050.6	2052.2	0	11025	Passeriformes	0.94710505	Turdidae	0.91706747	THSH	0.8866596	herthr	0.99998975	herthr	0.999989748	2024-05-16	34:14.6	Y
3213.4	3214.8	0	11025	Passeriformes	0.9721966	Parulidae	0.95632505			bawwar	0.99991834	bawwar	0.999918342	2024-05-17	53:41.4	Y
3225	3226.8	0	11025	Passeriformes	0.9721148	Parulidae	0.95616657			bawwar	0.9999994	bawwar	0.999999404	2024-05-17	53:53.0	Y
1529.8	1531.8	0	11025	Passeriformes	0.9720749	Turdidae	0.9596239	THSH	0.9469977	herthr	0.99999905	herthr	0.999999046	2024-05-17	25:37.8	Y
3555.2	3557.4	0	11025	Charadriiformes	0.958252	Scolopacidae	0.9859679			sposan	0.9435071	sposan	0.943507075	2024-05-17	59:25.2	Y
854.6	856.4	0	11025	Passeriformes	0.97210354	Parulidae	0.95613134			bawwar	0.9999044	bawwar	0.999904394	2024-05-17	14:25.6	Y
143.8	145.2	0	11025	Charadriiformes	0.9806144	Charadriidae	0.9996043			semplo	0.98366183	semplo	0.98366183	2024-05-17	02:26.8	Y
3548.8	3550	0	11025	Charadriiformes	0.98105204	Charadriidae	0.99960285			semplo	0.95803946	semplo	0.958039463	2024-05-17	59:11.8	Y
1114.6	1116	0	11025	Passeriformes	0.9703245	Turdidae	0.95574933	THSH	0.94023156	herthr	0.9999982	herthr	0.999998212	2024-05-17	18:38.6	Y
1923.8	1925.2	0	11025	Passeriformes	0.9693852	Turdidae	0.9526762	THSH	0.9380624	herthr	0.9999989	herthr	0.999998927	2024-05-17	32:07.8	Y
1936	1937.2	0	11025	Passeriformes	0.96549714	Turdidae	0.9529836	THSH	0.9374329	herthr	0.9999989	herthr	0.999998927	2024-05-17	32:20.0	Y
2473.6	2475.4	0	11025	Passeriformes	0.9722373	Parulidae	0.95647925			bawwar	0.9999999	bawwar	0.999999881	2024-05-18	41:22.6	Y
668.2	669.8	0	11025	Charadriiformes	0.97974145	Scolopacidae	0.9949693			greyel	0.998858	greyel	0.998857975	2024-05-18	11:11.2	Y
681.2	684	0	11025	Charadriiformes	0.97404987	Scolopacidae	0.99392265			greyel	0.99684733	greyel	0.996847332	2024-05-18	11:24.2	Y
684.2	688	0	11025	Charadriiformes	0.9813464	Scolopacidae	0.99560475			greyel	0.99955565	greyel	0.999555647	2024-05-18	11:27.2	Y
2799.4	2801.2	0	11025	Passeriformes	0.9722376	Parulidae	0.9564904			bawwar	0.9999999	bawwar	0.999999881	2024-05-18	46:44.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
484.2	485.8	0	11025	Passeriformes	0.97222114	Parulidae	0.95643467			bawwar	0.99999976	bawwar	0.999999762	2024-05-19	08:13.2	Y
841.4	843.2	0	11025	Passeriformes	0.97222555	Parulidae	0.9561974			bawwar	0.9999999	bawwar	0.999999881	2024-05-19	14:10.4	Y
1662.4	1664	0	11025	Passeriformes	0.9617442	Passerellidae	0.9917498	CUPS	0.9744581	amtspa	0.9961409	amtspa	0.996140897	2024-05-19	27:45.4	Y
1790.2	1793	0	11025	Charadriiformes	0.98147476	Scolopacidae	0.9957035			greyel	0.9997873	greyel	0.999787271	2024-05-19	29:54.2	Y
1809	1811.6	0	11025	Charadriiformes	0.9814492	Scolopacidae	0.9956851			greyel	0.99982053	greyel	0.99982053	2024-05-19	30:13.0	Y
561.6	563.4	0	11025	Passeriformes	0.9720284	Parulidae	0.95602			bawwar	0.99999964	bawwar	0.999999642	2024-05-20	09:30.6	Y
777.2	778.8	0	11025	Passeriformes	0.97223645	Parulidae	0.95647323			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	13:06.2	Y
313.2	314.8	0	11025	Passeriformes	0.97223794	Parulidae	0.956492			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	05:22.2	Y
253.6	255.2	0	11025	Passeriformes	0.9722311	Parulidae	0.95637894			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	04:23.6	Y
480.8	482.4	0	11025	Passeriformes	0.97223085	Parulidae	0.9564762			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	08:10.8	Y
1650	1651.6	0	11025	Charadriiformes	0.9550318	Scolopacidae	0.98315454			leasan	0.99988425	leasan	0.999884248	2024-05-20	27:33.0	Y
3102.4	3104.2	0	11025	Charadriiformes	0.980991	Scolopacidae	0.9952018			sposan	0.99144804	sposan	0.991448045	2024-05-20	51:48.4	Y
206.4	208.2	0	11025	Passeriformes	0.954511	Passerellidae	0.9937738			daejun	0.99521637	daejun	0.99521637	2024-05-21	03:35.4	Y
211	212.8	0	11025	Passeriformes	0.9697192	Passerellidae	0.9952885			daejun	0.99661475	daejun	0.996614754	2024-05-21	03:40.0	Y
217.4	218.8	0	11025	Passeriformes	0.95043784	Passerellidae	0.9916266			daejun	0.9925403	daejun	0.9925403	2024-05-21	03:46.4	Y
219.4	221.2	0	11025	Passeriformes	0.93665373	Passerellidae	0.99088836			daejun	0.9935533	daejun	0.993553281	2024-05-21	03:48.4	Y
222.6	224	0	11025	Passeriformes	0.96518165	Passerellidae	0.9948455			daejun	0.99626213	daejun	0.996262133	2024-05-21	03:51.6	Y
230.8	232.6	0	11025	Passeriformes	0.95635843	Passerellidae	0.9943007			daejun	0.9953329	daejun	0.995332897	2024-05-21	03:59.8	Y
251	252.8	0	11025	Passeriformes	0.9194893	Passerellidae	0.9876068			daejun	0.9886331	daejun	0.988633096	2024-05-21	04:20.0	Y
253.2	254.6	0	11025	Passeriformes	0.93937135	Passerellidae	0.9921191			daejun	0.9919849	daejun	0.991984904	2024-05-21	04:22.2	Y
277.6	279	0	11025	Passeriformes	0.8978705	Passerellidae	0.9865128			daejun	0.9440163	daejun	0.944016278	2024-05-21	04:46.6	Y
289.8	291	0	11025	Passeriformes	0.92027867	Passerellidae	0.98360944			daejun	0.9780458	daejun	0.978045821	2024-05-21	04:58.8	Y
309.2	311	0	11025	Passeriformes	0.956497	Passerellidae	0.99150556			daejun	0.98567355	daejun	0.985673547	2024-05-21	05:18.2	Y
311.2	313	0	11025	Passeriformes	0.93502504	Passerellidae	0.9903082			daejun	0.98774964	daejun	0.987749636	2024-05-21	05:20.2	Y
348.8	350.6	0	11025	Passeriformes	0.9603194	Passerellidae	0.9919918			daejun	0.9929824	daejun	0.992982388	2024-05-21	05:57.8	Y
2796	2797.2	0	11025	Passeriformes	0.96622765	Parulidae	0.93451506			bawwar	0.9999943	bawwar	0.999994278	2024-05-21	46:44.0	Y
3496.4	3498	0	11025	Passeriformes	0.97209364	Parulidae	0.9555808			bawwar	0.9999887	bawwar	0.999988675	2024-05-21	58:25.4	Y
1692.6	1694.2	0	11025	Passeriformes	0.9721487	Parulidae	0.95512253			bawwar	0.9999999	bawwar	0.999999881	2024-05-21	28:22.6	Y
2135	2137.4	0	11025	Passeriformes	0.97213745	Parulidae	0.9559408			bawwar	0.9999999	bawwar	0.999999881	2024-05-21	35:41.0	Y
178.6	182	0	11025	Charadriiformes	0.98146534	Scolopacidae	0.99569833			greyel	0.99981683	greyel	0.999816835	2024-05-22	03:07.6	Y
848.4	850	0	11025	Charadriiformes	0.98001856	Scolopacidae	0.995002			sposan	0.99809915	sposan	0.998099148	2024-05-22	14:17.4	Y
1033.2	1035	0	11025	Passeriformes	0.97066474	Passerellidae	0.99426126	DESP	0.98890686	savspa	0.99562377	savspa	0.995623767	2024-05-22	17:21.2	Y
1854.8	1856.4	0	11025	Passeriformes	0.9716058	Passerellidae	0.9952396	DESP	0.9909061	savspa	0.9898379	savspa	0.989837885	2024-05-22	31:02.8	Y
2271.8	2273.6	0	11025	Passeriformes	0.9721975	Passerellidae	0.99554515	DESP	0.99190086	savspa	0.9984378	savspa	0.998437822	2024-05-22	37:59.8	Y
3591.4	3593.2	0	11025	Passeriformes	0.97190094	Passerellidae	0.9953986	DESP	0.99153125	savspa	0.9979843	savspa	0.99798429	2024-05-22	59:59.4	Y
138.6	140.4	0	11025	Passeriformes	0.9722378	Parulidae	0.9564953			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	02:27.6	Y
2625	2626.8	0	11025	Passeriformes	0.9722288	Passerellidae	0.9955533	SWLI	0.99707234	linspa	0.983624	linspa	0.983623981	2024-05-22	43:54.0	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
0.4	2.2	0	11025	Passeriformes	0.9719306	Passerellidae	0.99539256	DESP	0.9917754	savspa	0.9983339	savspa	0.998333871	2024-05-22	00:09.4	Y
244.6	246.4	0	11025	Passeriformes	0.9721839	Passerellidae	0.99555176	DESP	0.9916427	savspa	0.9979479	savspa	0.997947872	2024-05-22	04:13.6	Y
261.8	263.6	0	11025	Passeriformes	0.9718242	Passerellidae	0.9953662	DESP	0.99113256	savspa	0.9829101	savspa	0.982910097	2024-05-22	04:30.8	Y
1833.2	1835.6	0	11025	Charadriiformes	0.96807355	Scolopacidae	0.9827565			sposan	0.99152327	sposan	0.991523266	2024-05-22	30:42.2	Y
1965.8	1968.4	0	11025	Charadriiformes	0.98148227	Scolopacidae	0.9956974			sposan	0.99948955	sposan	0.999489546	2024-05-22	32:54.8	Y
2001.6	2003.4	0	11025	Charadriiformes	0.98066527	Scolopacidae	0.99503714			sposan	0.99916804	sposan	0.999168038	2024-05-22	33:30.6	Y
2077.6	2078.8	0	11025	Charadriiformes	0.97463995	Scolopacidae	0.9909944			sposan	0.9982175	sposan	0.998217523	2024-05-22	34:46.6	Y
2429.6	2431	0	11025	Charadriiformes	0.97884095	Scolopacidae	0.9940439			sposan	0.9989053	sposan	0.998905301	2024-05-22	40:38.6	Y
1984.2	1985.8	0	11025	Passeriformes	0.972232	Parulidae	0.9564564			bawwar	0.99999976	bawwar	0.999999762	2024-05-22	33:14.2	Y
1598.6	1600	0	11025	Passeriformes	0.96775734	Passerellidae	0.9950354			daejun	0.99546474	daejun	0.995464742	2024-05-22	26:49.6	Y
1097.6	1099.4	0	11025	Passeriformes	0.967644	Passerellidae	0.99473464	DESP	0.98988056	savspa	0.99458236	savspa	0.994582355	2024-05-22	18:28.6	Y
883.2	885	0	11025	Passeriformes	0.97204065	Turdidae	0.9591588	THSH	0.9462031	herthr	0.9999989	herthr	0.999998927	2024-05-22	14:48.2	Y
894.6	896.2	0	11025	Passeriformes	0.97221684	Turdidae	0.9573516	THSH	0.94344866	herthr	0.9999989	herthr	0.999998927	2024-05-22	14:59.6	Y
908.4	910	0	11025	Passeriformes	0.9721214	Turdidae	0.95816106	THSH	0.94472754	herthr	0.9999989	herthr	0.999998927	2024-05-22	15:13.4	Y
937.8	939.6	0	11025	Passeriformes	0.97167623	Turdidae	0.95707333	THSH	0.9433893	herthr	0.9999988	herthr	0.999998808	2024-05-22	15:42.8	Y
948	949.4	0	11025	Passeriformes	0.9704689	Turdidae	0.95707816	THSH	0.94373345	herthr	0.9999989	herthr	0.999998927	2024-05-22	15:53.0	Y
992.8	994.2	0	11025	Passeriformes	0.9722139	Turdidae	0.9593999	THSH	0.9466661	herthr	0.99999905	herthr	0.999999046	2024-05-22	16:37.8	Y
997.2	998.6	0	11025	Passeriformes	0.9486418	Turdidae	0.9070257	THSH	0.8609695	herthr	0.99998105	herthr	0.999981046	2024-05-22	16:42.2	Y
1000.6	1002	0	11025	Passeriformes	0.97162974	Turdidae	0.9582577	THSH	0.9450485	herthr	0.9999989	herthr	0.999998927	2024-05-22	16:45.6	Y
1093.4	1094.8	0	11025	Passeriformes	0.9676811	Turdidae	0.95235926	THSH	0.93484676	herthr	0.9999987	herthr	0.999998689	2024-05-22	18:18.4	Y
2284.6	2285.8	0	11025	Passeriformes	0.9716271	Turdidae	0.9581404	THSH	0.9445637	herthr	0.9999989	herthr	0.999998927	2024-05-22	38:09.6	Y
2359.4	2360.8	0	11025	Passeriformes	0.9634051	Turdidae	0.93838096	THSH	0.91443133	herthr	0.9999964	herthr	0.999996424	2024-05-22	39:24.4	Y
2369.4	2370.8	0	11025	Passeriformes	0.97081304	Turdidae	0.9566606	THSH	0.94246674	herthr	0.9999989	herthr	0.999998927	2024-05-22	39:34.4	Y
467.2	469.4	0	11025	Passeriformes	0.9722073	Passerellidae	0.99556845	DESP	0.991727	savspa	0.9982179	savspa	0.998217881	2024-05-22	07:52.2	Y
1021	1022.8	0	11025	Passeriformes	0.97109735	Passerellidae	0.9944283	DESP	0.9884919	savspa	0.99360365	savspa	0.993603647	2024-05-22	17:06.0	Y
2978.6	2981.6	0	11025	Charadriiformes	0.9814771	Scolopacidae	0.9956726			sposan	0.9995303	sposan	0.999530315	2024-05-22	49:44.6	Y
12.2	14	0	11025	Passeriformes	0.9603285	Passerellidae	0.99182445	SFHS	0.9825137	whtspa	0.9959616	whtspa	0.995961607	2024-05-23	00:15.2	Y
35.4	36.8	0	11025	Passeriformes	0.9688035	Passerellidae	0.9663321	SFHS	0.93959546	whtspa	0.94260937	whtspa	0.94260937	2024-05-23	00:38.4	Y
40.6	42.4	0	11025	Passeriformes	0.9721066	Passerellidae	0.99549955	SFHS	0.98981386	whtspa	0.9973731	whtspa	0.997373104	2024-05-23	00:43.6	Y
44.2	45.6	0	11025	Passeriformes	0.9721367	Passerellidae	0.99554694	SFHS	0.9898713	whtspa	0.99072367	whtspa	0.99072367	2024-05-23	00:47.2	Y
50.6	52.4	0	11025	Passeriformes	0.97177863	Passerellidae	0.99529546	SFHS	0.9891856	whtspa	0.9983114	whtspa	0.9983114	2024-05-23	00:53.6	Y
69.6	71	0	11025	Passeriformes	0.89388305	Passerellidae	0.98059183	SFHS	0.97548044	whtspa	0.9943974	whtspa	0.994397402	2024-05-23	01:12.6	Y
96.6	98.2	0	11025	Passeriformes	0.9721296	Passerellidae	0.9954774	SFHS	0.9899664	whtspa	0.99750704	whtspa	0.997507036	2024-05-23	01:39.6	Y
1829.2	1830.8	0	11025	Passeriformes	0.962124	Turdidae	0.946979	THSH	0.9290658	herthr	0.9999968	herthr	0.999996781	2024-05-23	30:33.2	Y
249.2	251	0	11025	Passeriformes	0.97020376	Passerellidae	0.9946747	SFHS	0.98904294	whtspa	0.9980332	whtspa	0.998033226	2024-05-23	04:13.2	Y
275.2	276.8	0	11025	Passeriformes	0.9720978	Passerellidae	0.9954075	SFHS	0.9896207	whtspa	0.99843484	whtspa	0.998434842	2024-05-23	04:39.2	Y
297.8	299.6	0	11025	Passeriformes	0.97138476	Passerellidae	0.9952604	SFHS	0.9878819	whtspa	0.99732095	whtspa	0.99732095	2024-05-23	05:01.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2758.2	2760	0	11025	Passeriformes	0.9721604	Passerellidae	0.9955729			daejun	0.99700207	daejun	0.997002065	2024-04-06	06:12.2	Y
2758.2	2760	0	11025	Passeriformes	0.9721604	Passerellidae	0.9955729			daejun	0.99700207	daejun	0.997002065	2024-04-06	06:12.2	Y
2764	2766.6	0	11025	Passeriformes	0.97192353	Passerellidae	0.99544793			daejun	0.99695563	daejun	0.996955633	2024-04-06	06:18.0	Y
2764	2766.6	0	11025	Passeriformes	0.97192353	Passerellidae	0.99544793			daejun	0.99695563	daejun	0.996955633	2024-04-06	06:18.0	Y
2778.8	2780.4	0	11025	Passeriformes	0.9721041	Passerellidae	0.99554753			daejun	0.9969939	daejun	0.996993899	2024-04-06	06:32.8	Y
2778.8	2780.4	0	11025	Passeriformes	0.9721041	Passerellidae	0.99554753			daejun	0.9969939	daejun	0.996993899	2024-04-06	06:32.8	Y
464.6	467	0	11025	Passeriformes	0.97034746	Passerellidae	0.9949215			daejun	0.9966754	daejun	0.996675372	2024-04-08	30:58.6	Y
827.2	829.4	0	11025	Passeriformes	0.9720906	Passerellidae	0.9955596			daejun	0.9969976	daejun	0.996997595	2024-04-08	37:01.2	Y
464.6	467	0	11025	Passeriformes	0.97034746	Passerellidae	0.9949215			daejun	0.9966754	daejun	0.996675372	2024-04-08	30:58.6	Y
827.2	829.4	0	11025	Passeriformes	0.9720906	Passerellidae	0.9955596			daejun	0.9969976	daejun	0.996997595	2024-04-08	37:01.2	Y
3059.6	3061.4	0	11025	Passeriformes	0.9721868	Passerellidae	0.9955024	SFHS	0.98975605	whtspa	0.9977449	whtspa	0.997744918	2024-04-12	20:11.6	Y
3059.6	3061.4	0	11025	Passeriformes	0.9721868	Passerellidae	0.9955024	SFHS	0.98975605	whtspa	0.9977449	whtspa	0.997744918	2024-04-12	20:11.6	Y
1956	1957.4	0	11025	Passeriformes	0.9675735	Turdidae	0.9566321			amerob	0.9999913	amerob	0.999991298	2024-04-12	01:51.0	Y
1956	1957.4	0	11025	Passeriformes	0.9675735	Turdidae	0.9566321			amerob	0.9999913	amerob	0.999991298	2024-04-12	01:51.0	Y
2266.6	2270.6	0	11025	Passeriformes	0.9722349	Passerellidae	0.99559116			daejun	0.9970118	daejun	0.997011781	2024-04-12	07:01.6	Y
2266.6	2270.6	0	11025	Passeriformes	0.9722349	Passerellidae	0.99559116			daejun	0.9970118	daejun	0.997011781	2024-04-12	07:01.6	Y
2306.4	2308.2	0	11025	Passeriformes	0.9722322	Passerellidae	0.9955882			daejun	0.99701023	daejun	0.997010231	2024-04-12	07:41.4	Y
2306.4	2308.2	0	11025	Passeriformes	0.9722322	Passerellidae	0.9955882			daejun	0.99701023	daejun	0.997010231	2024-04-12	07:41.4	Y
2317.2	2319	0	11025	Passeriformes	0.97223616	Passerellidae	0.9955913			daejun	0.99701214	daejun	0.997012138	2024-04-12	07:52.2	Y
2317.2	2319	0	11025	Passeriformes	0.97223616	Passerellidae	0.9955913			daejun	0.99701214	daejun	0.997012138	2024-04-12	07:52.2	Y
2336	2339	0	11025	Passeriformes	0.9722363	Passerellidae	0.9955907			daejun	0.9970119	daejun	0.9970119	2024-04-12	08:11.0	Y
2336	2339	0	11025	Passeriformes	0.9722363	Passerellidae	0.9955907			daejun	0.9970119	daejun	0.9970119	2024-04-12	08:11.0	Y
22	23.2	0	11025	Passeriformes	0.96959376	Passerellidae	0.9945311	SFHS	0.9877993	whtspa	0.9902021	whtspa	0.990202129	2024-05-16	19:24.0	Y
22	23.2	0	11025	Passeriformes	0.96959376	Passerellidae	0.9945311	SFHS	0.9877993	whtspa	0.9902021	whtspa	0.990202129	2024-05-16	19:24.0	Y
425.8	427.4	0	11025	Passeriformes	0.9635088	Passerellidae	0.99218553	DESP	0.9794804	savspa	0.98692244	savspa	0.986922443	2024-05-16	26:07.8	Y
425.8	427.4	0	11025	Passeriformes	0.9635088	Passerellidae	0.99218553	DESP	0.9794804	savspa	0.98692244	savspa	0.986922443	2024-05-16	26:07.8	Y
2715.6	2717.4	0	11025	Passeriformes	0.97223264	Parulidae	0.95639944			bawwar	0.9999999	bawwar	0.999999881	2024-05-17	04:17.6	Y
2717.8	2719.4	0	11025	Passeriformes	0.97221583	Parulidae	0.9564018			bawwar	0.99999964	bawwar	0.999999642	2024-05-17	04:19.8	Y
880.8	882.4	0	11025	Passeriformes	0.97200364	Parulidae	0.9478688	ZEEP	0.95868	norwat	0.9999951	norwat	0.999995112	2024-05-16	33:42.8	Y
769.2	771	0	11025	Passeriformes	0.97122407	Passerellidae	0.995391	SFHS	0.98947144	whtspa	0.99392706	whtspa	0.993927062	2024-05-16	31:51.2	Y
1117.6	1119.4	0	11025	Passeriformes	0.97223127	Passerellidae	0.9955788	SWLI	0.99709547	linspa	0.986852	linspa	0.98685199	2024-05-17	37:39.6	Y
415.4	417	0	11025	Passeriformes	0.9470316	Passerellidae	0.9867198	DESP	0.9633469	savspa	0.9143542	savspa	0.914354205	2024-05-17	25:57.4	Y
1338	1339.6	0	11025	Passeriformes	0.97223073	Passerellidae	0.99557436	SFHS	0.99006736	whtspa	0.9985667	whtspa	0.998566687	2024-05-17	41:21.0	Y
1338	1339.6	0	11025	Passeriformes	0.97223073	Passerellidae	0.99557436	SFHS	0.99006736	whtspa	0.9985667	whtspa	0.998566687	2024-05-17	41:21.0	Y
23.6	25.4	0	11025	Passeriformes	0.97223604	Parulidae	0.9564544			bawwar	0.9999999	bawwar	0.999999881	2024-05-17	19:25.6	Y
23.6	25.4	0	11025	Passeriformes	0.97223604	Parulidae	0.9564544			bawwar	0.9999999	bawwar	0.999999881	2024-05-17	19:25.6	Y
1165.4	1167	0	11025	Passeriformes	0.9719163	Parulidae	0.95076215	ZEEP	0.958501	norwat	0.9999995	norwat	0.999999523	2024-05-17	38:27.4	Y
1165.4	1167	0	11025	Passeriformes	0.9719163	Parulidae	0.95076215	ZEEP	0.958501	norwat	0.9999995	norwat	0.999999523	2024-05-17	38:27.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1160.6	1162.2	0	11025	Passeriformes	0.9721367	Passerellidae	0.9954685	SFHS	0.9897798	whtspa	0.99836856	whtspa	0.998368561	2024-05-17	38:22.6	Y
1160.6	1162.2	0	11025	Passeriformes	0.9721367	Passerellidae	0.9954685	SFHS	0.9897798	whtspa	0.99836856	whtspa	0.998368561	2024-05-17	38:22.6	Y
5.2	7	0	11025	Passeriformes	0.97206104	Turdidae	0.95976466			amerob	0.9999999	amerob	0.999999881	2024-05-17	20:07.2	Y
77.6	79.4	0	11025	Passeriformes	0.9719507	Turdidae	0.9594159			amerob	0.9999999	amerob	0.999999881	2024-05-17	21:19.6	Y
109.2	110.4	0	11025	Passeriformes	0.9654871	Turdidae	0.9588004			amerob	0.9999939	amerob	0.99999392	2024-05-17	21:51.2	Y
1055.8	1057.6	0	11025	Passeriformes	0.962577	Passerellidae	0.9919063			daejun	0.9958145	daejun	0.995814502	2024-05-17	37:37.8	Y
627.6	629.2	0	11025	Passeriformes	0.9721175	Passerellidae	0.99549246	SFHS	0.9897922	whtspa	0.9933496	whtspa	0.993349612	2024-05-17	30:29.6	Y
1151.2	1152.8	0	11025	Passeriformes	0.97209936	Turdidae	0.95947605	THSH	0.94671243	herthr	0.99999905	herthr	0.999999046	2024-05-17	39:13.2	Y
178.6	180.2	0	11025	Passeriformes	0.9268429	Turdidae	0.89598286	THSH	0.8540226	herthr	0.9999937	herthr	0.999993682	2024-05-17	23:00.6	Y
178.6	180.2	0	11025	Passeriformes	0.9268429	Turdidae	0.89598286	THSH	0.8540226	herthr	0.9999937	herthr	0.999993682	2024-05-17	23:00.6	Y
1151.2	1152.8	0	11025	Passeriformes	0.97209936	Turdidae	0.95947605	THSH	0.94671243	herthr	0.99999905	herthr	0.999999046	2024-05-17	39:13.2	Y
164.2	166	0	11025	Passeriformes	0.9721867	Parulidae	0.9562493			bawwar	0.9999999	bawwar	0.999999881	2024-05-17	22:46.2	Y
164.2	166	0	11025	Passeriformes	0.9721867	Parulidae	0.9562493			bawwar	0.9999999	bawwar	0.999999881	2024-05-17	22:46.2	Y
3208.4	3209.6	0	11025	Passeriformes	0.97172236	Parulidae	0.95482856	BZWA	0.9784581	comyel	0.9244096	comyel	0.924409628	2024-05-18	13:30.4	Y
683.2	685	0	11025	Passeriformes	0.97015375	Turdidae	0.9553972	THSH	0.9410986	herthr	0.9999989	herthr	0.999998927	2024-05-18	31:25.2	Y
876.6	878.4	0	11025	Passeriformes	0.972169	Passerellidae	0.9954828	DESP	0.9913293	savspa	0.99712485	savspa	0.997124851	2024-05-18	34:38.6	Y
1831.2	1832.6	0	11025	Passeriformes	0.9718837	Passerellidae	0.99537575	DESP	0.9912004	savspa	0.9934911	savspa	0.993491113	2024-05-18	50:33.2	Y
1845.6	1847	0	11025	Passeriformes	0.96996284	Passerellidae	0.99455935	SFHS	0.98578644	whtspa	0.9972656	whtspa	0.997265577	2024-05-18	50:47.6	Y
468.4	470.2	0	11025	Passeriformes	0.9716253	Passerellidae	0.99501437	SFHS	0.98880225	whtspa	0.9980069	whtspa	0.99800688	2024-05-18	27:50.4	Y
468.4	470.2	0	11025	Passeriformes	0.9716253	Passerellidae	0.99501437	SFHS	0.98880225	whtspa	0.9980069	whtspa	0.99800688	2024-05-18	27:50.4	Y
774.8	776.8	0	11025	Passeriformes	0.9722324	Passerellidae	0.9955902			daejun	0.9970114	daejun	0.997011423	2024-05-18	33:56.8	Y
774.8	776.8	0	11025	Passeriformes	0.9722324	Passerellidae	0.9955902			daejun	0.9970114	daejun	0.997011423	2024-05-18	33:56.8	Y
1217.2	1218.6	0	11025	Passeriformes	0.97215515	Passerellidae	0.99550086	SFHS	0.98936605	whtspa	0.92883945	whtspa	0.928839445	2024-05-18	41:19.2	Y
1217.2	1218.6	0	11025	Passeriformes	0.97215515	Passerellidae	0.99550086	SFHS	0.98936605	whtspa	0.92883945	whtspa	0.928839445	2024-05-18	41:19.2	Y
846.2	847.6	0	11025	Passeriformes	0.971901	Turdidae	0.9587205	THSH	0.94578755	herthr	0.9999989	herthr	0.999998927	2024-05-18	35:08.2	Y
846.2	847.6	0	11025	Passeriformes	0.971901	Turdidae	0.9587205	THSH	0.94578755	herthr	0.9999989	herthr	0.999998927	2024-05-18	35:08.2	Y
1687	1688.6	0	11025	Passeriformes	0.97223413	Parulidae	0.95556945	ZEEP	0.9627612	norwat	0.99999976	norwat	0.999999762	2024-05-18	49:09.0	Y
1687	1688.6	0	11025	Passeriformes	0.97223413	Parulidae	0.95556945	ZEEP	0.9627612	norwat	0.99999976	norwat	0.999999762	2024-05-18	49:09.0	Y
938.8	940.6	0	11025	Passeriformes	0.9722249	Passerellidae	0.9955706	DESP	0.991962	savspa	0.9985026	savspa	0.998502612	2024-05-18	36:40.8	Y
938.8	940.6	0	11025	Passeriformes	0.9722249	Passerellidae	0.9955706	DESP	0.991962	savspa	0.9985026	savspa	0.998502612	2024-05-18	36:40.8	Y
1382	1383.8	0	11025	Passeriformes	0.97133505	Passerellidae	0.99484295	DESP	0.9898684	savspa	0.99682707	savspa	0.996827066	2024-05-19	44:05.0	Y
1382	1383.8	0	11025	Passeriformes	0.97133505	Passerellidae	0.99484295	DESP	0.9898684	savspa	0.99682707	savspa	0.996827066	2024-05-19	44:05.0	Y
1367.4	1369.2	0	11025	Passeriformes	0.97011817	Passerellidae	0.99463886	SFHS	0.9875392	whtspa	0.9970734	whtspa	0.997073412	2024-05-19	43:49.4	Y
1367.4	1369.2	0	11025	Passeriformes	0.97011817	Passerellidae	0.99463886	SFHS	0.9875392	whtspa	0.9970734	whtspa	0.997073412	2024-05-19	43:49.4	Y
11	12.4	0	11025	Passeriformes	0.97183067	Passerellidae	0.99526656	SFHS	0.98859555	whtspa	0.99711215	whtspa	0.997112155	2024-05-19	23:13.0	Y
1445.4	1447	0	11025	Passeriformes	0.9712983	Turdidae	0.9594046			amerob	0.9999995	amerob	0.999999523	2024-05-19	47:07.4	Y
623.4	625.2	0	11025	Passeriformes	0.97128457	Passerellidae	0.9954567			daejun	0.9969433	daejun	0.996943295	2024-05-19	33:25.4	Y
2499.4	2501.2	0	11025	Passeriformes	0.9722086	Passerellidae	0.99558663			daejun	0.9970095	daejun	0.997009516	2024-05-19	04:41.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1707.8	1709.2	0	11025	Passeriformes	0.9708307	Turdidae	0.9579236	THSH	0.94452286	herthr	0.99999857	herthr	0.999998569	2024-05-19	51:29.8	Y
3352.8	3354.4	0	11025	Passeriformes	0.97116435	Turdidae	0.9574109	THSH	0.9446073	herthr	0.9999988	herthr	0.999998808	2024-05-19	18:54.8	Y
11	12.4	0	11025	Passeriformes	0.97183067	Passerellidae	0.99526656	SFHS	0.98859555	whtspa	0.99711215	whtspa	0.997112155	2024-05-19	23:13.0	Y
623.4	625.2	0	11025	Passeriformes	0.97128457	Passerellidae	0.9954567			daejun	0.9969433	daejun	0.996943295	2024-05-19	33:25.4	Y
1445.4	1447	0	11025	Passeriformes	0.9712983	Turdidae	0.9594046			amerob	0.9999995	amerob	0.999999523	2024-05-19	47:07.4	Y
1707.8	1709.2	0	11025	Passeriformes	0.9708307	Turdidae	0.9579236	THSH	0.94452286	herthr	0.99999857	herthr	0.999998569	2024-05-19	51:29.8	Y
2499.4	2501.2	0	11025	Passeriformes	0.9722086	Passerellidae	0.99558663			daejun	0.9970095	daejun	0.997009516	2024-05-19	04:41.4	Y
3352.8	3354.4	0	11025	Passeriformes	0.97116435	Turdidae	0.9574109	THSH	0.9446073	herthr	0.9999988	herthr	0.999998808	2024-05-19	18:54.8	Y
1645.2	1646.8	0	11025	Passeriformes	0.97223264	Passerellidae	0.9955837	SWLI	0.9970931	linspa	0.9880707	linspa	0.988070726	2024-05-19	50:27.2	Y
3421.2	3423	0	11025	Passeriformes	0.971984	Passerellidae	0.99534976	DESP	0.9917577	savspa	0.9984119	savspa	0.998411894	2024-05-19	20:03.2	Y
1092.8	1094.6	0	11025	Passeriformes	0.9722353	Parulidae	0.9564378			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	41:14.8	Y
1092.8	1094.6	0	11025	Passeriformes	0.9722353	Parulidae	0.9564378			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	41:14.8	Y
1523.2	1524.8	0	11025	Passeriformes	0.9722329	Parulidae	0.95645195			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	48:25.2	Y
1523.2	1524.8	0	11025	Passeriformes	0.9722329	Parulidae	0.95645195			bawwar	0.9999999	bawwar	0.999999881	2024-05-20	48:25.2	Y
2880.8	2882.6	0	11025	Passeriformes	0.9722053	Parulidae	0.95633125			bawwar	0.9999988	bawwar	0.999998808	2024-05-20	11:02.8	Y
2880.8	2882.6	0	11025	Passeriformes	0.9722053	Parulidae	0.95633125			bawwar	0.9999988	bawwar	0.999998808	2024-05-20	11:02.8	Y
3335.8	3337.2	0	11025	Passeriformes	0.9367422	Passerellidae	0.99205995			daejun	0.9508852	daejun	0.950885177	2024-05-20	18:37.8	Y
3335.8	3337.2	0	11025	Passeriformes	0.9367422	Passerellidae	0.99205995			daejun	0.9508852	daejun	0.950885177	2024-05-20	18:37.8	Y
1088.8	1090.6	0	11025	Passeriformes	0.9711729	Passerellidae	0.9946708	DESP	0.9868285	savspa	0.9946163	savspa	0.99461633	2024-05-20	41:10.8	Y
1088.8	1090.6	0	11025	Passeriformes	0.9711729	Passerellidae	0.9946708	DESP	0.9868285	savspa	0.9946163	savspa	0.99461633	2024-05-20	41:10.8	Y
3239.6	3241.2	0	11025	Passeriformes	0.9185921	Turdidae	0.8956724	THSH	0.856074	herthr	0.9999924	herthr	0.999992371	2024-05-20	17:01.6	Y
1937	1938.8	0	11025	Passeriformes	0.9722057	Passerellidae	0.9955699	SWLI	0.99708986	linspa	0.99245656	linspa	0.992456555	2024-05-20	55:19.0	Y
2068.8	2070.4	0	11025	Passeriformes	0.9722143	Passerellidae	0.9955888	CUPS	0.9553558	amtspa	0.9924253	amtspa	0.992425323	2024-05-20	57:30.8	Y
1000.8	1002.4	0	11025	Passeriformes	0.97192657	Passerellidae	0.99549794			daejun	0.99697244	daejun	0.996972442	2024-05-20	39:42.8	Y
1000.8	1002.4	0	11025	Passeriformes	0.97192657	Passerellidae	0.99549794			daejun	0.99697244	daejun	0.996972442	2024-05-20	39:42.8	Y
2068.8	2070.4	0	11025	Passeriformes	0.9722143	Passerellidae	0.9955888	CUPS	0.9553558	amtspa	0.9924253	amtspa	0.992425323	2024-05-20	57:30.8	Y
3596	3597.4	0	11025	Passeriformes	0.9690396	Passerellidae	0.9927008			daejun	0.99424535	daejun	0.99424535	2024-05-20	22:58.0	Y
3596	3597.4	0	11025	Passeriformes	0.9690396	Passerellidae	0.9927008			daejun	0.99424535	daejun	0.99424535	2024-05-20	22:58.0	Y
297.6	299.4	0	11025	Passeriformes	0.9721763	Passerellidae	0.99556714			daejun	0.99700445	daejun	0.997004449	2024-05-20	28:59.6	Y
319.6	321.4	0	11025	Passeriformes	0.9722306	Passerellidae	0.9955869			daejun	0.99701035	daejun	0.99701035	2024-05-20	29:21.6	Y
852.4	854.2	0	11025	Passeriformes	0.97213644	Passerellidae	0.99557143			daejun	0.99700564	daejun	0.997005641	2024-05-20	38:14.4	Y
2235.2	2236.6	0	11025	Passeriformes	0.9719386	Passerellidae	0.99550855			daejun	0.9969357	daejun	0.996935725	2024-05-20	01:17.2	Y
1976	1977.4	0	11025	Passeriformes	0.9682929	Turdidae	0.95203066	THSH	0.93551785	herthr	0.9999987	herthr	0.999998689	2024-05-20	56:58.0	Y
1849.4	1851	0	11025	Passeriformes	0.9709636	Passerellidae	0.9953237	SFHS	0.9872754	whtspa	0.99634653	whtspa	0.996346533	2024-05-20	54:51.4	Y
603	604.4	0	11025	Passeriformes	0.97071135	Turdidae	0.95597905	THSH	0.94267094	herthr	0.99999774	herthr	0.999997735	2024-05-20	34:05.0	Y
603	604.4	0	11025	Passeriformes	0.97071135	Turdidae	0.95597905	THSH	0.94267094	herthr	0.99999774	herthr	0.999997735	2024-05-20	34:05.0	Y
648.4	649.8	0	11025	Passeriformes	0.97003955	Turdidae	0.9578887	THSH	0.9440711	herthr	0.9999988	herthr	0.999998808	2024-05-20	34:50.4	Y
648.4	649.8	0	11025	Passeriformes	0.97003955	Turdidae	0.9578887	THSH	0.9440711	herthr	0.9999988	herthr	0.999998808	2024-05-20	34:50.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
688.6	690.2	0	11025	Passeriformes	0.972172	Turdidae	0.9593547	THSH	0.94666034	herthr	0.9999989	herthr	0.999998927	2024-05-20	35:30.6	Y
688.6	690.2	0	11025	Passeriformes	0.972172	Turdidae	0.9593547	THSH	0.94666034	herthr	0.9999989	herthr	0.999998927	2024-05-20	35:30.6	Y
818.4	820.2	0	11025	Passeriformes	0.97211367	Turdidae	0.9591293	THSH	0.94624674	herthr	0.99999905	herthr	0.999999046	2024-05-20	37:40.4	Y
818.4	820.2	0	11025	Passeriformes	0.97211367	Turdidae	0.9591293	THSH	0.94624674	herthr	0.99999905	herthr	0.999999046	2024-05-20	37:40.4	Y
854.8	856.4	0	11025	Passeriformes	0.97069687	Turdidae	0.9583482	THSH	0.9451691	herthr	0.99999857	herthr	0.999998569	2024-05-20	38:16.8	Y
854.8	856.4	0	11025	Passeriformes	0.97069687	Turdidae	0.9583482	THSH	0.9451691	herthr	0.99999857	herthr	0.999998569	2024-05-20	38:16.8	Y
1030.2	1031.6	0	11025	Passeriformes	0.9722118	Turdidae	0.9595696	THSH	0.9468718	herthr	0.99999905	herthr	0.999999046	2024-05-20	41:12.2	Y
1030.2	1031.6	0	11025	Passeriformes	0.9722118	Turdidae	0.9595696	THSH	0.9468718	herthr	0.99999905	herthr	0.999999046	2024-05-20	41:12.2	Y
1323.2	1324.6	0	11025	Passeriformes	0.95579636	Turdidae	0.94355714	THSH	0.9228743	herthr	0.9999963	herthr	0.999996305	2024-05-20	46:05.2	Y
1323.2	1324.6	0	11025	Passeriformes	0.95579636	Turdidae	0.94355714	THSH	0.9228743	herthr	0.9999963	herthr	0.999996305	2024-05-20	46:05.2	Y
1368.6	1370.2	0	11025	Passeriformes	0.9681451	Passerellidae	0.9926726	DESP	0.98439276	savspa	0.99120575	savspa	0.991205752	2024-05-20	46:50.6	Y
1368.6	1370.2	0	11025	Passeriformes	0.9681451	Passerellidae	0.9926726	DESP	0.98439276	savspa	0.99120575	savspa	0.991205752	2024-05-20	46:50.6	Y
1397.6	1401	0	11025	Charadriiformes	0.98138726	Scolopacidae	0.99555814			sposan	0.99947256	sposan	0.999472558	2024-05-20	47:19.6	Y
1397.6	1401	0	11025	Charadriiformes	0.98138726	Scolopacidae	0.99555814			sposan	0.99947256	sposan	0.999472558	2024-05-20	47:19.6	Y
29.4	31.2	0	11025	Passeriformes	0.97195846	Passerellidae	0.99539316	SFHS	0.98979163	whtspa	0.9979819	whtspa	0.997981906	2024-05-20	24:31.4	Y
29.4	31.2	0	11025	Passeriformes	0.97195846	Passerellidae	0.99539316	SFHS	0.98979163	whtspa	0.9979819	whtspa	0.997981906	2024-05-20	24:31.4	Y
2710.6	2712.4	0	11025	Passeriformes	0.97223413	Parulidae	0.9564352			bawwar	0.9999994	bawwar	0.999999404	2024-05-21	09:12.6	Y
2710.6	2712.4	0	11025	Passeriformes	0.97223413	Parulidae	0.9564352			bawwar	0.9999994	bawwar	0.999999404	2024-05-21	09:12.6	Y
831.2	832.8	0	11025	Passeriformes	0.97210795	Passerellidae	0.9952217	DESP	0.98902005	savspa	0.9965618	savspa	0.996561825	2024-05-21	37:53.2	Y
831.2	832.8	0	11025	Passeriformes	0.97210795	Passerellidae	0.9952217	DESP	0.98902005	savspa	0.9965618	savspa	0.996561825	2024-05-21	37:53.2	Y
2545.4	2547.2	0	11025	Passeriformes	0.97221076	Parulidae	0.9563452			bawwar	0.99999416	bawwar	0.999994159	2024-05-21	06:28.4	Y
2545.4	2547.2	0	11025	Passeriformes	0.97221076	Parulidae	0.9563452			bawwar	0.99999416	bawwar	0.999994159	2024-05-21	06:28.4	Y
1552.4	1554.2	0	11025	Passeriformes	0.972235	Passerellidae	0.9955857	SWLI	0.99711454	linspa	0.99832624	linspa	0.998326242	2024-05-21	49:55.4	Y
1552.4	1554.2	0	11025	Passeriformes	0.972235	Passerellidae	0.9955857	SWLI	0.99711454	linspa	0.99832624	linspa	0.998326242	2024-05-21	49:55.4	Y
569.6	570.8	0	11025	Passeriformes	0.9716305	Turdidae	0.9585249	THSH	0.9451974	herthr	0.9999989	herthr	0.999998927	2024-05-21	34:31.6	Y
569.6	570.8	0	11025	Passeriformes	0.9716305	Turdidae	0.9585249	THSH	0.9451974	herthr	0.9999989	herthr	0.999998927	2024-05-21	34:31.6	Y
1383.4	1384.8	0	11025	Charadriiformes	0.9729628	Scolopacidae	0.9938426			uplsan	0.99892646	uplsan	0.998926461	2024-05-21	48:05.4	Y
1383.4	1384.8	0	11025	Charadriiformes	0.9729628	Scolopacidae	0.9938426			uplsan	0.99892646	uplsan	0.998926461	2024-05-21	48:05.4	Y
380.4	382.2	0	11025	Passeriformes	0.9722353	Parulidae	0.9564677			bawwar	0.9999999	bawwar	0.999999881	2024-05-21	31:22.4	Y
380.4	382.2	0	11025	Passeriformes	0.9722353	Parulidae	0.9564677			bawwar	0.9999999	bawwar	0.999999881	2024-05-21	31:22.4	Y
2077.4	2078.8	0	11025	Passeriformes	0.9668929	Parulidae	0.9484707			bawwar	0.98356575	bawwar	0.983565748	2024-05-21	59:39.4	Y
2077.4	2078.8	0	11025	Passeriformes	0.9668929	Parulidae	0.9484707			bawwar	0.98356575	bawwar	0.983565748	2024-05-21	59:39.4	Y
2247.6	2249.4	0	11025	Passeriformes	0.9720659	Passerellidae	0.9952951	DESP	0.9914102	savspa	0.9980628	savspa	0.998062789	2024-05-22	02:29.6	Y
2247.6	2249.4	0	11025	Passeriformes	0.9720659	Passerellidae	0.9952951	DESP	0.9914102	savspa	0.9980628	savspa	0.998062789	2024-05-22	02:29.6	Y
2467.4	2469.2	0	11025	Passeriformes	0.9722158	Parulidae	0.95550436			bawwar	0.9999821	bawwar	0.999982119	2024-05-22	06:09.4	Y
2467.4	2469.2	0	11025	Passeriformes	0.9722158	Parulidae	0.95550436			bawwar	0.9999821	bawwar	0.999982119	2024-05-22	06:09.4	Y
513.8	515.6	0	11025	Passeriformes	0.9722367	Parulidae	0.95647436			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	33:36.8	Y
513.8	515.6	0	11025	Passeriformes	0.9722367	Parulidae	0.95647436			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	33:36.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
527	528.6	0	11025	Passeriformes	0.97221744	Parulidae	0.95637226			bawwar	0.9985783	bawwar	0.99857831	2024-05-22	33:50.0	Y
527	528.6	0	11025	Passeriformes	0.97221744	Parulidae	0.95637226			bawwar	0.9985783	bawwar	0.99857831	2024-05-22	33:50.0	Y
3132	3133.8	0	11025	Passeriformes	0.96939856	Parulidae	0.9521772			bawwar	0.9999964	bawwar	0.999996424	2024-05-22	17:15.0	Y
3132	3133.8	0	11025	Passeriformes	0.96939856	Parulidae	0.9521772			bawwar	0.9999964	bawwar	0.999996424	2024-05-22	17:15.0	Y
1848	1849.2	0	11025	Passeriformes	0.972169	Parulidae	0.95628417			bawwar	0.9991053	bawwar	0.999105275	2024-05-22	55:50.0	Y
2450	2451.8	0	11025	Passeriformes	0.97223794	Parulidae	0.9564874			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	05:52.0	Y
3256	3257.8	0	11025	Passeriformes	0.97219986	Parulidae	0.9563057			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	19:18.0	Y
3184.6	3186.2	0	11025	Passeriformes	0.96267927	Turdidae	0.9495396	THSH	0.93424547	herthr	0.99999785	herthr	0.999997854	2024-05-22	18:06.6	Y
719.4	721.2	0	11025	Passeriformes	0.97205395	Passerellidae	0.9953413	DESP	0.99161434	savspa	0.9981066	savspa	0.998106599	2024-05-22	37:01.4	Y
3260.4	3262	0	11025	Passeriformes	0.9710171	Passerellidae	0.9917182	DESP	0.97894394	savspa	0.99057186	savspa	0.990571856	2024-05-22	19:22.4	Y
2483.8	2486.2	0	11025	Charadriiformes	0.9813725	Scolopacidae	0.995611			sposan	0.9995345	sposan	0.999534488	2024-05-22	06:25.8	Y
1244	1245.8	0	11025	Passeriformes	0.9707419	Passerellidae	0.9950079	SFHS	0.98810005	whtspa	0.99601066	whtspa	0.996010661	2024-05-22	45:46.0	Y
366.4	368.2	0	11025	Passeriformes	0.97220755	Parulidae	0.9563473			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	31:08.4	Y
2507.8	2509.4	0	11025	Passeriformes	0.97216594	Parulidae	0.95639014			bawwar	0.99999976	bawwar	0.999999762	2024-05-22	06:49.8	Y
135.4	137.2	0	11025	Passeriformes	0.9722207	Passerellidae	0.99556476	SFHS	0.99015117	whtspa	0.9982033	whtspa	0.998203278	2024-05-22	27:17.4	Y
940.6	942.8	0	11025	Passeriformes	0.9681235	Passerellidae	0.9947596			daejun	0.9965664	daejun	0.996566415	2024-05-22	41:42.6	Y
1523.8	1527.2	0	11025	Passeriformes	0.97204113	Passerellidae	0.99543107			daejun	0.9968927	daejun	0.996892691	2024-05-22	51:25.8	Y
2551.8	2553.2	0	11025	Passeriformes	0.9709063	Passerellidae	0.9953856			daejun	0.99689543	daejun	0.996895432	2024-05-22	08:33.8	Y
1496.8	1498.4	0	11025	Passeriformes	0.9695229	Turdidae	0.9570242	THSH	0.94374555	herthr	0.9999974	herthr	0.999997377	2024-05-22	50:58.8	Y
3558	3559.4	0	11025	Passeriformes	0.9696203	Turdidae	0.9545026	THSH	0.93843895	herthr	0.9999989	herthr	0.999998927	2024-05-22	25:20.0	Y
38.4	40.2	0	11025	Passeriformes	0.9673785	Passerellidae	0.99355114	SFHS	0.9868326	whtspa	0.9696014	whtspa	0.969601393	2024-05-22	26:40.4	Y
3554.2	3555.6	0	11025	Passeriformes	0.9700248	Turdidae	0.95732725	THSH	0.94419605	herthr	0.99999833	herthr	0.999998331	2024-05-23	27:16.2	Y
3554.2	3555.6	0	11025	Passeriformes	0.9700248	Turdidae	0.95732725	THSH	0.94419605	herthr	0.99999833	herthr	0.999998331	2024-05-23	27:16.2	Y
188.8	190.4	0	11025	Passeriformes	0.97212946	Passerellidae	0.9954581	SFHS	0.98983943	whtspa	0.99800426	whtspa	0.998004258	2024-05-23	31:10.8	Y
188.8	190.4	0	11025	Passeriformes	0.97212946	Passerellidae	0.9954581	SFHS	0.98983943	whtspa	0.99800426	whtspa	0.998004258	2024-05-23	31:10.8	Y
484.2	486	0	11025	Passeriformes	0.9126781	Passerellidae	0.98558205			daejun	0.9947266	daejun	0.994726598	2024-05-24	37:06.2	Y
58.2	60	0	11025	Passeriformes	0.97198033	Passerellidae	0.99533504	SFHS	0.989347	whtspa	0.9981748	whtspa	0.998174787	2024-05-24	30:00.2	Y
58.2	60	0	11025	Passeriformes	0.97198033	Passerellidae	0.99533504	SFHS	0.989347	whtspa	0.9981748	whtspa	0.998174787	2024-05-24	30:00.2	Y
484.2	486	0	11025	Passeriformes	0.9126781	Passerellidae	0.98558205			daejun	0.9947266	daejun	0.994726598	2024-05-24	37:06.2	Y
1954.4	1956	0	11025	Passeriformes	0.92703724	Turdidae	0.91720384	THSH	0.88796115	herthr	0.99999785	herthr	0.999997854	2024-05-24	01:36.4	Y
1954.4	1956	0	11025	Passeriformes	0.92703724	Turdidae	0.91720384	THSH	0.88796115	herthr	0.99999785	herthr	0.999997854	2024-05-24	01:36.4	Y
3145	3146.6	0	11025	Passeriformes	0.9689303	Turdidae	0.9546991	THSH	0.9399856	herthr	0.9999988	herthr	0.999998808	2024-05-24	21:27.0	Y
3145	3146.6	0	11025	Passeriformes	0.9689303	Turdidae	0.9546991	THSH	0.9399856	herthr	0.9999988	herthr	0.999998808	2024-05-24	21:27.0	Y
3378.2	3380	0	11025	Passeriformes	0.9722239	Parulidae	0.95643854			bawwar	0.9999999	bawwar	0.999999881	2024-05-25	25:20.2	Y
3378.2	3380	0	11025	Passeriformes	0.9722239	Parulidae	0.95643854			bawwar	0.9999999	bawwar	0.999999881	2024-05-25	25:20.2	Y
561	562.6	0	11025	Passeriformes	0.97222465	Turdidae	0.9596094	THSH	0.94686	herthr	0.99999905	herthr	0.999999046	2024-05-25	38:24.0	Y
561	562.6	0	11025	Passeriformes	0.97222465	Turdidae	0.9596094	THSH	0.94686	herthr	0.99999905	herthr	0.999999046	2024-05-25	38:24.0	Y
1513.4	1515.2	0	11025	Passeriformes	0.9722253	Passerellidae	0.9955758	SFHS	0.9901626	whtspa	0.9985953	whtspa	0.998595297	2024-05-25	54:16.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1513.4	1515.2	0	11025	Passeriformes	0.9722253	Passerellidae	0.9955758	SFHS	0.9901626	whtspa	0.9985953	whtspa	0.998595297	2024-05-25	54:16.4	Y
3437.2	3439	0	11025	Passeriformes	0.9722073	Passerellidae	0.9955449	SFHS	0.9901391	whtspa	0.99857783	whtspa	0.998577833	2024-05-25	26:19.2	Y
3437.2	3439	0	11025	Passeriformes	0.9722073	Passerellidae	0.9955449	SFHS	0.9901391	whtspa	0.99857783	whtspa	0.998577833	2024-05-25	26:19.2	Y
1469	1470.4	0	11025	Passeriformes	0.9697748	Turdidae	0.9553169	THSH	0.9405006	herthr	0.9999988	herthr	0.999998808	2024-05-26	55:31.0	Y
1052.4	1054.2	0	11025	Passeriformes	0.97199607	Passerellidae	0.9953094	SFHS	0.98968375	whtspa	0.9976398	whtspa	0.997639775	2024-05-26	48:34.4	Y
1052.4	1054.2	0	11025	Passeriformes	0.97199607	Passerellidae	0.9953094	SFHS	0.98968375	whtspa	0.9976398	whtspa	0.997639775	2024-05-26	48:34.4	Y
1469	1470.4	0	11025	Passeriformes	0.9697748	Turdidae	0.9553169	THSH	0.9405006	herthr	0.9999988	herthr	0.999998808	2024-05-26	55:31.0	Y
3194	3195.8	0	11025	Passeriformes	0.97141606	Passerellidae	0.99505746	DESP	0.99058914	savspa	0.9979862	savspa	0.997986197	2024-05-26	24:16.0	Y
3194	3195.8	0	11025	Passeriformes	0.97141606	Passerellidae	0.99505746	DESP	0.99058914	savspa	0.9979862	savspa	0.997986197	2024-05-26	24:16.0	Y
3427.8	3429.2	0	11025	Passeriformes	0.9718981	Passerellidae	0.9946444	DESP	0.98966426	savspa	0.98780614	savspa	0.987806141	2024-05-26	28:09.8	Y
3427.8	3429.2	0	11025	Passeriformes	0.9718981	Passerellidae	0.9946444	DESP	0.98966426	savspa	0.98780614	savspa	0.987806141	2024-05-26	28:09.8	Y
3494.2	3495.8	0	11025	Passeriformes	0.97199774	Turdidae	0.9594943	THSH	0.9468147	swathr	0.8844802	swathr	0.884480178	2024-05-27	29:16.2	Y
2032.2	2034	0	11025	Passeriformes	0.97219634	Parulidae	0.9564326			bawwar	0.99999976	bawwar	0.999999762	2024-05-27	04:56.2	Y
2032.2	2034	0	11025	Passeriformes	0.97219634	Parulidae	0.9564326			bawwar	0.99999976	bawwar	0.999999762	2024-05-27	04:56.2	Y
2047.6	2049.2	0	11025	Passeriformes	0.97219694	Parulidae	0.95618945			bawwar	0.9996302	bawwar	0.999630213	2024-05-27	05:11.6	Y
2047.6	2049.2	0	11025	Passeriformes	0.97219694	Parulidae	0.95618945			bawwar	0.9996302	bawwar	0.999630213	2024-05-27	05:11.6	Y
1769.6	1771.2	0	11025	Passeriformes	0.9719508	Parulidae	0.9495084	ZEEP	0.9564283	norwat	0.99988556	norwat	0.999885559	2024-05-27	00:31.6	Y
1769.6	1771.2	0	11025	Passeriformes	0.9719508	Parulidae	0.9495084	ZEEP	0.9564283	norwat	0.99988556	norwat	0.999885559	2024-05-27	00:31.6	Y
3023.2	3024.6	0	11025	Passeriformes	0.9720652	Turdidae	0.9551338			amerob	0.99999714	amerob	0.999997139	2024-05-27	22:25.2	Y
3023.2	3024.6	0	11025	Passeriformes	0.9720652	Turdidae	0.9551338			amerob	0.99999714	amerob	0.999997139	2024-05-27	22:25.2	Y
410.4	412.2	0	11025	Passeriformes	0.9714155	Parulidae	0.9526718			bawwar	0.9999995	bawwar	0.999999523	2024-05-27	38:52.4	Y
1546.8	1548.4	0	11025	Passeriformes	0.96054924	Parulidae	0.8537608			bawwar	0.99406743	bawwar	0.99406743	2024-05-27	57:48.8	Y
1229.8	1231	0	11025	Passeriformes	0.97104836	Parulidae	0.95438457	BZWA	0.9738115	comyel	0.99995995	comyel	0.999959946	2024-05-27	52:31.8	Y
1615.2	1616.6	0	11025	Passeriformes	0.9687743	Passerellidae	0.99361455	DESP	0.9845018	savspa	0.97134656	savspa	0.971346557	2024-05-27	58:57.2	Y
1725.8	1727.2	0	11025	Passeriformes	0.97211355	Passerellidae	0.9955829	DESP	0.99181926	savspa	0.99789584	savspa	0.997895837	2024-05-27	00:47.8	Y
2073.8	2075.2	0	11025	Passeriformes	0.971144	Passerellidae	0.99408615	SFHS	0.986991	whtspa	0.9967439	whtspa	0.996743917	2024-05-27	06:35.8	Y
410.4	412.2	0	11025	Passeriformes	0.9714155	Parulidae	0.9526718			bawwar	0.9999995	bawwar	0.999999523	2024-05-27	38:52.4	Y
1546.8	1548.4	0	11025	Passeriformes	0.96054924	Parulidae	0.8537608			bawwar	0.99406743	bawwar	0.99406743	2024-05-27	57:48.8	Y
1229.8	1231	0	11025	Passeriformes	0.97104836	Parulidae	0.95438457	BZWA	0.9738115	comyel	0.99995995	comyel	0.999959946	2024-05-27	52:31.8	Y
1615.2	1616.6	0	11025	Passeriformes	0.9687743	Passerellidae	0.99361455	DESP	0.9845018	savspa	0.97134656	savspa	0.971346557	2024-05-27	58:57.2	Y
1725.8	1727.2	0	11025	Passeriformes	0.97211355	Passerellidae	0.9955829	DESP	0.99181926	savspa	0.99789584	savspa	0.997895837	2024-05-27	00:47.8	Y
2073.8	2075.2	0	11025	Passeriformes	0.971144	Passerellidae	0.99408615	SFHS	0.986991	whtspa	0.9967439	whtspa	0.996743917	2024-05-27	06:35.8	Y
2653.8	2655.4	0	11025	Passeriformes	0.9673448	Parulidae	0.9528296			bawwar	0.99953485	bawwar	0.999534845	2024-05-28	16:15.8	Y
2653.8	2655.4	0	11025	Passeriformes	0.9673448	Parulidae	0.9528296			bawwar	0.99953485	bawwar	0.999534845	2024-05-28	16:15.8	Y
2902.2	2903.6	0	11025	Passeriformes	0.9716277	Passerellidae	0.9948489	DESP	0.9898247	savspa	0.9957302	savspa	0.995730221	2024-05-28	20:24.2	Y
2902.2	2903.6	0	11025	Passeriformes	0.9716277	Passerellidae	0.9948489	DESP	0.9898247	savspa	0.9957302	savspa	0.995730221	2024-05-28	20:24.2	Y
1744.2	1746	0	11025	Passeriformes	0.9722358	Parulidae	0.9564786			bawwar	0.9999999	bawwar	0.999999881	2024-05-28	01:06.2	Y
2013.8	2015.4	0	11025	Passeriformes	0.97217464	Parulidae	0.9563727			bawwar	0.9999994	bawwar	0.999999404	2024-05-28	05:35.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1744.2	1746	0	11025	Passeriformes	0.9722358	Parulidae	0.9564786			bawwar	0.9999999	bawwar	0.999999881	2024-05-28	01:06.2	Y
2013.8	2015.4	0	11025	Passeriformes	0.97217464	Parulidae	0.9563727			bawwar	0.9999994	bawwar	0.999999404	2024-05-28	05:35.8	Y
2522.4	2524.2	0	11025	Passeriformes	0.97172177	Passerellidae	0.99495894	DESP	0.9662901	savspa	0.98329735	savspa	0.983297348	2024-05-28	14:04.4	Y
2522.4	2524.2	0	11025	Passeriformes	0.97172177	Passerellidae	0.99495894	DESP	0.9662901	savspa	0.98329735	savspa	0.983297348	2024-05-28	14:04.4	Y
2287.6	2289	0	11025	Passeriformes	0.9694173	Turdidae	0.95721966	THSH	0.94424444	herthr	0.9999987	herthr	0.999998689	2024-05-28	12:09.6	Y
1807.2	1809	0	11025	Passeriformes	0.97176546	Passerellidae	0.9953551	SFHS	0.9899317	whtspa	0.99783355	whtspa	0.99783355	2024-05-28	04:09.2	Y
1807.2	1809	0	11025	Passeriformes	0.97176546	Passerellidae	0.9953551	SFHS	0.9899317	whtspa	0.99783355	whtspa	0.99783355	2024-05-28	04:09.2	Y
2287.6	2289	0	11025	Passeriformes	0.9694173	Turdidae	0.95721966	THSH	0.94424444	herthr	0.9999987	herthr	0.999998689	2024-05-28	12:09.6	Y
3537.2	3539	0	11025	Passeriformes	0.9721009	Passerellidae	0.99547935	SFHS	0.98991627	whtspa	0.9971035	whtspa	0.997103512	2024-05-29	32:59.2	Y
3537.2	3539	0	11025	Passeriformes	0.9721009	Passerellidae	0.99547935	SFHS	0.98991627	whtspa	0.9971035	whtspa	0.997103512	2024-05-29	32:59.2	Y
218.4	219.6	0	11025	Passeriformes	0.9709711	Turdidae	0.91944975			amerob	0.98143584	amerob	0.981435835	2024-05-29	38:40.4	Y
2812.2	2813.8	0	11025	Passeriformes	0.9708801	Turdidae	0.9597472			amerob	0.99999976	amerob	0.999999762	2024-05-29	21:54.2	Y
436.6	438.4	0	11025	Passeriformes	0.9720847	Passerellidae	0.9955063	SFHS	0.9899531	whtspa	0.99821126	whtspa	0.998211265	2024-05-29	42:18.6	Y
3249	3251	0	11025	Charadriiformes	0.9808781	Scolopacidae	0.99546885			greyel	0.9993863	greyel	0.999386311	2024-05-31	31:11.0	Y
3249	3251	0	11025	Charadriiformes	0.9808781	Scolopacidae	0.99546885			greyel	0.9993863	greyel	0.999386311	2024-05-31	31:11.0	Y
256.2	257.8	0	11025	Passeriformes	0.9711268	Passerellidae	0.9951382	SFHS	0.9869307	whtspa	0.99788994	whtspa	0.997889936	2024-06-01	42:18.2	Y
256.2	257.8	0	11025	Passeriformes	0.9711268	Passerellidae	0.9951382	SFHS	0.9869307	whtspa	0.99788994	whtspa	0.997889936	2024-06-01	42:18.2	Y
1274.8	1276.2	0	11025	Passeriformes	0.96810305	Passerellidae	0.9941591			daejun	0.9962394	daejun	0.996239424	2024-06-02	00:16.8	Y
37.4	38.8	0	11025	Passeriformes	0.9554958	Passerellidae	0.9890063	SFHS	0.98547137	whtspa	0.99437153	whtspa	0.994371533	2024-06-02	39:39.4	Y
37.4	38.8	0	11025	Passeriformes	0.9554958	Passerellidae	0.9890063	SFHS	0.98547137	whtspa	0.99437153	whtspa	0.994371533	2024-06-02	39:39.4	Y
1274.8	1276.2	0	11025	Passeriformes	0.96810305	Passerellidae	0.9941591			daejun	0.9962394	daejun	0.996239424	2024-06-02	00:16.8	Y
517.4	519.2	0	11025	Passeriformes	0.9709953	Parulidae	0.9540037	BZWA	0.979202	comyel	0.99999976	comyel	0.999999762	2024-06-03	47:39.4	Y
517.4	519.2	0	11025	Passeriformes	0.9709953	Parulidae	0.9540037	BZWA	0.979202	comyel	0.99999976	comyel	0.999999762	2024-06-03	47:39.4	Y
3440.4	3442.2	0	11025	Passeriformes	0.97189856	Passerellidae	0.99545395	SFHS	0.9899912	whtspa	0.99847776	whtspa	0.998477757	2024-06-03	36:22.4	Y
3440.4	3442.2	0	11025	Passeriformes	0.97189856	Passerellidae	0.99545395	SFHS	0.9899912	whtspa	0.99847776	whtspa	0.998477757	2024-06-03	36:22.4	Y
180.4	182	0	11025	Passeriformes	0.9703992	Passerellidae	0.9948436	SFHS	0.98833	whtspa	0.98577523	whtspa	0.985775232	2024-06-03	43:02.4	Y
180.4	182	0	11025	Passeriformes	0.9703992	Passerellidae	0.9948436	SFHS	0.98833	whtspa	0.98577523	whtspa	0.985775232	2024-06-03	43:02.4	Y
232.8	234.6	0	11025	Passeriformes	0.96906304	Passerellidae	0.9938453	SFHS	0.98633665	whtspa	0.99613863	whtspa	0.996138632	2024-06-03	43:54.8	Y
232.8	234.6	0	11025	Passeriformes	0.96906304	Passerellidae	0.9938453	SFHS	0.98633665	whtspa	0.99613863	whtspa	0.996138632	2024-06-03	43:54.8	Y
36.2	37.6	0	11025	Passeriformes	0.951411	Passerellidae	0.98534805	SFHS	0.975921	whtspa	0.9894936	whtspa	0.989493608	2024-06-04	41:38.2	Y
36.2	37.6	0	11025	Passeriformes	0.951411	Passerellidae	0.98534805	SFHS	0.975921	whtspa	0.9894936	whtspa	0.989493608	2024-06-04	41:38.2	Y
574.4	576	0	11025	Passeriformes	0.9721924	Parulidae	0.95571405	MWAR	0.9989778	mouwar	0.9843833	mouwar	0.984383285	2024-06-05	50:36.4	Y
574.4	576	0	11025	Passeriformes	0.9721924	Parulidae	0.95571405	MWAR	0.9989778	mouwar	0.9843833	mouwar	0.984383285	2024-06-05	50:36.4	Y
3293.6	3295	0	11025	Passeriformes	0.96494436	Passerellidae	0.9938352	SFHS	0.9879319	whtspa	0.9976948	whtspa	0.99769479	2024-06-05	35:55.6	Y
3293.6	3295	0	11025	Passeriformes	0.96494436	Passerellidae	0.9938352	SFHS	0.9879319	whtspa	0.9976948	whtspa	0.99769479	2024-06-05	35:55.6	Y

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CONSULTING

BASELINE RADAR/ACOUSTIC REPORT, LEADING TICKLES WIND PROJECT AREA
EVREC Green Energy Hub
Near Botwood, NL

May 11, 2026

EXECUTIVE SUMMARY

Exploits Valley Renewable Energy Corporation (EVREC), is proposing to develop, construct, and operate a wind to green ammonia project near Botwood, in central Newfoundland (the "Project"). EVREC will develop a wind project consisting of up to 534 wind turbines, a 150 megawatt (MW) solar project area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an industrial facility. For the purposes of this baseline study, only the Wind Project Area (WPA) was assessed.

A full year of avian radar and acoustic monitoring was completed beginning in spring of 2025 to fall of 2025 to assess target movements and species presence within the WPA, and to support the assessment of the potential effects of the Project on avifauna. Both systems were deployed simultaneously in an open area near Twin Ponds within the Leading Tickles Wind Project Area (LTWPA).

The results of the avian radar program showed varying levels of target detections within the WPA, with most detections occurring in mid-April and early to mid September. Target detected within the radar also primarily occurred within the rotor swept area where avian species will interact with the WPA infrastructures. A variety of environmental and climatic factors were investigated to determine any influences on migration timing, which results demonstrated some variability in influences between the external factors. Similarly, the results of the avian acoustic program showed high detections in peak migratory periods, with April, May, September and October seeing high positive identifications of species within the WPA. One SAR (Canada warbler) was identified within the dataset.

The results above provided an overview of baseline conditions within the WPA, including number of target detections, migration timing, and species presence and diversity. The LTWPA is primarily located inland, therefore occurrences of shorebirds and seabirds within the WPA were low. Despite some level of data gaps in-between the monitoring period, the results of the avian radar and acoustic monitoring help to predict potential migration timing that may occur within the WPA when infrastructures are operational.

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
2.0 REGULATORY CONTEXT 2
3.0 AVIAN RADAR SYSTEM 3
3.1 Radar Methodology 3
3.1.1 Avian Radar System Deployment 3
3.1.1.1 Habitat Description 4
3.1.1.2 Avian Radar Assessment 4
3.1.1.3 Discussion of Migration Cues in Radar Results 4
3.1.1.4 Discussion of Migratory Bird Density in Radar Results 5
3.1.1.5 Avian Interaction Model 6
3.2 Avian Radar Result 6
3.2.1 Cues for Avian Migration 9
3.2.2 Migratory Bird Density 13
3.2.3 Avian Interactions with the Project 16
4.0 ACOUSTIC RECORDING UNIT 17
4.1 Acoustic Monitoring Methodology 17
4.1.1 Avian Acoustic Monitor Deployment 17
4.1.1.1 Habitat Description 18
4.1.2 Avian Acoustic Data Processing 18
4.1.2.1 Nighthawk 18
4.1.2.2 Raven Pro 19
4.2 Acoustic Monitoring Results 19
4.2.1 2025 Spring Nighthawk Results 19
4.2.2 2025 Breeding Nighthawk Results 26
4.2.3 2025 Fall Nighthawk Results 32
5.0 DISCUSSION 39
5.1 Radar 39
5.1.1 Cues for Avian Migration 39
5.1.2 Migratory Bird Density 40
5.2 Acoustics 40
5.2.1 Detection of Vocalizations 40
5.2.2 Species Richness 41
5.3 General Avian Migration Trends 41
5.3.1 Radar and Acoustic 41
6.0 SUMMARY 42
6.1 Radar 42
6.2 Acoustics 43
6.3 Notable Migration Times 43

7.0 LIMITATIONS 44
7.1 Radar Data 44
7.2 Nighthawk 45
8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY 46
9.0 REFERENCES 48

LIST OF FIGURES

Figure 3.1: Number of BTs Detected throughout the 2025 Monitoring Period at Leading Tickle .. 7
Figure 3.2: Number of BTs Detected per hour throughout the 2025 Monitoring Period at Leading Tickle 9
Figure 3.3: Wind Direction by Number of BTs Detected, 2025 10
Figure 3.4: Wind Speed (km/h) by Number of BTs Detected, 2025 11
Figure 3.5: Number of BTs Detected during the 2025 ARS Monitoring Campaign compared to Daily Average Temperatures (°C) 12
Figure 3.6: Number of BTs Detected during the 2025 ARS Monitoring Campaign compared to Daily Moonlight Exposure (%) 13
Figure 3.7: Number of Targets Detected and Target Density within Height Bins – Spring 2025. 14
Figure 3.8: Number of Targets Detected and Target Density within Height Bins – Summer 2025 15
Figure 3.9: Number of Targets Detected and Target Density within Height Bins – Fall 2025..... 16
Figure 3.10: Number of Detections Within or Above the Rotor Swept Zone During the 2025 ARS Monitoring Campaign 17
Figure 4.1: Total Number of Detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period. 20
Figure 4.2: Timeframe of Nighthawk Detections during the 2025 LTWPA Spring Monitoring Period. 20
Figure 4.3: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period. 24
Figure 4.4: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period. 24
Figure 4.5: Nighthawk Species Richness during the 2025 LTWPA Spring Monitoring Period. ... 26
Figure 4.6: Total Number of Detections made by Nighthawk during the 2025 LTWPA Summer Monitoring Period. 26
Figure 4.7: Timeframe of Nighthawk Detections during the 2025 LTWPA Breeding Monitoring Period. 27
Figure 4.8: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Breeding Acoustic Monitoring Period. 30
Figure 4.9: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Summer Acoustic Monitoring Period. 31
Figure 4.10: Nighthawk Species Richness during the 2025 LTWPA Breeding Monitoring Period. 32
Figure 4.11: Total Number of Detections made by Nighthawk during the 2025 LTWPA Fall Monitoring Period. 32

Figure 4.12: Timeframe of Nighthawk Detections during the 2025 LTWPA Fall Monitoring Period. 33
Figure 4.13: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Fall Acoustic Monitoring Period..... 36
Figure 4.14: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Fall Acoustic Monitoring Period..... 37
Figure 4.15: Nighthawk Species Richness during the 2025 LTWPA Fall Monitoring Period. 38
Figure 5.1.: Total positive detections across the 2025 LTWPA monitoring period..... 43

LIST OF TABLES

Table 3.1: Date Range when the ARS was Active within the LTWPA 4
Table 3.2: Airspace Scanned (km3) within the ARS' Height Bins 6
Table 3.3: Turbine – Avifauna Interaction Volume Calculation Information 6
Table 3.4: Number of BTs Detected by the Leading Tickle ARS Height Bins during the 2025 Monitoring Period 8
Table 3.5: Target Density detected in the ARS height bins during the 2025 monitoring period. . 13
Table 4.1: Date Range when the ARU was Active within the LTWPA 18
Table 4.2: Summary of 2025 LTWPA Spring Nighthawk Results1 21
Table 4.3: Summary of Species Correctly Identified by Nighthawk During the 2025 LTWPA Spring Monitoring Period..... 25
Table 4.4: Summary of 2025 LTWPA Breeding Nighthawk Results[1] 27
Table 4.5: Summary of Species Correctly Identified by Nighthawk During the 2025 Breeding Monitoring Period. 31
Table 4.6: Summary of 2025 LTWPA Breeding Nighthawk Results[1] 33
Table 4.7: Summary of Species Correctly Identified by Nighthawk During the 2025 Spring Monitoring Period. 37

LIST OF APPENDICES

Appendix A: Drawings
Appendix B: Tables

LIST OF ACRONYMS

ARS	Avian radar system
ARU	Autonomous recording unit
BWPA	Botwood Wind Project Area
BT	Biological Targets
CEPA	*Canadian Environmental Protection Act*
CMT	Cognitive Marine Tracker
CWS	Canadian Wildlife Service
EIS	Environmental Impact Statement
ECCC	Environment and Climate Change Canada
EVREC	Exploits Valley Renewable Energy Corporation
GW	Gigawatt
ha	Hectare
Hz	Hertz
km	kilometre
km/hr	kilometre/hour
LTWPA	Leading Tickles Wind Project Area
MW	Megawatt
MBCA	*Migratory Bird Convention Act*
MBR	Migratory Bird Regulations
MBII	Migratory Bird Interaction Index
MW	Megawatt
m	Metre
mm	millimetre
nBTs	Number of biological targets
NFC	Nocturnal flight calls
NL ESA	Newfoundland and Labrador *Endangered Species Act*
SAR	Species at risk
SARA	*Species at Risk Act*
SLWPA	Seabrights Lakes Wind Project Area
SOCC	Species of conservation concern
TLWPA	Twin Lakes Wind Project Area
V	Volts
WTG	Wind turbine generator

1.0 INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC, the "Proponent"), is proposing to develop, construct, and operate a wind to green ammonia project on the brownfield, former Abitibi lands, near Botwood in central Newfoundland, Canada (the "Project", Drawing 1, Appendix A). EVREC will develop an onshore wind farm consisting of up to 534 wind turbines, a 150-megawatt (MW) Solar Area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an Industrial Facility comprised of 2.6 gigawatt (GW) of electrolysers utilizing a combination of proton exchange membrane and aqueous solution units, air separation plants, ammonia plant, electrical energy storage facilities, molecular storage, water purification systems, warehousing, administrative buildings, and other associated utility infrastructure (switchyards, transformers, pipelines, emergency generators, and cooling systems) including an electrical grid connection for critical loads.

The Project nameplate capacity will be up to 3.5 GW of electrical power and produce 925,000 to 1,000,000 tons per year of certified green ammonia. The Project is considered an undertaking under Section 34 (1f) of the Newfoundland and Labrador Environmental Assessment Regulations, (2003), where electrical power generation that has a capacity greater than 1 MW and engages in the manufacturing of green hydrogen and ammonia, which requires the submission of an Environmental Impact Statement (EIS). The Project will involve development, construction, operations, decommissioning, and reclamation of wind farms, a solar farm, an industrial facility, and water supply for green hydrogen production and ammonia synthesis, including air separation, water treatment, and ammonia storage.

The Project will use the existing Port of Botwood for its shipping needs, which has historically served various clients across industrial sectors for over 100 years. The Project is proposed on land parcels totaling 35,834 hectares (ha) in central Newfoundland (defined hereafter as the Project Area). The Project is centered at 49.161441° N, 55.486669° W.

Within the Project Area, siting of wind turbine generators (WTGs) will be within four areas: Botwood, Seabrights Lake, Twin Lakes, and Leading Tickles (Drawing 1, Appendix A). The Industrial Facility and Solar Farm, along with associated infrastructure, are co-located on a parcel southwest of the Town of Botwood. For the purposes of the EIS, the Project consists of three components: (i) Wind Project Area and transmission line; (ii) Solar Area; and (iii) hydrogen and ammonia production facilities (defined hereafter as the Industrial Facility).

The Proponent has retained Strum Consulting to provide avian radar and acoustic assessment services within the Project Area of the WTGs. Avian radar systems (ARS) and autonomous recording units (ARU) were deployed throughout the Project Area of the WTGs throughout varying monitoring periods.

- Botwood Wind Project Area (BWPA)
    - Four ARS deployed in 2024

  - Four ARU deployed in 2023 and 2024
- Twin Lakes Wind Project Area (TLWPA)
  - One ARS deployed in 2024
  - One ARU deployed in 2023 and 2024
- Leading Tickles Wind Project Area (LTWPA)
  - One ARS and one ARU deployed in 2025

This report summarizes the findings for the radar and acoustic monitoring periods at the LTWPA.

2.0 REGULATORY CONTEXT

This Report has been developed in accordance with applicable laws and regulations relating to the protection of avian species, including the following:

Canadian Environmental Protection Act (CEPA) (1999)
Canada Wildlife Act (2000)
Environment Act (2002)
Migratory Birds Convention Act (MBCA) (2018)
Species at Risk Act (SARA) (2002)
Newfoundland and Labrador *Endangered Species Act* (NL ESA) (2001)

CEPA (1999) provides protection of the federal environment through pollution prevention, toxic substance control, waste management, and emissions management. Similarly, the *Environment Act* (2002) supports and promotes the protection, enhancement, and use of the provincial environment while maintaining ecosystem integrity and sustainable development, along with pollution prevention and reduction.

The *Canada Wildlife Act* (2000) provides a framework at the federal level for the creation of protected wildlife areas. In May 2018, Canadian Wildlife Services (CWS), a division of Environment and Climate Change Canada (ECCC) responsible for enforcing the MBCA (2018), updated guidance stipulating that two years of radar monitoring should be completed for projects that propose the installation of wind turbines that are greater than 150 m tall. This guidance suggests that migrating birds travel in an airspace between 150 m and 600 m above the ground as they migrate, which would put them at risk of interacting with tall turbines that extend into this corridor. As the corridor is too high for traditional survey methods (e.g., ground-based ornithological studies), the guidance requires the use of avian radar assessments to characterize high altitude migratory bird movements so regulators can evaluate the risk that the proposed development would pose to migrating birds.

The *MBCA* (2018) prohibits the deposit of harmful substances into waters or areas frequented by migratory birds, along with the disturbance, destruction, or possession of migratory birds, their occupied nests, and/or eggs. The new Migratory Bird Regulations (MBR) became effective as of July 30, 2022. Under the new regulations, occupied nests (and parts of the nests) of migratory birds are protected until they no longer provide high conservation value for migratory birds. Nests

are not considered high conservation value if they no longer contain any living birds or eggs. Year-round protection is only provided for nests of migratory birds known to reuse nesting areas as listed under Schedule 1 of the regulations.

For species designated as rare or at risk, their dwellings are protected provincially, under the provincial ESA, and federally, under SARA. The provincial ESA and SARA prohibit harm to listed SAR along with their habitually occupied space and core/critical habitat.

3.0 AVIAN RADAR SYSTEM

This section outlines methodologies and results for the 2025 radar monitoring program. Data collection and analysis were determined following the ECCC-CWS guidance for passive bird monitoring programs (2022).

The guidance recommends that acoustic and radar studies be conducted from March 15 to June 7 to capture migratory bird activity in the spring season, and from July 15 to November 30 for the fall migration season (ECCC-CWS, 2022).

3.1 Radar Methodology

3.1.1 Avian Radar System Deployment

Avian radar assessments were undertaken during the 2025 spring and fall migratory periods as well as the summer breeding periods to understand and measure the flight patterns of migrating birds over the LTWFPA. Avian radar assessments were focused on nocturnal avian migration, as most avian migration events occur at night; therefore, there is higher risk of interactions with wind turbines during the evening hours (Berthold, 1997; Helm & Gwinner, 2006; Newton, 2023, p. 200). The avian radar system (ARS) was deployed from April 8 to late November 30 (Table 3.1; Drawing 2, Appendix A). One Simrad Halo20 pulse compression marine surveillance radar was angled diagonally at 45° above the horizon during the deployment period. The diagonal orientation allowed for a 180° scan of the airspace above the radar, while the 180° below the radar is blanked to avoid ground interference. The diagonal orientation also allows for the calculation of the height of any potential avian target using triangulation. The ARS consists of two x-band pulse-compression surveillance radars oriented to scan the airspace approximately 50 m to 600 m above the Project.

Sensitive equipment in harsh remote environments is prone to malfunction and difficult to monitor and maintain. The ARS experienced corruption during the fall monitoring season and data was subsequently excluded from the analysis due to an internal malfunction that affected the battery bank and the system's ability to store power.

Table 3.1: Date Range when the ARS was Active within the LTWPA

ARS Location	Active Periods
Leading Tickles	April 8 – November 30*

*The ARS was active during these dates, but a combination of inclement weather and internal malfunction had resulted in unreadable data.

The ARS was deployed with an off grid 12V system that was designed for optimal active monitoring and flexibility in deployment. The 12V system charged and stored energy using solar panels and a battery bank to power the ARS for data collection and remote communications. The ARS was mobile, so relocation was possible throughout a season, if needed.

The ARS was deployed south of the LTWPA within the PA (Drawing 2, Appendix A). The site was located on a clearing at the top of a hill that is accessible via a resource road. This site was selected for this high elevation; good line of sight with relatively few trees in the immediate area into the airspace above the Project; and accessibility for spot checks. The ARS was mounted off the ground to minimize ground noise interference and lessen the impacts of local microtopography on data collection and quality.

3.1.1.1 Habitat Description

The ARU was deployed in a clearing at the end of a road surrounded by softwood-dominated forest within the LTWPA.

3.1.1.2 Avian Radar Assessment

Avian radar assessment results were processed using the Cognitive Marine Tracker (CMT) platform, a proprietary platform designed for tracking radar targets and specifically tuned for biological applications. Biological targets (BTs) detected by the radar generate blips in the image of the radar scan. The CMT can detect targets flying up to an altitude of 500 m; this distance is sufficient given the rotor swept area of the wind turbines associated with the Project is 35 m to 226 m. BTs detected by the CMT are most likely generated by avian species, but can also be bats, insects, drones, and planes. The CMT platform helps filter sequential images of radar scans to identify blips that occur in the same area over at least two scans, signifying BTs that are suspended in the airspace for an extended period. A track is generated for each BT given these conditions.

Weather occurrences, such as fog, rain, and low cloud cover, may cause interference with the radar. Interference lowers the effectiveness of the system by reducing the system's ability to detect birds. Data were excluded from the analysis when rainfall was ≥ 0.5 mm per hour to account for potential effects from interference. Rainfall data was obtained from ECCC's Badger (AUT) Weather Station (ECCC, 2025).

3.1.1.3 Discussion of Migration Cues in Radar Results

Weather and atmospheric conditions influence bird migration activity, especially wind speed and direction (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Birds are thought to take advantage of favourable conditions, such as tailwinds, to travel farther while using less energy (Nussbaumer et al., 2022). As such, birds migrating through Newfoundland during spring likely use northerly

winds, while those travelling in fall likely use southerly winds. In addition to wind direction, migrating birds may also take advantage of favourable wind speed to expedite their migration or to avoid unfavourable headwinds (Nussbaumer et al., 2022). The list of cues that are theorized and studied to play a role in avian migration include the following:

- Wind speed and direction (Gudmundsson et al., 2011; La Sorte & Fink, 2017; Nussbaumer et al., 2022).
- Photoperiod (Assadi & Fraser, 2021; Helm & Liedvogel, 2024; Robart et al., 2018; Sockman & Hurlbert, 2020).
- Temperature (Brisson-Curadeau et al., 2020; Burnside et al., 2021).
- Changes in migration cohort or population sizes (Miller-Rushing et al., 2008).
- Food availability (Robart et al., 2019).
- Lunar cycle (Bonnet-Lebrun et al., 2021; Korpach et al., 2024; Norevik et al., 2019; Pyle et al., 1993).

For this assessment, the variables of wind speed, wind direction, daily temperatures and lunar cycle were analyzed with the avian radar data to determine the strength of influence each cue may have on avian migrants over the Project.

3.1.1.4 Discussion of Migratory Bird Density in Radar Results

The Halo 20 radar emits a beam that is angled 12.5° upward and downward from the radar's antenna. The volume of airspace that the radar scans increase with range as the radar beam extends outwards; therefore, the number of BTs detected by the ARS generally increases with range, until such a point that the radar becomes limited by range and the number of BTs detected drops. The airspace volume scanned by the radar at each height bin is corrected for distortions in BT detection counts at different ranges.

The volume of airspace scanned in each of the height bins was determined using CAD software and the geometry of the radar's beam angle. These volumes were used to determine the target density (i.e., the number of targets detected per cubic kilometer of airspace) based on number of BTs detected in each height bin (Table 3.2). Target density followed the methodology Farnsworth (2013) and was measured as birds per km^3 to be representative of, and likely proportional to, the migratory bird activity in the airspace above the Project for the cumulative monitoring period (i.e., the 2025 avian radar monitoring campaign).

Table 3.2: Airspace Scanned (km3) within the ARS' Height Bins

Range Bin (m)	Airspace Scanned (km^3)
0-25	0.1015
25-50	0.1015
50-100	0.2036
100-150	0.2043
150-200	0.2052
200-250	0.2063
250-500	1.052
Total	**2.0744**

3.1.1.5 Avian Interaction Model

The level of interaction between migratory birds and the Project turbines can be estimated using data collected from the radar monitoring in 2025. Interactions may include sensory disturbance to birds passing near the turbines, requiring birds to maneuver around the turbines and thus forcing migratory birds to expend additional energy, bird collisions with the turbine components, or blade strikes (for operating turbines).

Table 3.3 shows the turbine dimensions for this Project and the parameters used to calculate the interaction airspace volume for the turbine model. The total height of the wind turbine infrastructure was calculated using the hub height and rotor diameter of the proposed turbine model, which was subsequently used to determine the rotor sweep area where avifauna could interact with the turbine (i.e., bird strike). The risk of avian interaction is calculated by comparing the proportion of avian targets detected within the calculated rotor sweep area of the proposed turbine.

Table 3.3: Turbine – Avifauna Interaction Volume Calculation Information

Turbine Model Information	
Component	**Description**
Turbine Model	Unspecified Model
Number of Turbines*	3*
Hub Height	135 m
Total Height	226 m
Rotor Diameter	182 m
Blade Length	91 m
Rotor Sweep Area	26,015 m^2

*Number of turbines is a representation for the application of statistical analysis. Actual turbine number varies.

3.2 Avian Radar Result

Data collected by the ARS for the 2025 radar monitoring campaign was analysed to provide the number of BTs by date, time, possible migration cues, and detection altitude (Table 3, Appendix B). Data was divided into three monitoring periods in accordance with the ECCC-CWS guidance (2022): spring (March 15 to June 6), summer breeding (June to July 15) and fall (July 16 to

November 30).

The ARS identified 15,873 BTs during the 2025 spring monitoring period (Figure 3.1). Peak days where notably high numbers of BTs were detected primarily occurred on June 1 to 6, 2025 (average number of Biological Targets [nBTs] = 2,364). Notably high numbers of BTs were also detected April 8 (nBTs = 452), April 9 (nBTs = 499) and May 18, 2025 (nBTs = 678). Most BTs were detected at heights between 150 m to 500 m and the largest number of BTs were detected between 250 m to 500m (nBTs = 6,118; Table 3.4).

The ARS identified 28,926 BTs during the 2025 summer breeding period (Figure 3.1). Peak days where notably high numbers of BTs were detected occurred on June 7 (nBTs = 2,060), June 11 to 16 (average nBTs = 2,144) and June 19, 2025 (nBTs = 1,420). The highest portion of BTs were detected at heights between 150 m to 500 m. The largest number of BTs occurred between 250 m to 500 m (nBTs = 8,752; Table 3.4).

The ARS identified 22,714 BTs during the 2025 fall monitoring period (Figure 3.1). All BTs observed during this period were detected between July 16 to August 29, as the ARS malfunctioned and did not record BT detections for the remainder of the fall. Peak detections during the period when the ARS was functioning occurred on August 11 (nBTs = 799), August 21 (nBTs = 810) and August 25, 2023 (nBTs = 853). The highest portion of BTs were detected at heights between 25 m to 200 m. The largest number of BTs occurred between 25 m to 50 m (nBTs = 5,514; Table 3.4).

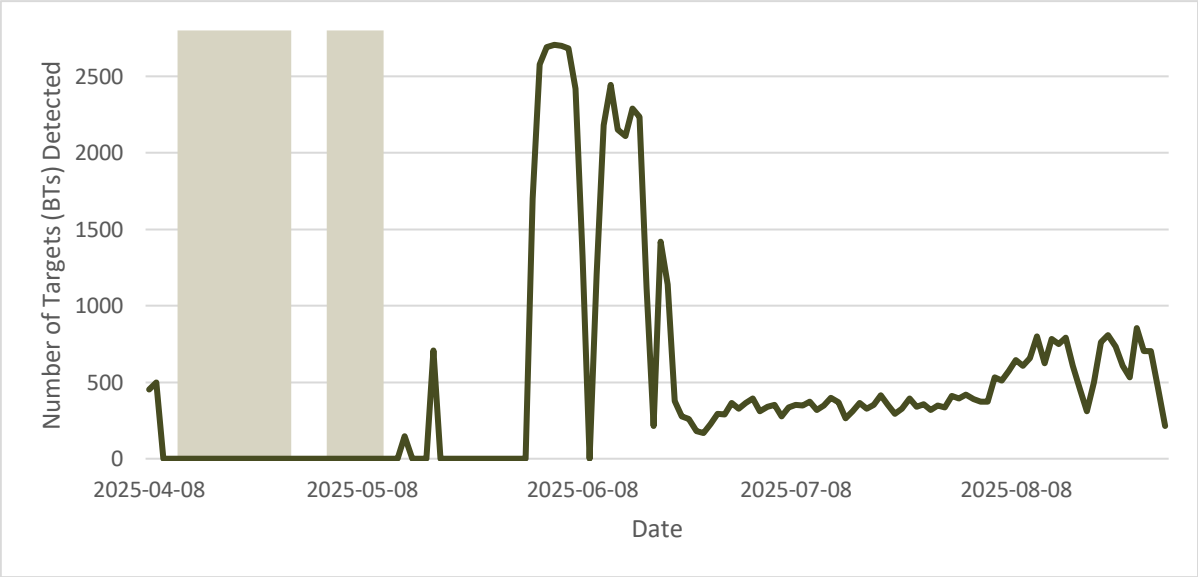

Figure 3.1: Number of BTs Detected throughout the 2025 Monitoring Period at Leading Tickle

Table 3.4: Number of BTs Detected by the Leading Tickle ARS Height Bins during the 2025 Monitoring Period

Range bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets (Fall)
0-25	0	0	58
25-50	0	378	5514
50-100	11	1572	3652
100-150	290	3117	5497
150-200	5412	8690	3347
200-250	4042	6417	2083
250-500	6118	8752	2563
Total	**15873**	**28926**	**22714**

Summary of 2025 Results

Results from the 2025 monitoring campaign suggest that avian migration activity occurred intermittently throughout, and possibly before/after, the monitoring periods. The ARS detected large migration events where a noticeable number of BTs were detected on some days compared to others. For example, early and mid-June were large migration events during the spring and summer breeding periods. The relatively consistent detection of BTs over the spring and summer suggest that avian activity over the LTWPA was relatively constant during the monitored days. It is difficult to determine what the pattern of migratory movements may have been in the later fall months due to the malfunction of the ARS system.

Timing of Migratory Movements

BTs were detected by the ARS during all hours overnight from sunset to sunrise during the 2025 monitoring campaign (Figure 3.2). The ARS was not actively recording between sunrise and sunset since migratory movements during these times are typically observed through field surveys. The number of BT detections was evenly distributed between the hours of 19:00 to 05:00, with the highest number of detections occurring from 20:00 to 21:00 (10% of BT detections) and few BTs detected during other monitored hours, during the spring and summer monitoring periods. Conversely, most BTs were detected between 19:00 and 06:00, with 19:00 to 20:00 being the most active hours (10% of BTs detected) during the fall monitoring period. These results are not unexpected as previous avian radar studies have found that during fall migration avian species tend to begin and end nocturnal activity in the twilight hours before sunrise and after sunset (Korpach et al., 2024; Van Doren et al., 2023).

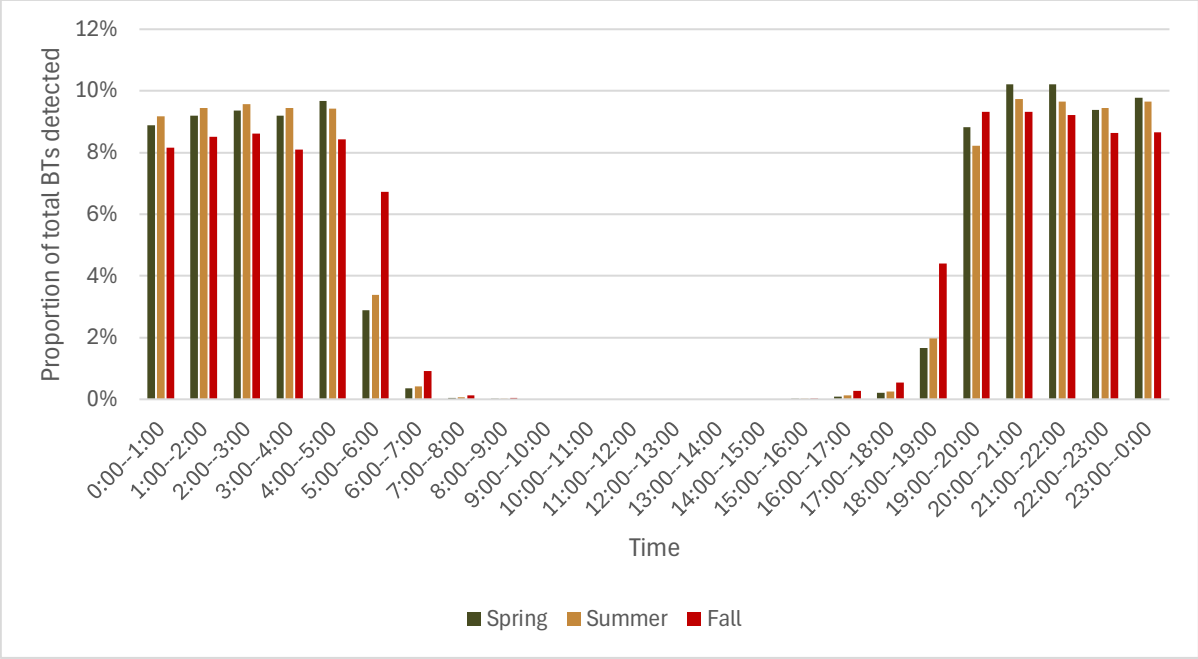

Figure 3.2: Number of BTs Detected per hour throughout the 2025 Monitoring Period at Leading Tickle

3.2.1 Cues for Avian Migration

The list of environmental cues that were used to compare with the data collected by the avian radar systems included:

Wind direction
Wind speed
Temperature
Lunar cycle

Photoperiod and tidal phase may have also affected bird migration timing. Data analysis was conducted to test the correlation between these cues and migration timing; however, there was no significant evidence that photoperiod and tidal phase affected migration timing.

Wind Direction and Wind Speed

The highest number of BTs were detected when the wind was blowing from the south southwest and when there was no wind throughout all the periods monitored during the 2025 ARS campaign (Figure 3.3). A breakdown of wind patterns and BTs detections during each monitoring period is as follows:

Spring migration:

- 26% of BTs were detected when winds were moving from the south
- 21% of BTs were detected when winds were from the southwest
- 35% of BTs were detected when there was no wind

Summer breeding period:

- 22% of BTs were detected when winds were moving from the south
- 24% of BTs were detected when winds were from the southwest
- 35% of BTs were detected when there was no wind

Fall migration period:

- 19% of BTs were detected when winds were moving from the south,
- 22% of BTs were detected when winds were from the southwest
- 32% of BTs were detected when there was no wind

These results were somewhat unexpected as birds flying over the LTWPA appear to not show a high degree of wind direction selectivity. Birds migrating in the spring would likely take advantage of the tailwinds provided by the winds moving south to north; however, these winds would likely not be as beneficial to birds flying in the summer and fall (Liechti & Bruderer, 1998). The fact that the highest proportion of birds were detected when there was no wind during each monitoring period further indicates that wind direction does not strongly influence avian activity over the LTWPA. Migrating birds have been known to show no wind direction selectivity when other cues are present during migration (Thorup et al., 2006), which may have been the case for the 2025 monitoring periods.

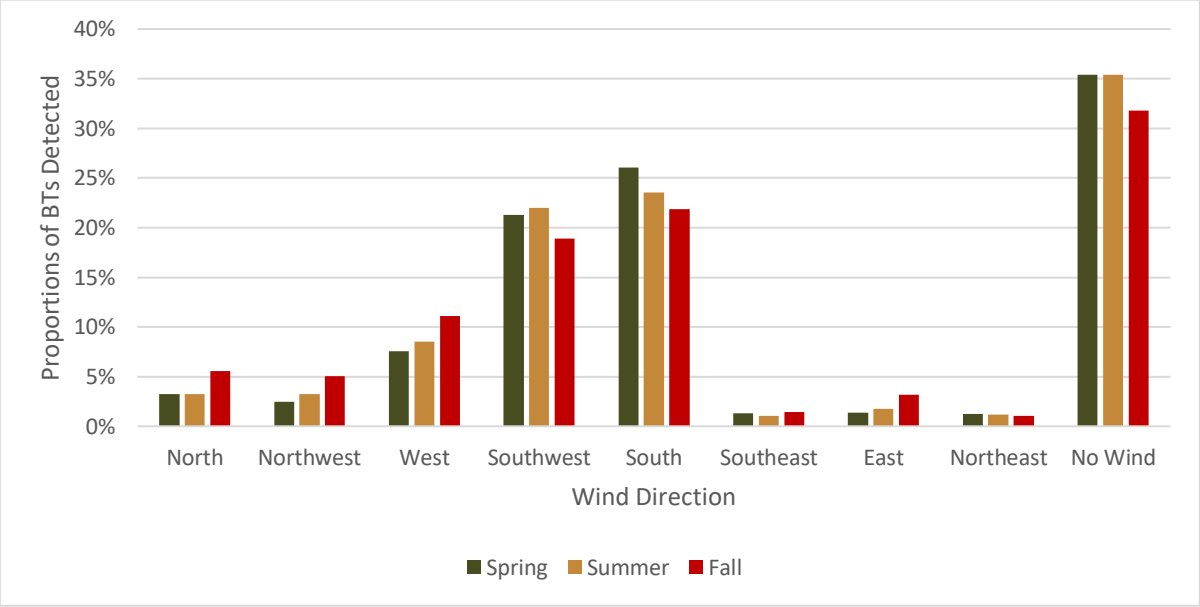

Figure 3.3: Wind Direction by Number of BTs Detected, 2025

Most BTs were detected when wind speeds were less than 11 km/hr during each of the 2025 ARS monitoring periods. Wind speeds of 11 km/hr are classified as a light breeze on the Beaufort wind scale (ECCC, 2025). This result was expected as birds prefer to fly during calmer wind conditions, which lowers the probability of birds being shifted off their migratory course (Dossman et al., 2016). This result is also consistent with the wind direction data as a large proportion of targets were observed when there was no wind detected. It can be concluded that

birds flying over the LTWPA seem to prefer flying during slower wind speeds, which would allow them to migrate to their destination regardless of wind direction (Alerstam, 2011; Nussbaumer et al., 2022).

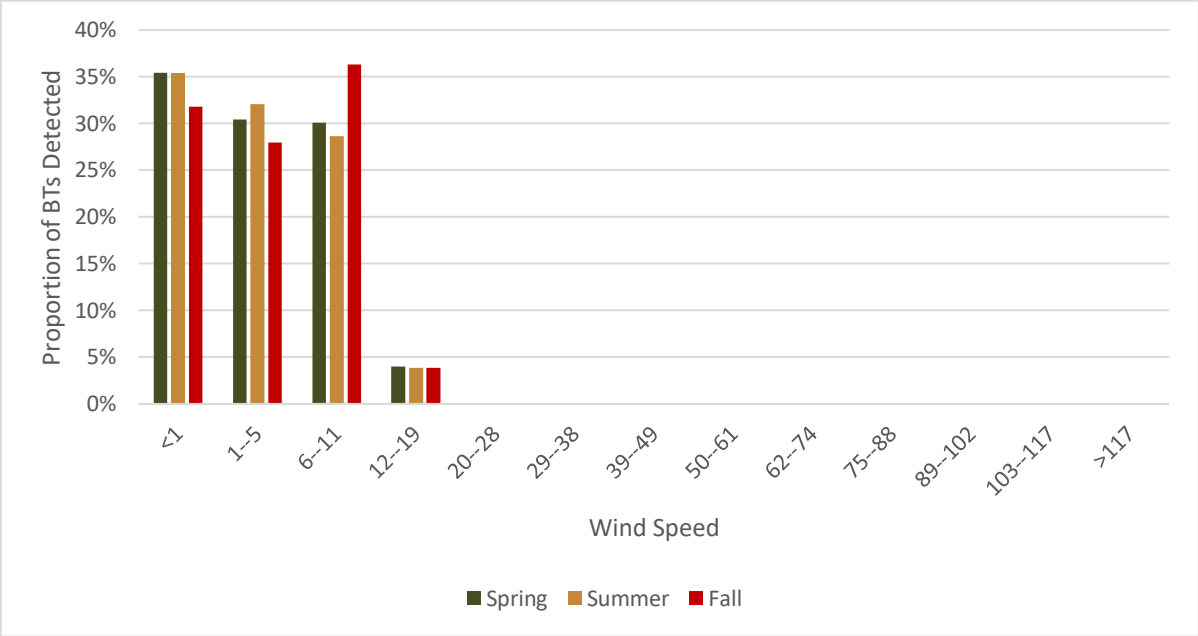

Figure 3.4: Wind Speed (km/h) by Number of BTs Detected, 2025

Temperature

Birds have been known to depend on consistent temperature cues to indicate migration departure; hence, comparing daily mean temperature with ARS data may provide guidance on predicting peak migration events (Burnside et al., 2021; Klinner & Schmaljohann, 2020). Most BTs were detected as temperatures began to steadily increase, following a brief period of low temperatures, during the spring 2025 monitoring period (Figure 3.5). The most consistent period of BT detections occurred during the summer breeding period when average daily temperatures were the highest observed during the entire 2025 monitoring campaign. Detections during the fall monitoring period were limited to late July and August when temperatures were still relatively high. Birds will often use decreasing temperatures as trigger to begin their fall migration and depart before the later months of fall (Brisson-Curadeau et al., 2020), so it was expected that as temperatures began to decrease in the later fall months, fewer BTs would be detected, but this cannot be confirmed due to the ARS malfunction.

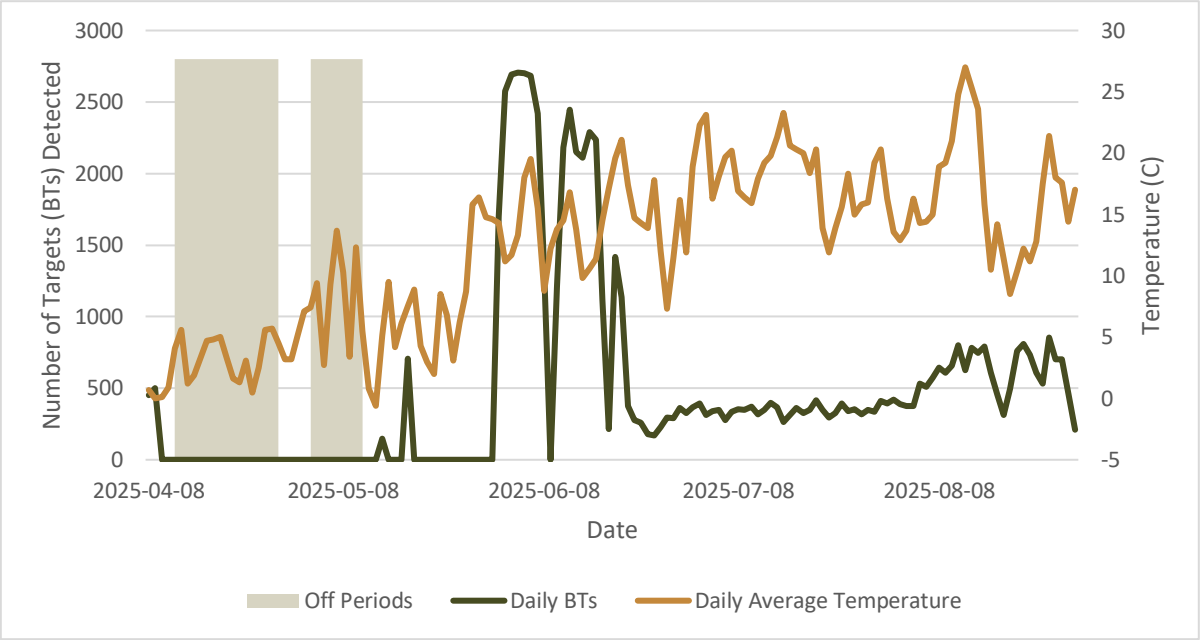

Figure 3.5: Number of BTs Detected during the 2025 ARS Monitoring Campaign compared to Daily Average Temperatures (° C)

Lunar Cycle

The relationship between lunar cycles and daily number of BTs detected by each of the avian radars during the 2025 monitoring campaign was quantified according to the percentage of exposed moonlight during each of moon's phases (i.e., new moon = 0%, first quarter = 50%, full moon = 100%, last quarter = 50%). Several of the most active migration periods observed during the 2025 monitoring period occurred shortly after or before a full moon, when the amount of exposed moonlight was highest (Figure 3.6). This result is consistent with current understanding nocturnal birds' migratory behaviours, as Norevik et al. (2019) demonstrated that birds take advantage of the higher visibility provided by increased moonlight to forage in preparation for migration.

There were also multiple large migratory movements in the later days of summer and early fall that occurred when there was less than 50% exposed moonlight, with most observations occurring when there was almost no exposed moonlight (Figure 3.6); hence, migratory movements observed during the 2025 campaign may be more strongly associated with other environmental cues.

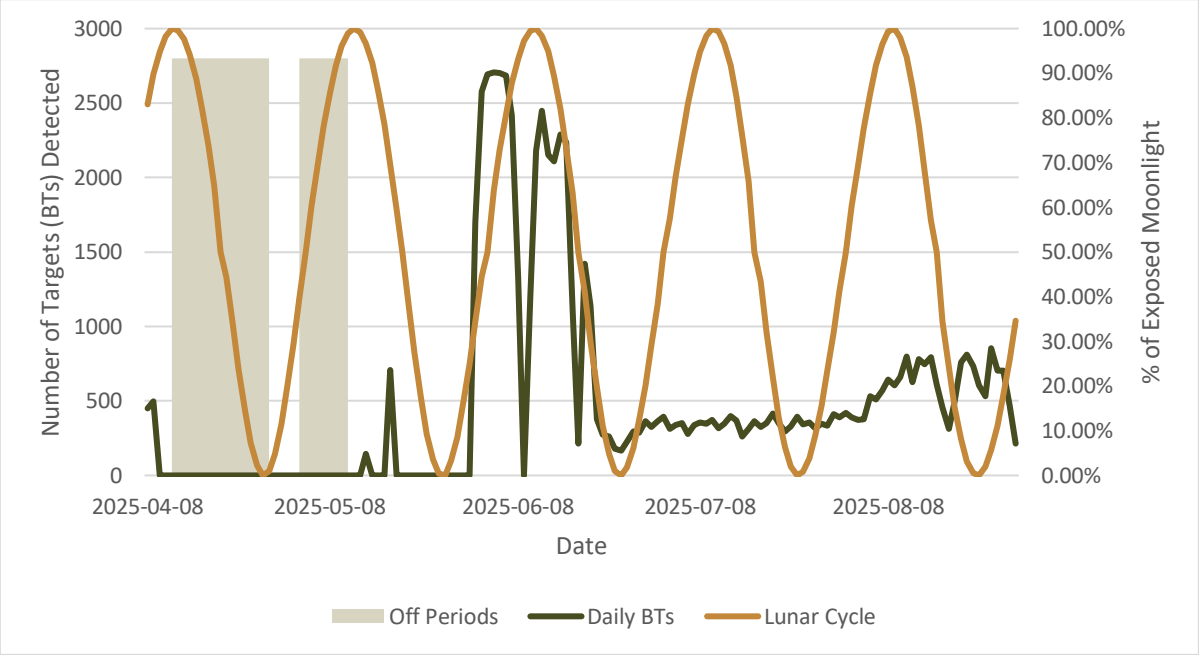

Figure 3.6: Number of BTs Detected during the 2025 ARS Monitoring Campaign compared to Daily Moonlight Exposure (%)

3.2.2 Migratory Bird Density

Table 3.5 details the target density of the ARS location calculated using the volume of airspace scanned (Table 3.3) and the number of BTs detected at each height during the spring and fall monitoring period (Table 3.5).

Table 3.5: Target Density detected in the ARS height bins during the 2025 monitoring period.

Range Bin (m)	Target Density (Spring)	Target Density (Summer Breeding)	Target Density (Fall)
0-25	0	0	0
25-50	0	3724.138	54325.12
50-100	54.0275	7721.022	17937.13
100-150	1419.481	15256.98	26906.51
150-200	26374.27	42348.93	16310.92
200-250	19592.83	31105.19	10096.95
250-500	5815.589	8319.392	2436.312

The ARS detected the most targets in the 250 m to 500 m range bin during the spring 2025 monitoring period. This is associated with peaks in detections on April 8 and 9, May 18, and June 1 to 6, 2025. Approximately 38% of BTs (nBTs = 6,118) were within this range bin. The target density calculations show relatively similar variation to target count, with target density increasing mostly above 100 m, and peaking in the 150 m to 200 m range bin. Target density was notably lower than target count in the 250 m to 500 m height bin indicating a lower-than-expected number of targets given the scanned air space. These results indicate that targets were the most concentrated in the 150 m to 200 m height bin (Figure 3.7).

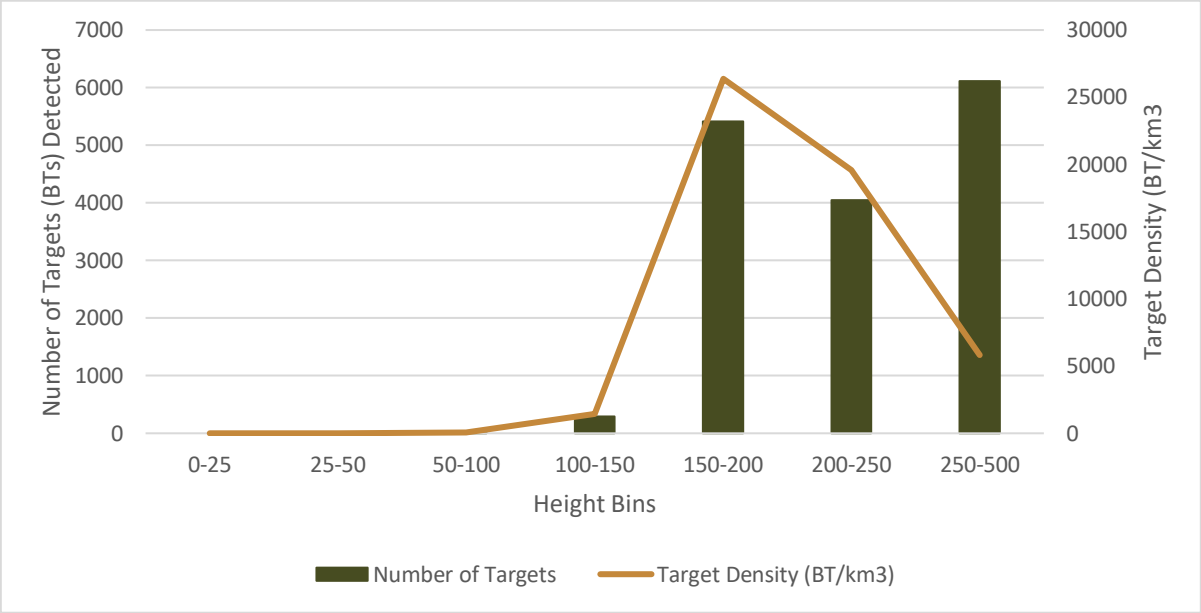

Figure 3.7: Number of Targets Detected and Target Density within Height Bins – Spring 2025

During the 2025 summer breeding period, the ARS detected the most targets in the 250 m to 500 m range bin. This is associated with peaks in detections on June 7, June 11 to 16 and June 19, 2025. Approximately 30% of BTs (nBTs = 8,752) were within this range bin. The target density calculations show relatively similar variation to target count, with target density increasing mostly above 100 m, and peaking in the 150 m to 200 m range bin. Like the spring results, target density was notably lower than target count in the 250 m to 500 m height bin indicating a lower-than-expected number of targets given the scanned air space. These results indicate that targets were the most concentrated in the 150 m to 200 m height bin (Figure 3.8).

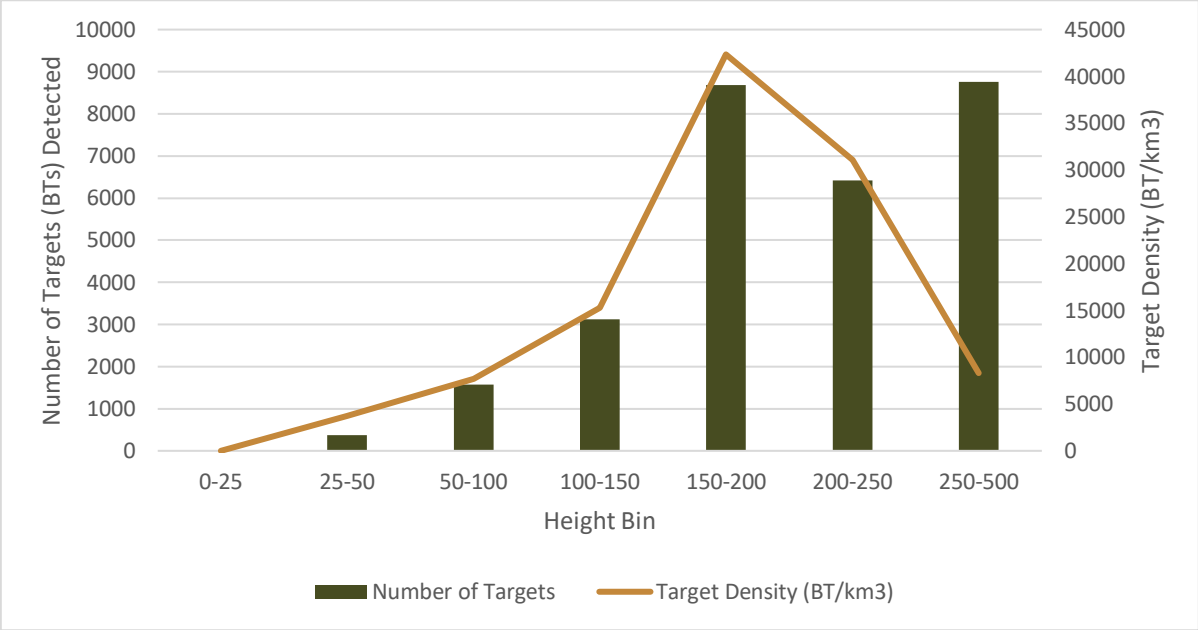

Figure 3.8: Number of Targets Detected and Target Density within Height Bins - Summer 2025

During the fall 2025 monitoring period, the ARS detected the most targets in the 25 m to 50 m range bin. This is associated with peaks in detections on August 11, August 21 and August 25, 2025. Approximately 24% of BTs (nBTs = 5,514) were within this range bin. The target density calculations show relatively similar variation to target count, with target density mostly decreasing in the higher height bins above 50 m and peaking in the 25 m to 50 m range bin. Target density was notably lower than target count in every height bin above 50m, indicating a lower than expected number of targets given the scanned air space for each height bin. These results indicate that targets were the most concentrated in the 25 m to 50 m height bin (Figure 3.9).

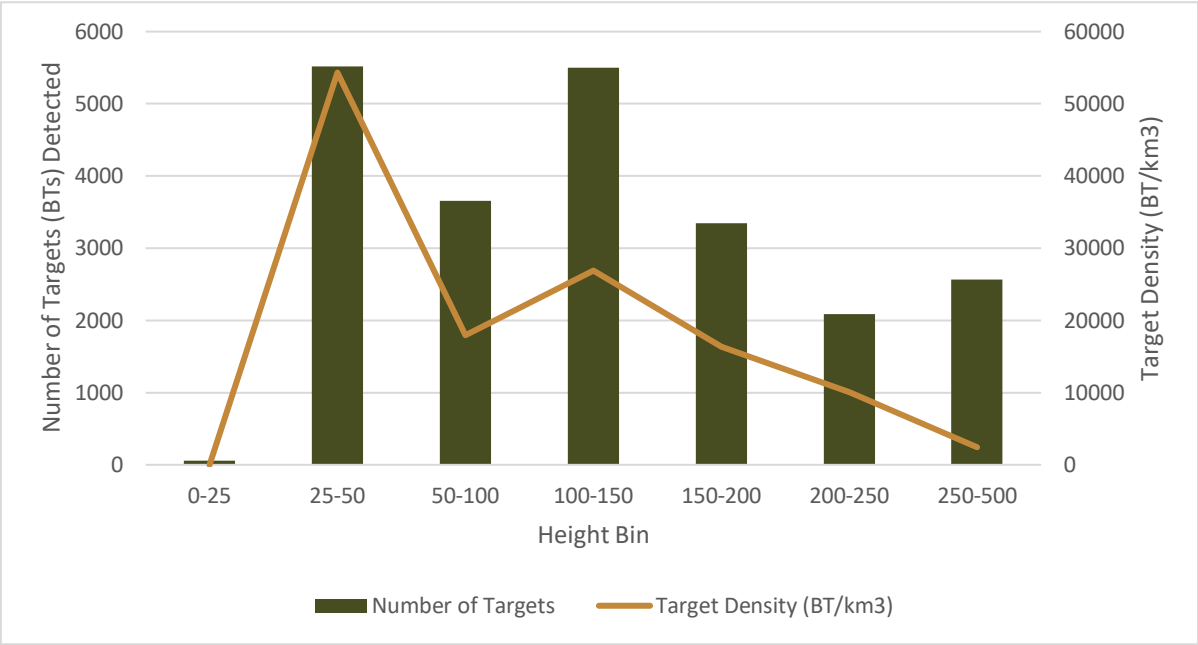

Figure 3.9: Number of Targets Detected and Target Density within Height Bins – Fall 2025

3.2.3 Avian Interactions with the Project

The number of BTs detected during the 2025 spring, summer breeding and fall monitoring periods that were detected within the rotor swept zone of the Project's wind turbines were compared the total number of BTs to illustrate the risk of BT interactions with the Project (Figure 3.10). The Project's wind turbines have a hub height of 135 m and a blade diameter of 183 m; therefore, any BTs between heights of 44 m to 226 m were determined to be at risk of interacting with the turbines.

During the 2025 spring monitoring period, most of the BTs were detected above the rotor swept area of the Project's turbines (Figure 3.10). The number of targets within the rotor swept area peaked on June 1 to 6, 2025 (average nBTs = 889). Each of those peak days were also days when the number of BTs detected above the rotor swept area also peaked. In total 5713 BTs were detected within the rotor swept area of potential turbines which accounted for 36% of the BTs detected.

During the 2025 summer breeding period, most of the BTs were detected above the rotor swept area of the Project's turbines (Figure 3.10). The number of targets within the rotor swept area peaked on June 11-16, 2025 (average nBTs = 4,774). Each of those peak days were also days when the number of BTs detected above the rotor swept area also peaked. In total 13,757 BTs were detected within the rotor swept area of potential turbines which accounted for 48% of the BTs detected.

During the 2025 fall monitoring period, most of the BTs were detected within the rotor swept area of the Project's turbines (Figure 3.10). The number of targets within the rotor swept area peaked on August 11, August 21 and August 25, 2025 (average nBTs = 700). Each of those peak days

were also days when the number of BTs detected above the rotor swept area also peaked. In total 18,068 BTs were detected within the rotor swept area of potential turbines which accounted for 80% of the BTs detected.

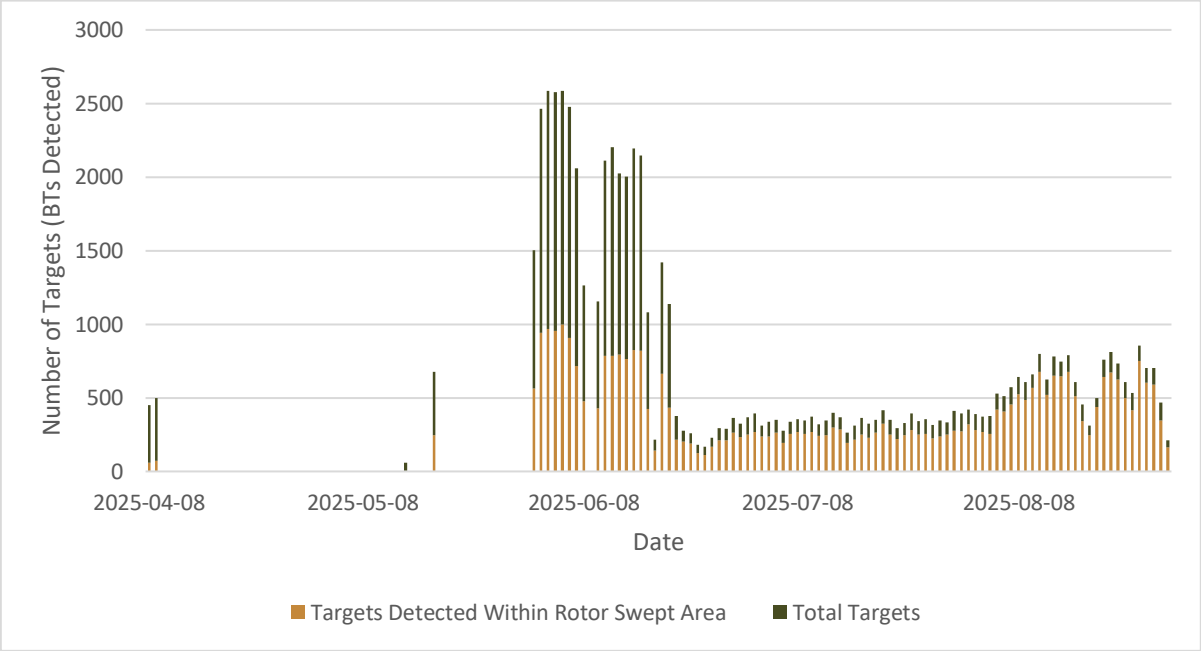

Figure 3.10: Number of Detections Within or Above the Rotor Swept Zone During the 2025 ARS Monitoring Campaign

4.0 ACOUSTIC RECORDING UNIT

This section outlines methodologies and results for the 2025 acoustic monitoring program. Data collection and analysis were determined following the ECCC-CWS guidance for passive bird monitoring programs (2022).

The guidance recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

4.1 Acoustic Monitoring Methodology

4.1.1 Avian Acoustic Monitor Deployment

One ARU, a Wildlife Acoustic Song Meter 4, was deployed within the Study Area in tandem with the ARS from April 4, 2025, to late November (Drawing 2, Appendix A). Due to an internal malfunction, data from the ARU was corrupted from September onwards and will not be included in this report. Table 4.1 demonstrated when the ARU was actively recording during the 2025 monitoring season.

Table 4.1: Date Range when the ARU was Active within the LTWPA

ARU Location	Active Periods
Leading Tickles	April 4 – August 19, 2025

The monitor was scheduled to record from 18:00 to 8:00 with the intention of capturing as many nocturnal flight calls (NFCs) of migrating birds as possible during spring and summer. ARU data was targeted to include data near sunset until sunrise to maintain consistent data records and avoid confusing the machine learning model used to process avian NFCs. This time constraint was set since breeding calls for avian species are concentrated to dusk and dawn during the spring.

4.1.1.1 Habitat Description

The ARU was deployed in a clearing at the end of a road surrounded by softwood-dominated forest within the LTWPA.

4.1.2 Avian Acoustic Data Processing

The acoustic data collected by the ARU was run through Nighthawk, a machine learning model that specializes in the detection and classification of avian NFCs. The output files from these models were then brought into Raven Pro (2022), a computer program specializing in visualization and analysis of sounds, for manual analysis.

4.1.2.1 Nighthawk

Nighthawk is a deep learning model designed by researchers at the Cornell Lab of Ornithology (Van Doren et al., 2023). The Nighthawk model was designed to detect and identify vocalizations made by nocturnally migrating birds and was trained using recordings of NFCs from throughout the Americas. For the purposes of this analysis, Nighthawk was run in its own computer programming environment using Python programming language, and was set using the following default parameters:

- Model sample rate: 22,050 Hz
- Model input duration: 1 s
- Hop size: 20% (percentage of the model input duration)
- Length of detections: 0.2 s

Nighthawk can assign a probability score to each detection it makes, which represents the likelihood of the model making a correct prediction. For this analysis, only detections with a probability score of 0.8 (80%) or above were considered for further analysis in Raven Pro.

Nighthawk can identify 82 bird species (Table 2, Appendix B), although a species-level identification is not always possible (Van Doren et al., 2023). In instances where a species-level identification cannot be achieved, the model may identify vocalizations to the order, family, or group level. Order and family refer to the taxonomic levels, whereas group level refers to a subset of species with similar sounding NFCs. For example, the 'ZEEP' group consists of several similar-sounding warbler species that can be exceptionally difficult to vocally separate from one another. Nighthawk was fed a list containing only species that are likely to occur in this region to

limit false species-level identifications.

Nighthawk produced a series of text files containing all detections and predictions for a given audio file input. The text files and audio files were then brought into Raven Pro (version 1.6) for manual verification.

4.1.2.2 Raven Pro

Raven Pro is a software program that specializes in the visualization and analysis of sounds. Environmental scientists with experience in bird identification brought raw audio files recorded by the ARU and the text files containing the detections made by Nighthawk into Raven Pro. The scientists were then able to manually verify the detections and assess the accuracy of the Nighthawk results by listening to sound clips and visually analyzing the spectrograms of NFCs. The scientists listened to approximately 30 vocalizations (or all vocalizations if fewer than 30 were detected) for each species identified by Nighthawk. The vocalizations were annotated 'Y' if the species-level identification made by the model was correct, or 'N' if the identification was incorrect.

4.2 Acoustic Monitoring Results

Data collected by the ARU was analyzed and manually verified to produce a list of species present near the Project during the 2025 monitoring season.

Results include avian vocalizations detected using Nighthawk. Data was collected in 2025 (April 8 to late November) (Table 4, Appendix B), with the period between April 4 and June 7 (Spring), June 8 to July 15 (Breeding), and July 16 to August 19 (Fall) discussed within this report.

4.2.1 2025 Spring Nighthawk Results

The Nighthawk model made a total of 86,955 detections during the 2025 spring monitoring period, with most occurring in May (70%) followed by June (22%) (Figure 4.1). It is assumed that most of the June detections are songs and calls as the period approaches breeding season.

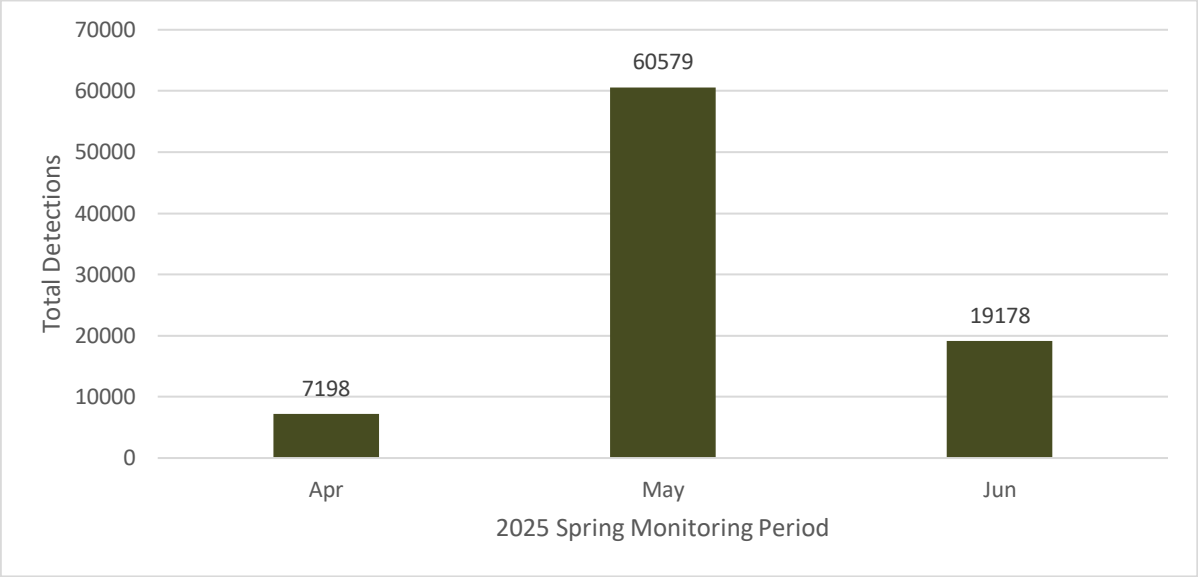

Figure 4.1: Total Number of Detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period.

Most of the detections occurred relatively around sunset and sunrise times during this period (approximately 4:30 AM and 19:30 PM), with the highest number of detections occurring in the morning within the 4:00 (11%), 5:00 (25%) and 6:00 (22%) timeframes and in the evenings within the 19:00 (11%) and 20:00 (15%) timeframes (Figure 4.2).

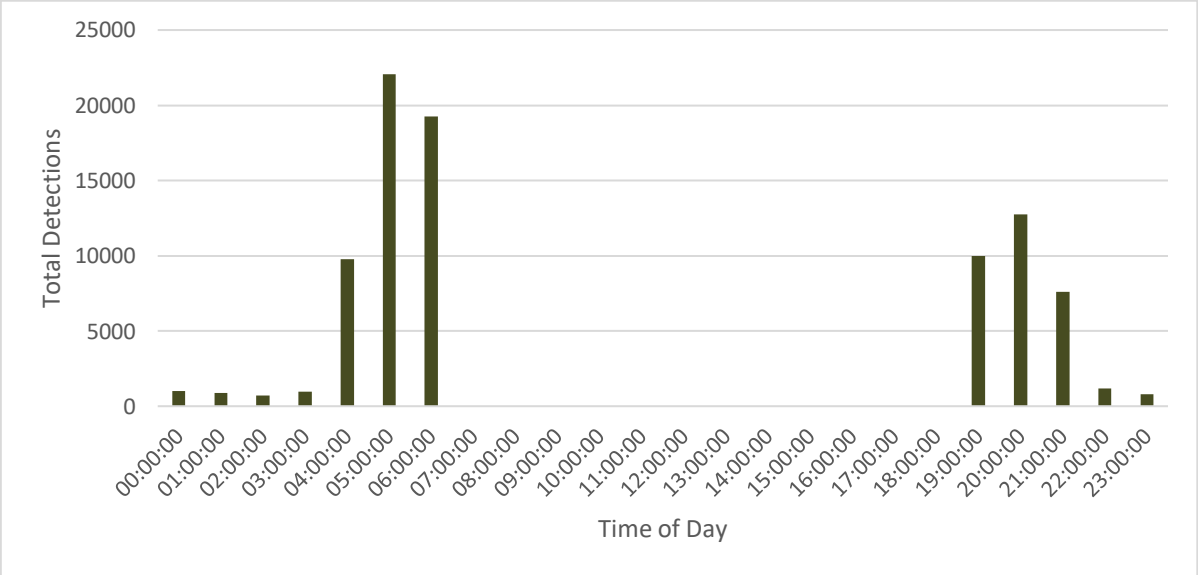

Figure 4.2: Timeframe of Nighthawk Detections during the 2025 LTWPA Spring Monitoring Period.

A subset of 743 detections was manually verified by Strum environmental scientists, and of those, 138 (19%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin (*Turdus migratorius*), dark-eyed junco (*Junco*

hyemalis), hermit thrush (*Catharus guttatus*); all of which had a success rate of 90% or higher when a sample of detections were manually verified. Nighthawk also made 15,842 detections at the group level, 23,118 detections at the family level, and 22,575 detections at the order level, which are included in Table 4.2. Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Table 4.2: Summary of 2025 LTWPA Spring Nighthawk Results1

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American Pipit	69	22	0%	0.94
American Redstart	235	41	5%	0.89
American Robin	361	42	98%	1.00
American Tree Sparrow	258	13	0%	1.00
Black-and-white Warbler	255	13	77%	1.00
Black-billed Cuckoo	4	4	0%	1.00
Black Oystercatcher	85	22	0%	0.98
Bobolink	1	1	0%	0.97
Black-throated Blue Warbler	70	28	0%	0.90
Cape May Warbler	23	12	0%	1.00
Canada Warbler	1	1	0%	1.00
Chipping Sparrow	33	17	0%	0.92
Chestnut-sided Warbler	80	20	0%	0.93
Common Yellowthroat	12	11	27%	0.99
Dark-eyed Junco	438	40	93%	0.99
Grasshopper Sparrow	24	12	0%	0.99
Greater Yellowlegs	99	23	0%	0.98
Green Heron	3	1	0%	1.00
Hermit Thrush	626	19	95%	1.00
Hooded Warbler	3	2	0%	0.91
Indigo Bunting	3	3	0%	0.90
Killdeer	173	16	0%	1.00
Lapland Longspur	9	7	0%	0.99
Least Sandpiper	24	12	0%	1.00
Lincoln's Sparrow	25	17	29%	0.97
Nashville Warbler	10	10	10%	0.94
Northern Parula	11	4	0%	0.97
Northern Waterthrush	27	12	8%	1.00
Ovenbird	14	11	0%	0.94
Palm Warbler	6	5	80%	1.00

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Red-breasted Nuthatch	239	24	0%	0.99
Rose-breasted Grosbeak	2	2	0%	1.00
Savannah Sparrow	922	17	6%	0.98
Scarlet Tanager	154	39	0%	0.99
Semipalmated Plover	21	9	0%	0.95
Short-billed Dowitcher	164	44	0%	0.99
Solitary Sandpiper	318	19	0%	0.96
Spotted Sandpiper	188	17	6%	0.99
Sprague's Pipit	1	1	0%	0.96
Swainson's Thrush	16	8	0%	0.86
Upland Sandpiper	254	49	0%	0.99
Veery	6	6	0%	0.98
Vesper Sparrow	5	5	0%	1.00
White-crowned Sparrow	2	2	0%	0.99
White-throated Sparrow	19845	18	72%	0.99
Wilson's Warbler	2	2	50%	0.96
Wood Thrush	1	1	0%	1.00
Yellow-billed Cuckoo	298	40	0%	0.99
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	36	0	N/A	N/A
BZWA	329	0	N/A	N/A
CUPS	135	0	N/A	N/A
DBUP	686	0	N/A	N/A
DESP	1459	0	N/A	N/A
DEWA	8	0	N/A	N/A
GCBI	1	0	N/A	N/A
HSSP	13	0	N/A	N/A
SBUF	360	0	N/A	N/A
SFHS	10686	0	N/A	N/A
SWLI	494	0	N/A	N/A
TANA	87	0	N/A	N/A
THSH	23	0	N/A	N/A
ZEEP	1525	0	N/A	N/A
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	8	0	N/A	N/A
Bombycillidae	178	0	N/A	N/A
Calcariidae	807	0	N/A	N/A

Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Cardinalidae	30	0	N/A	N/A
Charadriidae	322	0	N/A	N/A
Cuculidae	186	0	N/A	N/A
Haematopodidae	713	0	N/A	N/A
Icteridae	4	0	N/A	N/A
Laridae	2	0	N/A	N/A
Motacillidae	71	0	N/A	N/A
Parulidae	5212	0	N/A	N/A
Passerellidae	10698	0	N/A	N/A
Scolopacidae	4544	0	N/A	N/A
Sittidae	58	0	N/A	N/A
Turdidae	285	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	6319	0	N/A	N/A
Cuculiformes	33	0	N/A	N/A
Passeriformes	16223	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.1 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

[2] Groupings of birds with similar NFCs.

False positive detections can be attributed to an oversensitivity of the model in conjunction with noise interference from wind, vegetation, frogs, insects, and other environmental factors.

Most of the confirmed positive detections made during the spring monitoring period occurred in April (45%) and May (41%), which represents peak spring migration movements for most species (Figure 4.3). Positive detections decreased from May to June, suggesting the decline of the migratory movement from the spring into breeding season.

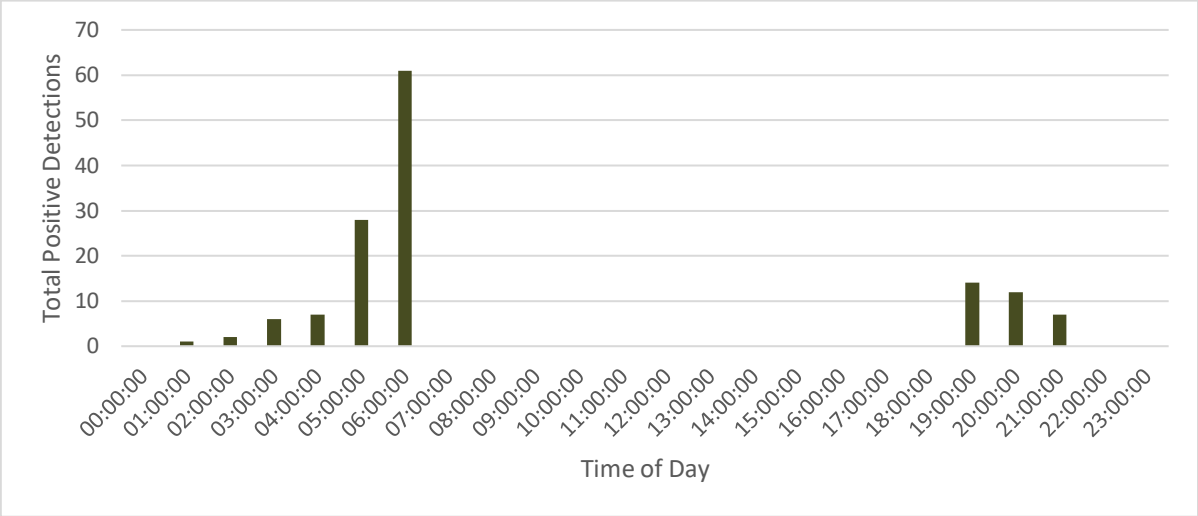

Figure 4.3: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period.

The highest number of detections occurred within the 5:00 and 6:00 timeframes and from the 19:00 to 20:00 timeframes (Figure 4.4). Notably, there were more detections in the mornings compared to the evenings, suggesting higher migratory movements happening during this period.

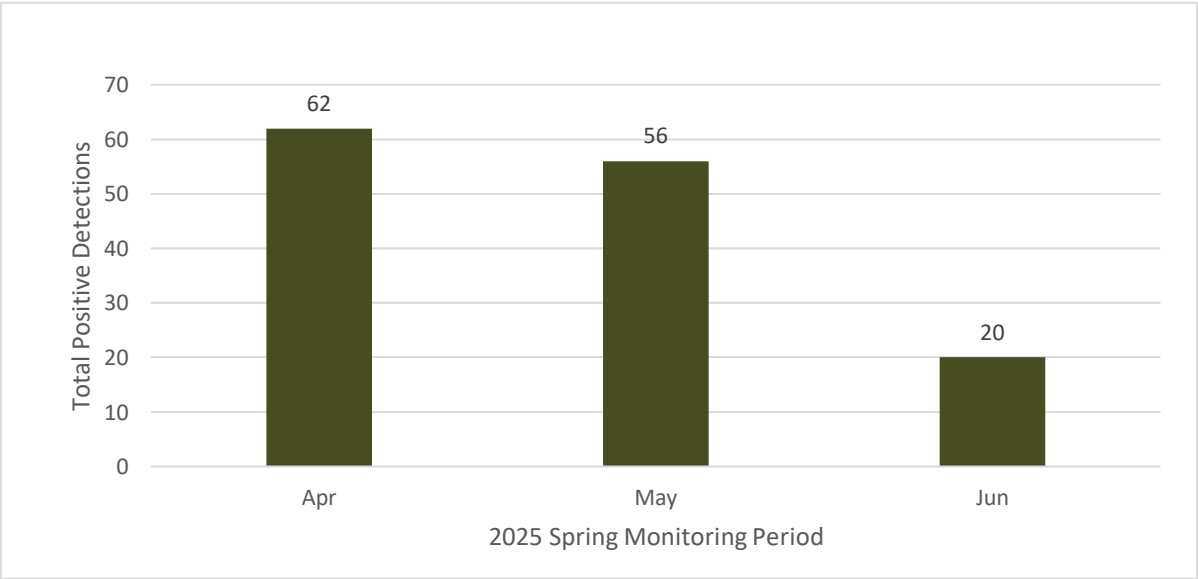

Figure 4.4: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Spring Monitoring Period.

During the 2025 spring monitoring period, 14 unique species were correctly identified by the model (Table 4.3). Of those, the most commonly detected species were American robin (41), dark-eyed junco (37), hermit thrush (18), and white-throated sparrow (13). One SOCI, Nashville

warbler (*Leiothlypis ruficapilla*), was detected during the 2025 spring monitoring period. One occurrence of this species was identified on June 6, suggesting that the species migrated to the region right before peak nesting period (Canada, 2015). No SAR was detected during this period.

Table 4.3: Summary of Species Correctly Identified by Nighthawk During the 2025 LTWPA Spring Monitoring Period.

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NL S-Rank
American Redstart	*Setophaga ruticilla*	---	---	---	S5B
American Robin	*Turdus migratorius*	---	---	---	S5B
Black-and-White Warbler	*Mniotilta varia*	---	---	---	S5B
Common Yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed Junco	*Junco hyemalis*	---	---	---	S5
Hermit Thrush	*Catharus guttatus*	---	---	---	S5B
Lincoln's Sparrow	*Melospiza lincolnii*	---	---	---	S5B
Nashville Warbler	*Leiothlypis ruficapilla*	---	---	---	S2B,SUM
Northern Waterthrush	*Parkesia noveboracensis*	---	---	---	S5B
Palm Warbler	*Setophaga palmarum*	---	---	---	S4B
Savannah Sparrow	*Passerculus sandwichensis*	---	---	---	S5B
Spotted Sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
White-throated Sparrow	*Zonotrichia albicollis*	---	---	---	S5B
Wilson's Warbler	*Cardellina pusilla*	---	---	---	S5B

Source: (ACCDC, 2025)

May and June have the highest number of unique species detected during the 2025 spring monitoring period (Figure 4.5). The pattern seen in this monitoring period suggests that peak migration occurred in May as it was the month with the highest species richness.

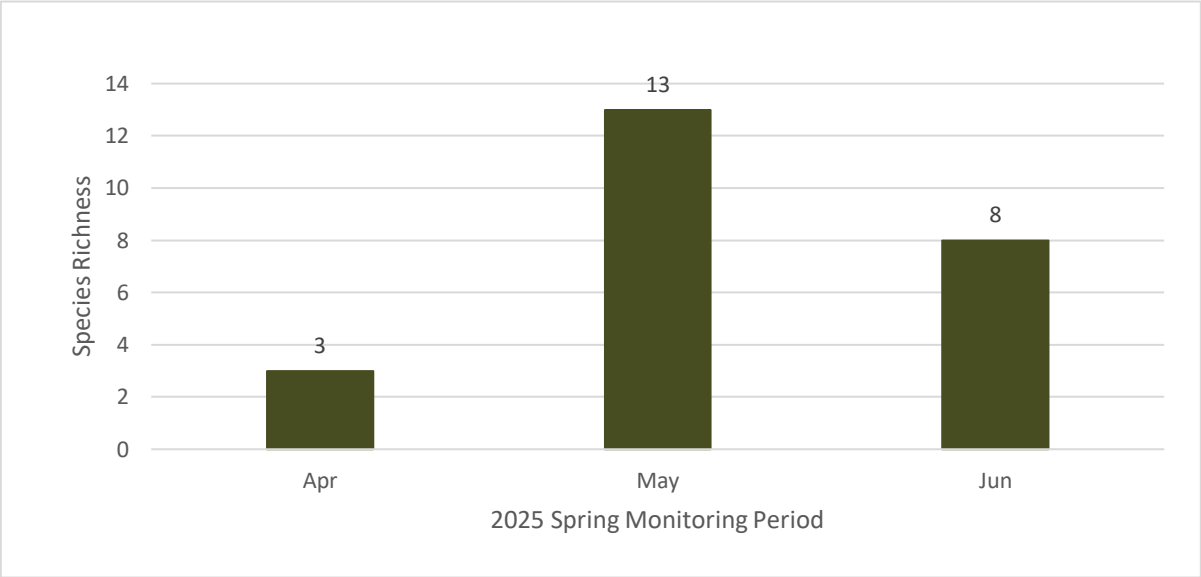

Figure 4.5: Nighthawk Species Richness during the 2025 LTWPA Spring Monitoring Period.

4.2.2 2025 Breeding Nighthawk Results

The Nighthawk model made a total of 71,429 detections during the 2025 breeding monitoring period, with most occurring in July (59%) (Figure 4.6).

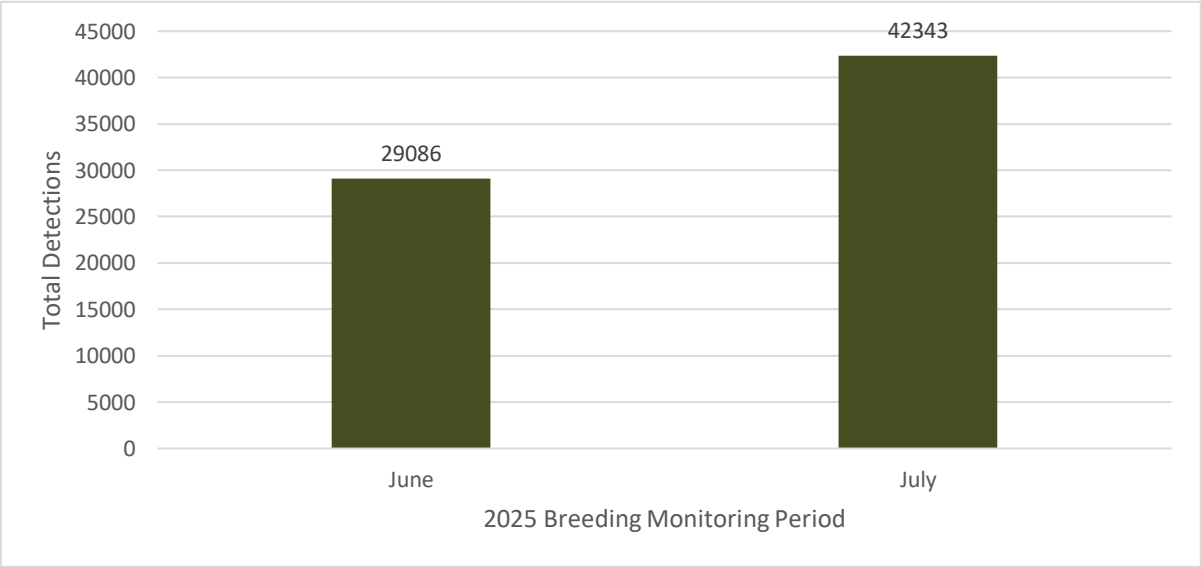

Figure 4.6: Total Number of Detections made by Nighthawk during the 2025 LTWPA Summer Monitoring Period.

Most detections occurred relatively around sunset and sunrise times during this period (approximately 4:30 AM and 20:00 PM), with the highest number of detections occurring in the morning within the 4:00 (11%), 5:00 (24%), and 6:00 (21%) timeframes and in the evening within the 19:00 (12%), 20:00 (17%), and 21:00 (11%) timeframes (Figure 4.7).

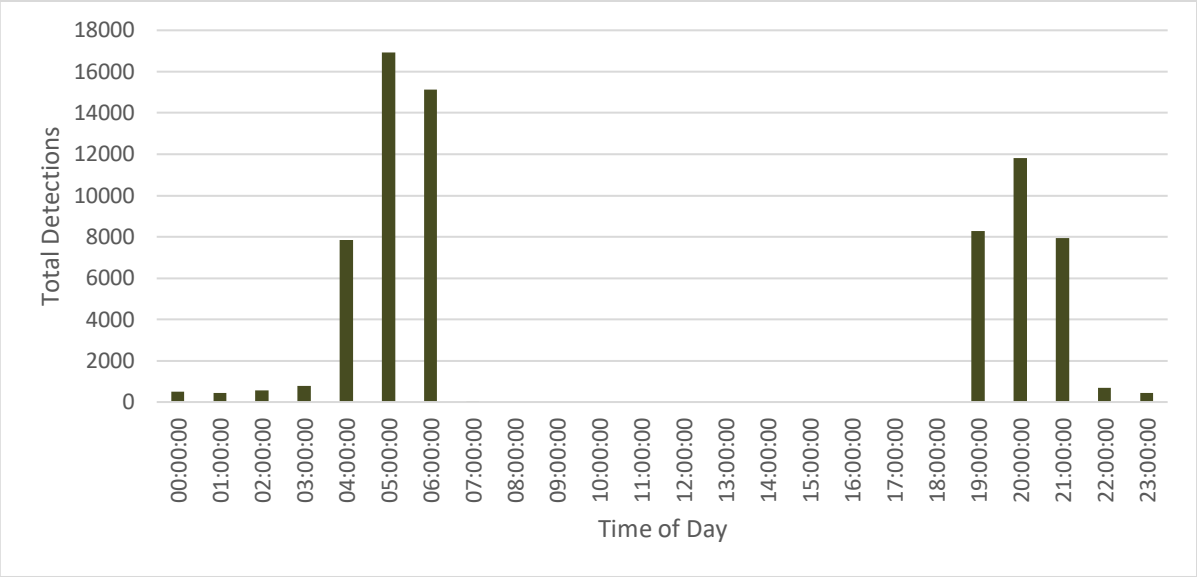

Figure 4.7: Timeframe of Nighthawk Detections during the 2025 LTWPA Breeding Monitoring Period.

A subset of 251 detections was manually verified, and of those, 36 (14%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was relatively unsuccessful at identifying species, with correct detections for all species below the established 90% success rate. This is expected as the model is less successful when there is higher presence of songs and calls, which are abundantly present during the breeding season. Nighthawk also made 13,358 detections at the group level, 24,141 detections at the family level, and 20,143 detections at the order level, which are included in Table 4.4. Each detection was identified to the highest taxonomic level possible.

Table 4.4: Summary of 2025 LTWPA Breeding Nighthawk Results[1]

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American Pipit	47	23	0%	0.93
American Redstart	208	27	4%	0.88
American Robin	210	22	23%	1.00
American Tree Sparrow	96	21	0%	0.99
Black-and-white Warbler	159	25	24%	1.00
Black-billed Cuckoo	6	13	31%	0.98
Black Oystercatcher	22	21	0%	0.97
Bobolink	12	25	0%	1.00
Black-throated Blue Warbler	30	21	0%	0.90
Cape May Warbler	43	20	0%	0.98
Canada Warbler	3	8	0%	0.99
Chipping Sparrow	11	26	0%	0.92

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Chestnut-sided Warbler	45	24	0%	0.93
Common Yellowthroat	4	26	4%	1.00
Dark-eyed Junco	347	24	17%	0.99
Grasshopper Sparrow	11	27	0%	0.99
Greater Yellowlegs	123	28	4%	0.99
Grey-cheeked Thrush	5	9	0%	1.00
Hermit Thrush	294	21	24%	1.00
Hooded Warbler	4	22	0%	0.89
Indigo Bunting	1	7	0%	0.95
Killdeer	37	17	0%	1.00
Lapland Longspur	3	9	0%	1.00
Least Sandpiper	292	25	0%	1.00
Lincoln's Sparrow	10	18	0%	0.98
Nashville Warbler	7	14	0%	0.97
Northern Parula	61	37	0%	0.99
Northern Waterthrush	8	22	0%	0.99
Ovenbird	10	21	0%	0.95
Palm Warbler	3	19	0%	1.00
Red-breasted Nuthatch	382	26	4%	0.99
Savannah Sparrow	238	23	0%	0.98
Scarlet Tanager	142	25	0%	0.99
Semipalmated Plover	85	38	5%	0.95
Short-billed Dowitcher	187	31	0%	0.99
Solitary Sandpiper	104	22	0%	0.95
Spotted Sandpiper	245	26	0%	0.99
Sprague's Pipit	1	2	0%	0.98
Swainson's Thrush	32	38	0%	0.85
Upland Sandpiper	72	19	0%	0.99
Veery	1	3	0%	0.95
Vesper Sparrow	4	28	0%	0.99
White-crowned Sparrow	1	2	0%	1.00
White-throated Sparrow	9612	22	27%	0.99
Wilson's Warbler	4	35	0%	0.99
Yellow-billed Cuckoo	565	27	0%	0.99
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	23	0	N/A	N/A
BZWA	263	0	N/A	N/A
CUPS	92	0	N/A	N/A

Nighthawk Group Name[2]	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
DBUP	489	0	N/A	N/A
DESP	942	0	N/A	N/A
DEWA	68	0	N/A	N/A
HSSP	4	0	N/A	N/A
SBUF	206	0	N/A	N/A
SFHS	6428	0	N/A	N/A
SWLI	579	0	N/A	N/A
TANA	81	0	N/A	N/A
THSH	57	0	N/A	N/A
ZEEP	4126	0	N/A	N/A
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	162	0	N/A	N/A
Bombycillidae	553	0	N/A	N/A
Calcariidae	129	0	N/A	N/A
Cardinalidae	21	0	N/A	N/A
Charadriidae	719	0	N/A	N/A
Cuculidae	252	0	N/A	N/A
Haematopodidae	285	0	N/A	N/A
Icteridae	4	0	N/A	N/A
Laridae	5	0	N/A	N/A
Motacillidae	25	0	N/A	N/A
Parulidae	7066	0	N/A	N/A
Passerellidae	8926	0	N/A	N/A
Scolopacidae	2479	0	N/A	N/A
Sittidae	116	0	N/A	N/A
Turdidae	170	0	N/A	N/A
Ardeidae	162	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	3229	0	N/A	N/A
Cuculiformes	89	0	N/A	N/A
Passeriformes	20050	0	N/A	N/A
Pelecaniformes	4	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.3 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

[2] Groupings of birds with similar NFCs.

Confirmed positive detections were identified within both June (42%) and July (58%), which is assumed to be migratory patterns of birds outside of the peak migration period (Figure 4.8). It is noted that positive detections were lower during this period, suggesting that NFC detections were lower during breeding period.

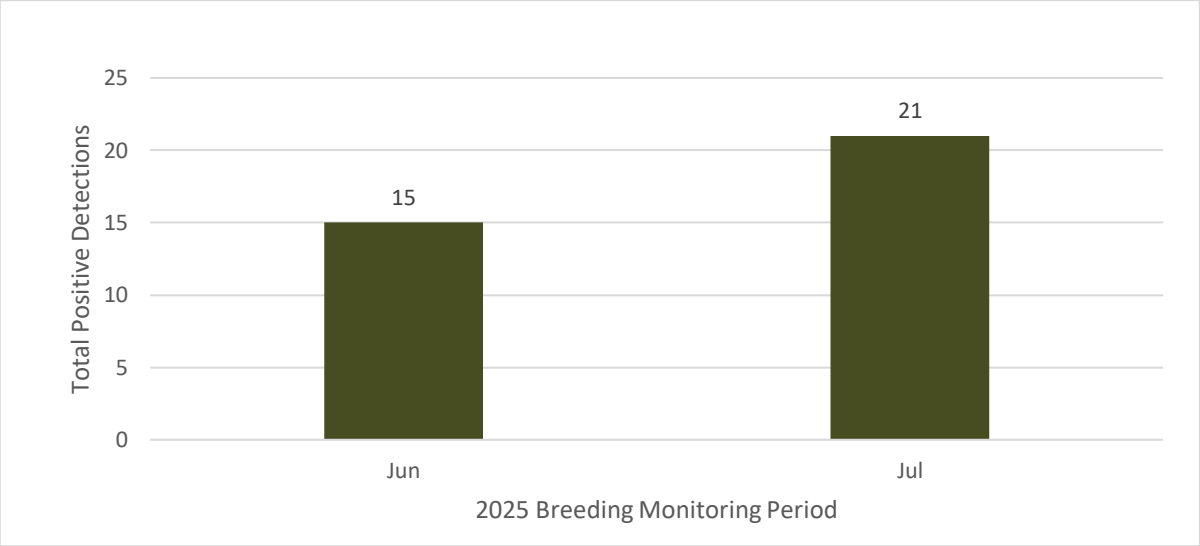

Figure 4.8: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Breeding Acoustic Monitoring Period.

The highest number of detections occurred from the 5:00 to 7:00 timeframes and from the 19:00 to 20:00 timeframes (Figure 4.9). Notably, positive NFC detections mostly occurred during periods close to dawn and dusk, with an exception in the morning when no positive detections occurred between 4:00 to 5:00 AM. Further, the evening period only saw one notable timeframe before detections drastically decrease.

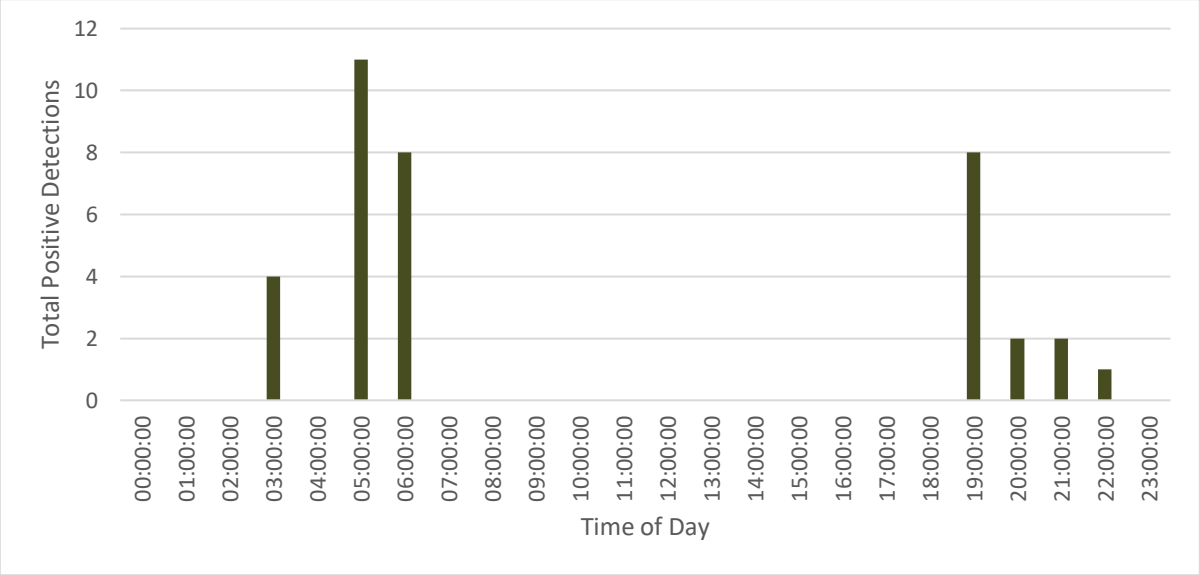

Figure 4.9: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Summer Acoustic Monitoring Period.

During the 2025 breeding monitoring period, 11 unique species were correctly identified by the model (Table 4.5). Of those, the most commonly detected species were black-and-white warbler (six) and white-throated sparrow (six). Canada warbler was the only SAR detected by Nighthawk, with two occurrences in August. Notably, there was increased presence of shorebirds from late July to August, suggesting the beginning of shorebird migration occurring in the province during this period.

Table 4.5: Summary of Species Correctly Identified by Nighthawk During the 2025 Breeding Monitoring Period.

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NL S-Rank
American Redstart	*Setophaga ruticilla*	---	---	---	S5B
American Robin	*Turdus migratorius*	---	---	---	S5B
Black-and-white Warbler	*Mniotilta varia*	---	---	---	S5B
Black-billed Cuckoo	*Coccyzus erythropthalmus*	---	---	---	SNA
Common Yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed Junco	*Junco hyemalis*	---	---	---	S5B
Greater Yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Hermit Thrush	*Catharus guttatus*	---	---	---	S5B
Red-breasted Nuthatch	*Sitta canadensis*	---	---	---	S5
Semipalmated Plover	*Calidris pusilla*	---	---	---	S3M
Short-billed Dowitcher	*Limnodromus griseus*	---	---	---	S3M
White-throated Sparrow	*Zonotrichia albicollis*	---	---	---	S5B

Source: (ACCDC, 2025)

Both June and July have the same number of unique species detected during the 2025 breeding monitoring period (Figure 4.10). It is noted that species richness in this period of June is similar to the June period during the spring monitoring period.

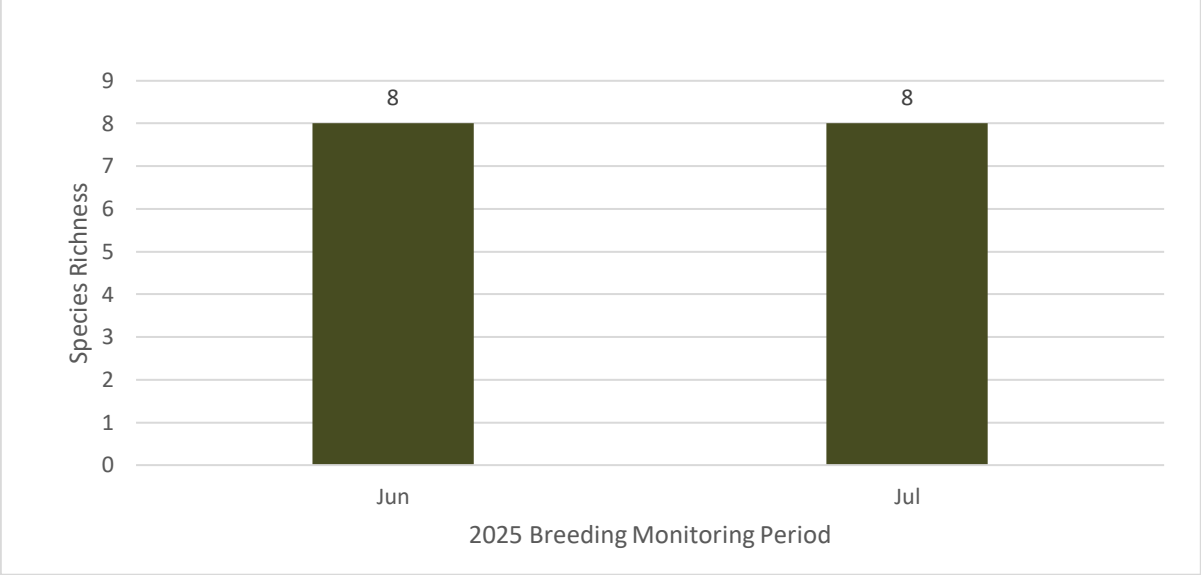

Figure 4.10: Nighthawk Species Richness during the 2025 LTWPA Breeding Monitoring Period.

4.2.3 2025 Fall Nighthawk Results

The Nighthawk model made a total of 101,645 detections during the 2025 fall monitoring period, with most occurring in August (68%) (Figure 4.11). It is assumed that late July detections are signs of post-breeding dispersal prior to the beginning of fall migration.

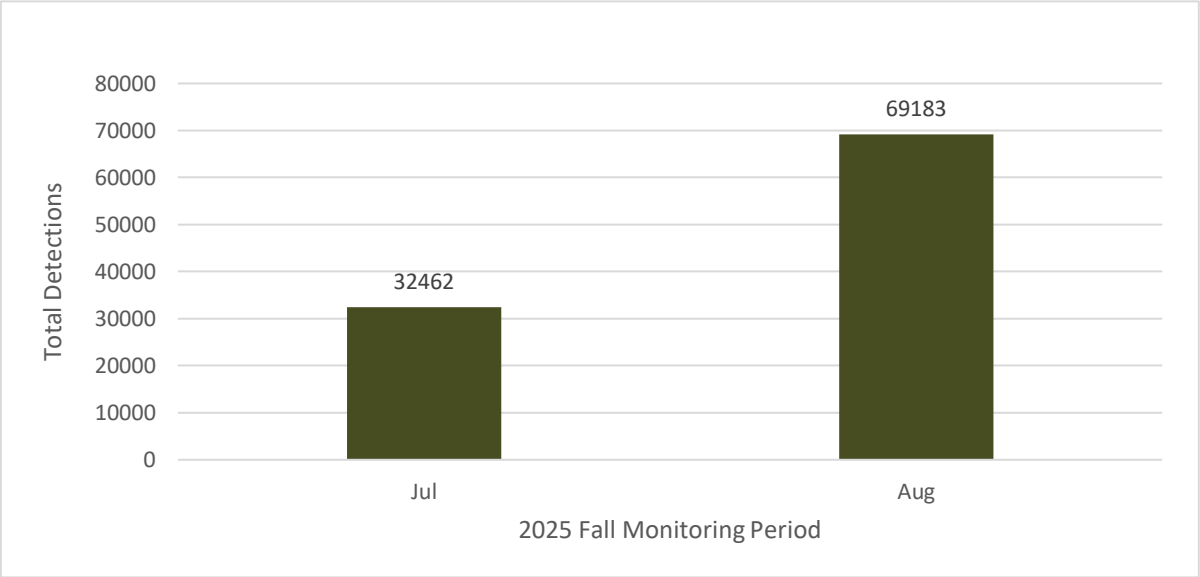

Figure 4.11: Total Number of Detections made by Nighthawk during the 2025 LTWPA Fall Monitoring Period.

Most detections occurred consistently throughout the evening during this period, with the highest number of detections occurring in the evening during the 18:00 (27%), 19:00 (31%), and 20:00 (26%) timeframes (Figure 4.12). It is noted that detections occurring in the morning were significantly smaller compared to detections occurring in the evening.

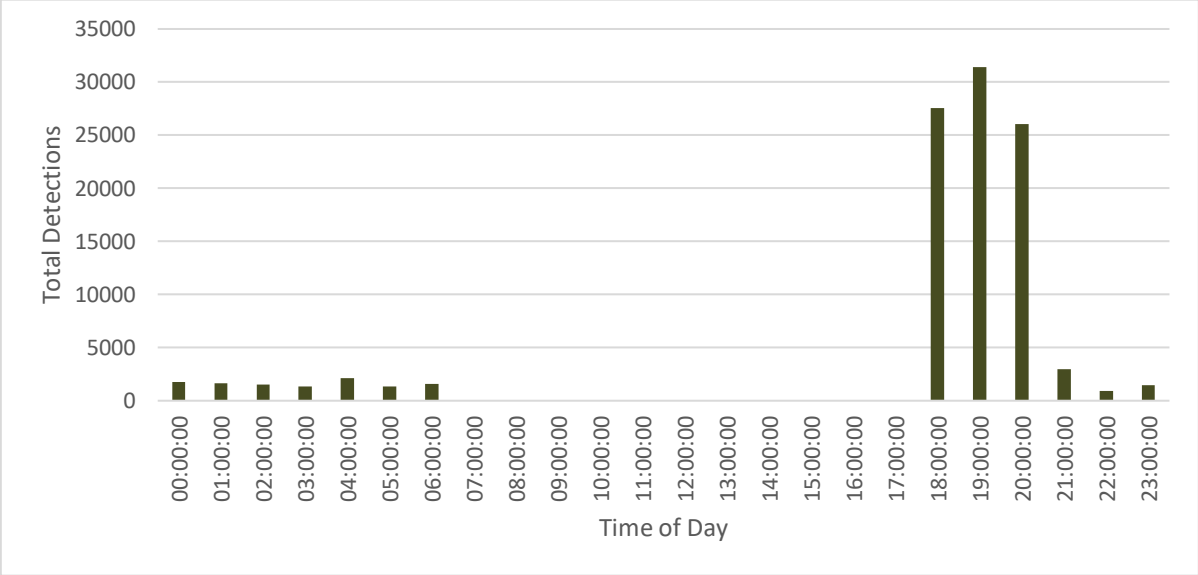

Figure 4.12: Timeframe of Nighthawk Detections during the 2025 LTWPA Fall Monitoring Period.

A subset of 515 detections was manually verified, and of those, 159 (31%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin, black-and-white warbler, black-billed cuckoo (*Coccyzus erythropthalmus*), Canada warbler, dark-eyed junco, hermit thrush, mourning warbler (*Geothlypis philadelphia*), and white-throated sparrow; all of which had a success rate of 90% or higher when a sample of detections were manually verified. This is expected as the model is less successful when there is higher presence of songs and calls, which are abundantly present during the breeding season. Nighthawk also made 21,106 detections at the group level, 33,237 detections at the family level, and 32,596 detections at the order level, which are included in Table 4.6. Each detection was identified to the highest taxonomic level possible.

Table 4.6: Summary of 2025 LTWPA Breeding Nighthawk Results[1]

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American Pipit	24	11	0%	0.93
American Redstart	2108	16	81%	0.89
American Robin	433	13	92%	1.00
American Tree Sparrow	466	15	0%	0.99
Black-and-white Warbler	252	12	100%	1.00
Black-billed Cuckoo	1	1	100%	1.00
Black Oystercatcher	3	3	0%	0.97

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Bobolink	1	1	0%	1.00
Black-throated Blue Warbler	37	13	0%	0.90
Cape May Warbler	66	13	0%	0.99
Canada Warbler	2	2	100%	0.98
Chipping Sparrow	15	14	0%	0.92
Chestnut-sided Warbler	190	19	11%	0.94
Common Yellowthroat	31	20	65%	1.00
Dark-eyed Junco	1228	15	100%	0.99
Grasshopper Sparrow	51	16	0%	0.99
Greater Yellowlegs	35	14	64%	0.99
Hermit Thrush	45	11	100%	1.00
Hooded Warbler	14	14	0%	0.93
Indigo Bunting	6	5	0%	0.96
Killdeer	13	9	0%	1.00
Lapland Longspur	3	3	0%	0.99
Least Sandpiper	74	12	33%	1.00
Lincoln's Sparrow	11	10	0%	0.98
MacGillivray's Warbler	2	2	0%	1.00
Mourning Warbler	10	10	90%	0.99
Northern Parula	69	17	0%	0.98
Northern Waterthrush	282	18	39%	0.99
Ovenbird	32	19	21%	0.96
Palm Warbler	13	13	62%	1.00
Red-breasted Nuthatch	36	9	22%	0.98
Savannah Sparrow	228	11	9%	0.98
Scarlet Tanager	43	8	0%	1.00
Semipalmated Plover	27	11	9%	0.94
Short-billed Dowitcher	118	18	6%	0.99
Solitary Sandpiper	133	15	7%	0.95
Spotted Sandpiper	56	10	60%	1.00
Swainson's Thrush	14	9	33%	0.86
Upland Sandpiper	13	11	0%	0.99
Veery	1	1	0%	0.97
Vesper Sparrow	23	22	0%	0.99
White-throated Sparrow	8188	9	100%	0.99
Wilson's Warbler	78	29	45%	0.98
Yellow-billed Cuckoo	231	11	0%	0.99

Nighthawk Group Name[2]	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
BUNT	126	0	N/A	N/A
BZWA	639	0	N/A	N/A
CUPS	323	0	N/A	N/A
DBUP	1192	0	N/A	N/A
DESP	519	0	N/A	N/A
DEWA	199	0	N/A	N/A
HSSP	43	0	N/A	N/A
MWAR	10	0	N/A	N/A
SBUF	645	0	N/A	N/A
SFHS	4475	0	N/A	N/A
SWLI	1764	0	N/A	N/A
TANA	21	0	N/A	N/A
THSH	31	0	N/A	N/A
ZEEP	11119	0	N/A	N/A
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	5	0	N/A	N/A
Bombycillidae	2330	0	N/A	N/A
Calcariidae	53	0	N/A	N/A
Cardinalidae	32	0	N/A	N/A
Charadriidae	257	0	N/A	N/A
Cuculidae	62	0	N/A	N/A
Haematopodidae	57	0	N/A	N/A
Icteridae	2	0	N/A	N/A
Laridae	7	0	N/A	N/A
Motacillidae	31	0	N/A	N/A
Parulidae	17826	0	N/A	N/A
Passerellidae	11131	0	N/A	N/A
Scolopacidae	1271	0	N/A	N/A
Sittidae	10	0	N/A	N/A
Turdidae	163	0	N/A	N/A
Ardeidae	5	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	960	0	N/A	N/A
Cuculiformes	46	0	N/A	N/A
Passeriformes	31590	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.5 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also

counted in the group, family, or order level categories).

[2] Groupings of birds with similar NFCs.

Confirmed positive detections were highest in August (85%), which suggest the beginning of fall migration within the region (Figure 4.13). It is noted that positive detections increase drastically from July and August.

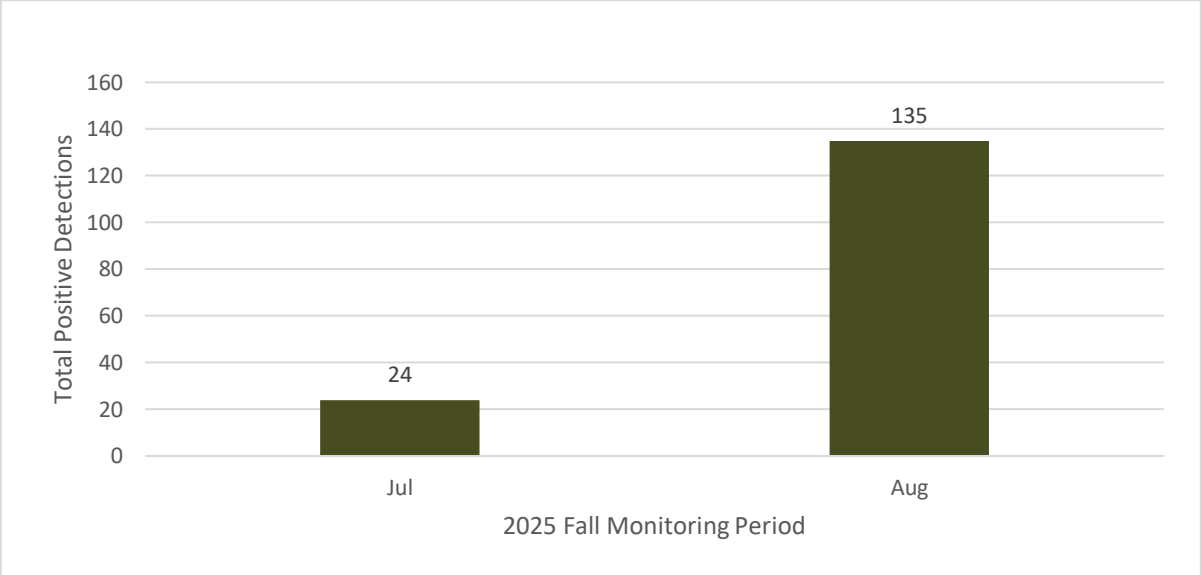

Figure 4.13: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Fall Acoustic Monitoring Period.

Positive detections occurred consistently throughout the 2025 fall monitoring period, with most detections occurring within the 4:00 and 19:00 timeframes (Figure 4.14). Notably, positive NFC detections occurred during timeframes close to dawn and dusk, with the exception of the 5:00 and 22:00 timeframes when detections were below five detections.

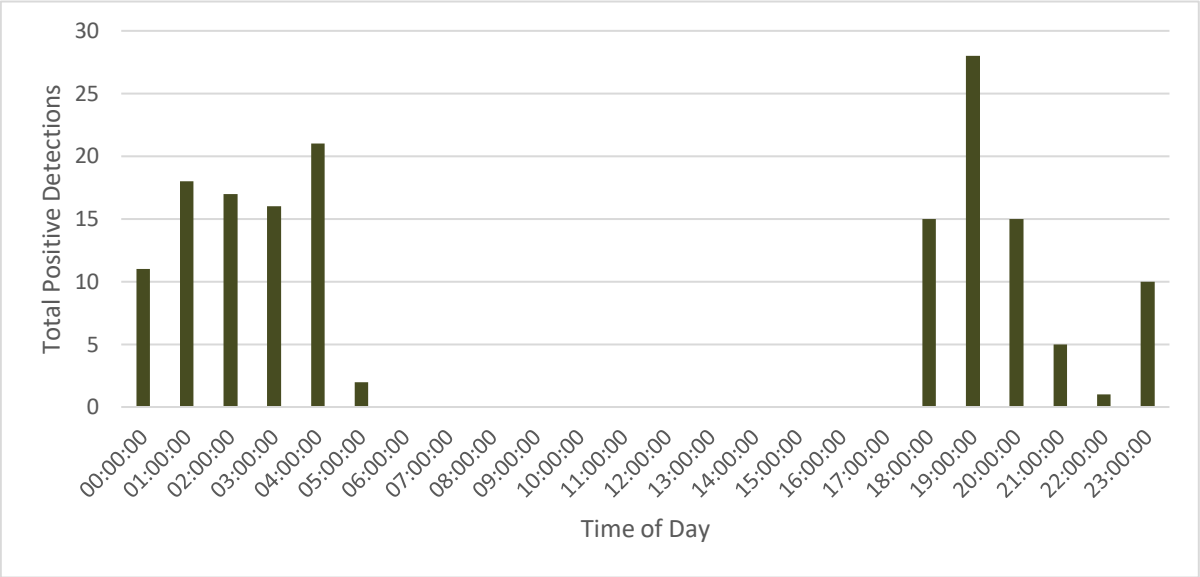

Figure 4.14: Total Number of positive detections made by Nighthawk during the 2025 LTWPA Fall Acoustic Monitoring Period.

During the 2025 fall monitoring period, 24 unique species were correctly identified by the model (Table 4.7). Of those, the most commonly detected species were dark-eyed junco (15), American redstart (*Setophaga ruticilla*) (13), and Wilson's warbler (*Cardellina pusilla*) (13). Canada warbler was the only SAR detected by Nighthawk, with two occurrences in August. Notably, there was increased presence of shorebirds from late July to August, suggesting the beginning of shorebird migration occurring in the province during this period.

Table 4.7: Summary of Species Correctly Identified by Nighthawk During the 2025 Spring Monitoring Period.

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NL S-Rank
American Redstart	*Setophaga ruticilla*	---	---	---	S5B
American Robin	*Turdus migratorius*	---	---	---	S5B
Black-and-white Warbler	*Mniotilta varia*	---	---	---	S5B
Black-billed Cuckoo	*Coccyzus erythropthalmus*	---	---	---	SNA
Canada Warbler	*Cardellina canadensis*	Special Concern	---	---	SNA
Chestnut-sided Warbler	*Setophaga pensylvanica*	---	---	---	SNA
Common Yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed Junco	*Junco hyemalis*	---	---	---	S5B
Greater Yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Hermit Thrush	*Catharus guttatus*	---	---	---	S5B

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NL S-Rank
Least Sandpiper	*Calidris minutilla*	---	---	---	S3B,S4M
Mourning Warbler	*Geothlypis philadelphia*	---	---	---	S4B,SUM
Northern Waterthrush	*Parkesia noveboracensis*	---	---	---	S5B
Ovenbird	*Seiurus aurocapilla*	---	---	---	S3B,SUM
Palm Warbler	*Setophaga palmarum*	---	---	---	S4B
Red-breasted Nuthatch	*Sitta canadensis*	---	---	---	S5
Savannah Sparrow	*Passerculus sandwichensis*	---	---	---	S5B
Semipalmated Plover	*Calidris pusilla*	---	---	---	S3M
Short-billed Dowitcher	*Limnodromus griseus*	---	---	---	S3M
Solitary Sandpiper	*Tringa solitaria*	---	---	---	S4M
Spotted Sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
Swainson's Thrush	*Catharus ustulatus*	---	---	---	S5B
White-throated Sparrow	*Zonotrichia albicollis*	---	---	---	S5B
Wilson's Warbler	*Cardellina pusilla*	---	---	---	S5B

Source: (ACCDC, 2025)

August has the highest number of unique species detected during the 2025 summer monitoring period (Figure 4.15). The gradual increase of species richness throughout this period suggests that peak migration primarily occurred in August, with breeding and post-breeding dispersal happening primarily in late June to July.

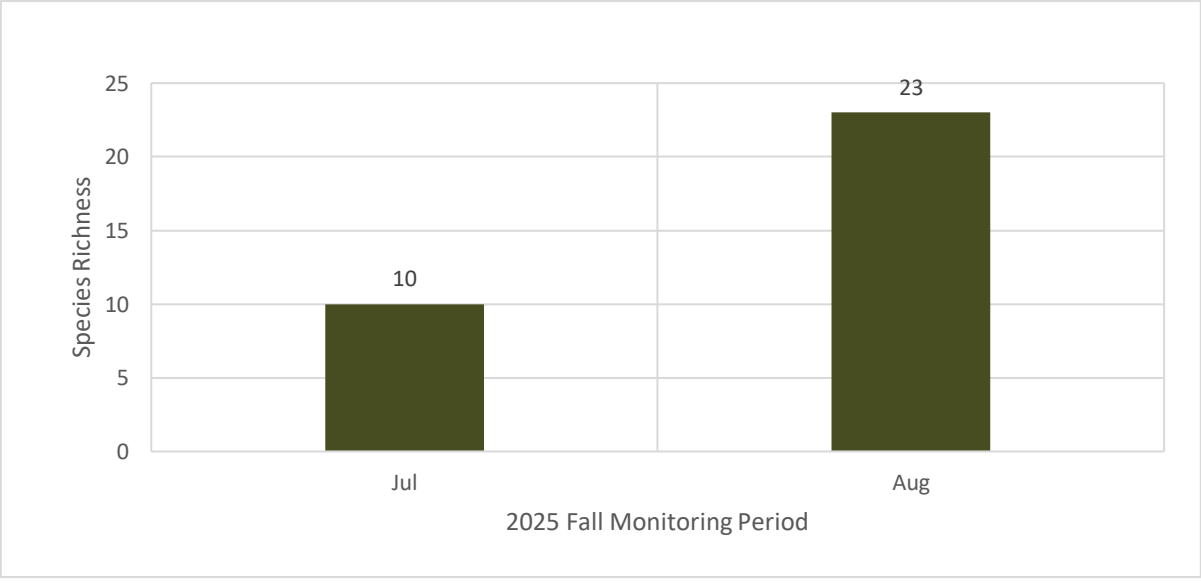

Figure 4.15: Nighthawk Species Richness during the 2025 LTWPA Fall Monitoring Period.

5.0 DISCUSSION

5.1 Radar

The ARS was deployed near Leading Tickle to capture the avian migration movements over the WPA. The results of the 2025 radar monitoring campaign indicated a few migration events in spring and one longer migration event in the summer and early fall. These peaks occurred in early-April (April 8 and 9), early to mid-June (June 1 to 20), and mid to late-August (August 11 to 27), 2025 suggesting that most migration activity within the WPA occurs at these times. It is possible that large migration events may have also occurred during these down periods that were not recorded by the radar. This is especially true for the later fall months when the ARS was not recording BTs. While additional monitoring of the later fall months is recommended, migrating birds tend to not make a notable number of acute adjustments over 200 m to the altitude at which they are flying (Bowlin et al., 2015; Norevik et al., 2021). Therefore, the risk of interaction with the turbine blades would likely not be remarkably higher during the inactive periods than what was observed when the ARS was active. It is also expected that migration events will become increasingly harder to predict as birds adapt to changing weather conditions and climate change (Burnside et al., 2021; La Sorte & Fink, 2017; Nilsson et al., 2013).

5.1.1 Cues for Avian Migration

Several cues for migratory movements were analyzed and discussed to determine possible correlations to migratory timing. Cues for migratory movements can include any of the following: wind direction, wind speed, temperature changes, lunar cycle, photoperiod, and potential variations in migration cohort size (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Miller-Rushing et al., 2008; Robart et al., 2019). Migratory bird activity observed for this Project is likely related to a number of these avian migration cues. The results of this report suggest that favorable winds were a predictive factor for when avian species migrate through the LTWPA. Most migration activity occurred when wind speeds were low. It is likely that birds also did not have much preference for wind direction as during each monitoring period most targets were detected flying when there was either no wind or the winds were coming from the south and southwest. While these winds would benefit birds during spring migration that would likely not be especially beneficial during the summer breeding period or the fall. This may imply that wind has less influence on migratory timing through the project as opposed to other migratory cues (Brisson-Curadeau et al., 2020; Nussbaumer et al., 2022).

Temperature appears to have had some influence on avian activity within the WPA. Seasonal temperature changes may have been a trigger for species to begin their migrations (Brisson-Curadeau et al., 2020). This report found that spring migration appears to have occurred after an increase in temperature in late-May. It was found that the most consistent periods of avian activity occurred during the warmest days during the summer breeding period and early fall months. The influence of lunar cycle was less prevalent throughout each monitoring period. Large numbers of BTs were detected during times when there was both little and extensive exposed moonlight indicating birds in the area may be more influenced by other environmental cues. These findings were partially consistent with the findings of other studies that examined the effects of weather and atmospheric conditions on bird migrations.

5.1.2 Migratory Bird Density

The ARS target count within height bins and target density for the 2025 monitoring period indicated moderate to high levels of interaction between migratory avifauna and the Project. This report found that any avifauna flying at heights between 35 m to 226 m would potentially be within the rotor swept zone and at risk of interacting with the turbine. 56% of observed targets were detected within the rotor swept area during the entirety of the 2025 monitoring period. The largest proportion of targets within the rotor swept area were detected during the fall where 80% of targets were at risk of interacting with potential turbines. The density of targets detected within the lower height bins during the spring and summer breeding period also indicates that there could be a potential high risk of interaction between targets and potential turbines.

5.2 Acoustics

Acoustic monitoring provides a simple and reliable passive data collection method that supplements field surveys. Data was collected in a standardized manner by using the same equipment, at the same time of day, and in the same location. This standardization generates a presence-absence indicator, which enables the tracking of environmental changes in a reliable way. Acoustic monitoring, along with field assessments, allows for a better overall understanding of avian abundance and species richness within the LTWPA.

5.2.1 Detection of Vocalizations

The results of the 2025 ARU monitoring period show high vocalizations during sunset and sunrise hours of most evenings, supporting theories that bird migration increased during nighttime around these hours (Evens et al., 2020). While raw detection results saw most detections occurring within the 5:00 and 19:00 timeframes during both seasons, positive detections were highest around 19:00 and 20:00 timeframes in the evening and 4:00 to 7:00 timeframes in the morning. This coincided with the approximate sunset and sunrise hours for Leading Tickles during this monitoring period, supporting research suggesting that birds began producing NFCs shortly before or after sunrise and sunset (Evens et al., 2020; Farnsworth et al., 2004). Efforts were made to reduce hours when songs and calls were most prevalent as much as possible from the dataset.

Throughout the monitoring period, NFC detections were highest in May and August, suggesting the two months when peak spring and fall migration occurred within the region. Environmental factors such as temperature, wind speed and direction, and photoperiod may have affected migration arrival (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Helm & Liedvogel, 2024; Robart et al., 2018, 2019). It is noted that while positive detections did occur during breeding season between June 8 and July 15, these detections were from birds observed during both the spring and fall migratory periods. This suggested that birds may continues to display NFCs outside of peak migratory period due to external influences, but timing of occurrences support assumptions that most individuals have mostly move towards displaying breeding behaviors and vocalizations.

While the full fall migration season was not captured in this dataset, literature reviews may help extrapolate the dataset for the remaining months. With warming temperatures annually due to climate change, it is expected that migration will become harder to predict (Burnside et al.,

2021). Expected trends seen in research demonstrates that fall migration movement are highest in August and September for most species before decreasing in October and November when conditions are no longer suitable for migration (Burnside et al., 2021; Huettmann & Diamond, 2011). However, migration movements may be delayed with warming temperatures, with migration movements may not even travel as far as previous patterns (Frei et al., 2024; Rushing et al., 2020). Nonetheless, previous trends identified by research will continue to help predict potential migration peaks in the season.

5.2.2 Species Richness

Species richness was relatively consistent throughout the monitoring period, with species composition highest in May and August due to proximity to most avian species' peak migration period. The decrease in detections and species richness in June and early July is expected given that this period is usually associated with peak breeding season where birds produce more songs and calls to which the Nighthawk model does not contain the capacity to identify. With species producing more NFCs during peak migratory seasons, the patterns seen in the LTWPA dataset support assumptions that the months when species richness was highest are correlated with potential migratory movements.

Species richness also helps showcase avian species present within the LTWPA, which may guide management plans for any SOCC or SAR detected during the monitoring period. In particular, Canada warbler was the only SAR detected in the dataset, notably in August. Observations of this species are notable as the species' migration range is rare in Newfoundland, particularly focused in the southwestern region of the island (Cornell Lab of Ornithology, 2026). However, warming temperatures as a result of climate change may have created suitable conditions for more northern migration movements, thus resulting in detections of the species within the monitoring period (Rushing et al., 2020). It is implied that presence of this species may increase in the region as climate change continues to increase temperatures. Shorebird species were primarily present in the fall monitoring period, which implies their presence in the region and their migration towards southern grounds. Species identified during the monitoring period are species expected to be identified in Newfoundland (Cornell Lab of Ornithology, 2026); occurrences may differ between species depending on available publicly available data.

5.3 General Avian Migration Trends

5.3.1 Radar and Acoustic

The ARS and ARU were deployed in tandem near the LTWPA to potentially correlate their assessment in identifying target populations and species composition of avian migrants. However, these correlations do not represent confirmed observations of species and migratory movements due in part to the detection range of the ARU being significantly lower than that of the ARS. No correlation statistics were completed for radar and acoustic data. However, some noticeable observations were made and are discussed in this section.

During the spring monitoring period radar results captured high peak spring migratory activity during early June, with the highest peaks occurring from June 1 to 6 during the 2025 monitoring

period. This coincides with the acoustic results seen during the spring 2024 monitoring period, where high NFC detections were detected in early June. There were also a high number of NFC detections during May that were not detected by the ARS. The ARS was offline from May 3 to 11, 2025. The high number of NFC detections and high species richness indicates that there may have been a large migratory movement in early May that occurred when the ARS was down. During the summer breeding period, the ARS detected the largest number of detections in mid-June, with lower numbers of detections also coming in mid to early July. The were also high numbers of NFCs detected during those months, though there were more NFCs in July than June. This may suggest that detection of avian activity during the summer is variable due to most species spending this time to recuperate from the breeding season and disperse to find new resource availability. During the fall monitoring period, the highest number of targets were detected in August which is also when a high number of NFC detections were made and the species richness of those detections was also high.

Reasons for an inexact temporal alignment between ARS and ARU observations are likely due to several factors, including detection range and weather conditions. An ARS system has a much greater detection range than an acoustic monitor, which can allow it to observe more migrants as they fly over the Project. Additionally, certain weather conditions are more favorable for acoustic sampling than radar. For example, low level clouds, or light rain conditions can force migratory birds closer to the ground. Migrants closer to the ground are more readily heard in acoustic sampling. Furthermore, migrants navigating through conditions of reduced visibility may create more calls to aid in their migration. These same weather conditions can prove difficult for the ARS, which is unreliable in detecting birds against significant cloud cover.

6.0 SUMMARY

6.1 Radar

The ARS unit was able to capture several peak BT detection events during the 2025 monitoring period:

- Peak spring migrations occurred from June 1 to 6. There may have also been a large migration event during the early days of spring that the ARS did not detect due to being offline at the time. It is assumed that spring migration occurred rapidly, due to either favorable weather conditions or the need for energy-saving and migration stopovers.
- Movement during the 2025 summer breeding period peaked in mid-June and was when BT detections were the most consistent.
- Temperature appeared to have some influence over avian activity as the largest and most consistent BT detections occurred during the period when daily average temperatures were the highest
- Peak fall migrations occurred mid to late-August. While additional monitoring of the later fall months is recommended, it is likely that the proportion of targets that were detected within the rotor swept area of potential turbines will be like those detected during the 2025 monitoring period.
- Wind speed appeared to have a greater influence on migration activity than wind

direction.

6.2 Acoustics

The 2025 monitoring period detected 26 unique species with one SAR (Canada warbler) identified. While data for the remaining fall monitoring period was unavailable, some patterns were observed during the monitoring period that was reported:

- Detections in the spring monitoring period were observed consistently from April to early June, with most detections occurring in May (Figure 5.1). It is assumed that peak spring migration began in late April and continued into May, potentially reducing in June as the season turns to peak breeding season.
- Detections during breeding monitoring period were observed frequently in late June and early July; however, positive detections were notably lower compared to the spring and fall monitoring periods (Figure 5.1).
- Detections during the fall monitoring period were highest in August, signifying the change between post-breeding dispersal in late July into the beginning of fall migratory period in August (Figure 5.1). It is assumed that fall migration will continue into September and October, before decreasing drastically in November as fall migration ends.
- Species richness was highest in May, late July and August. This aligns with peak migration periods as seen in positive detections throughout the monitoring period.

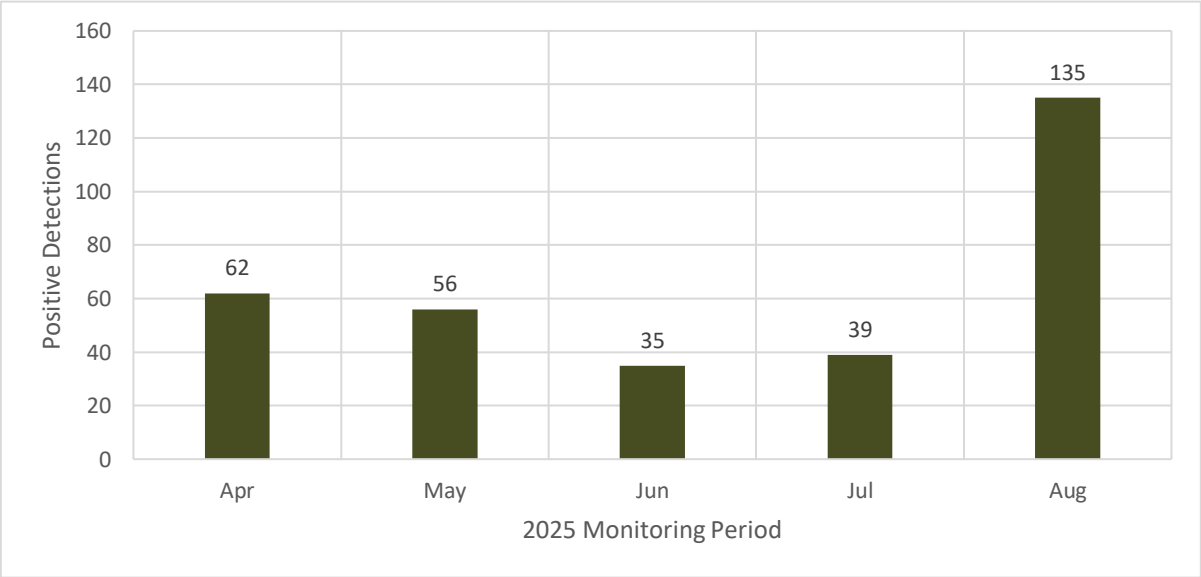

Figure 5.1.: Total positive detections across the 2025 LTWPA monitoring period.

6.3 Notable Migration Times

Notable migration times were determined from reviewing a combination of radar and acoustic data from the ARS and ARU monitoring periods. These notable time periods aimed to be broad to capture general trends, but peak dates are mentioned to highlight potential timing for monitoring efforts aimed at reducing interactions.

- Spring
  - Early April (April 8-9)
  - Potentially early to mid-May
  - Early June (June 1-6)
- Summer
  - Mid-June (June 11-16)
  - Mid to Late July (July 12-26)
- Fall
  - Mid-to-late August (August 11 to 25)

7.0 LIMITATIONS

7.1 Radar Data

Sensitive equipment in harsh, remote environments is prone to malfunction and difficult to monitor and maintain in remote areas. Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARS experienced interruptions during their monitoring periods. Inclement weather events near the Study Area, particularly in July and August, also affected the ARS' outputs. Thus, radar data was collected somewhat intermittently throughout the ARS monitoring period.

Data collected by the ARS helps provide useful data for a greater understanding of when large migration events are expected to pass over the area of a proposed wind project, as well as the magnitude of such movements. Data collected from the radar can also be used to determine the heights at which avian species tend to travel during migration events, and the potential risk of interactions with turbine blades; however, while most targets detected by the radars are assumed to be migratory birds, some targets may also be insects, bats, or ground interference. The radars can also confuse precipitation with biological targets; therefore, days with large amounts of rain or snowfall tend to be omitted from data analysis. While in general avian flight activity is reduced during periods or rainfall, avian species may still fly during these periods but will not be accurately recorded by the radar (Gordo, 2007).

While the Simrad Halo 20 radar is useful for detecting individual biological targets, it cannot infer the size of the target or any information on the potential species identification. Acoustic and field surveys are therefore necessary to supplement ARS to gain a greater understanding of species detection. Exclusion zones generated on RadR during radar processing are helpful to reduce as much ground interference and external factors as possible.

For the radars to determine if a detected target is a bird, that target must stay in the radar detection field for an extended period of approximately 4 seconds. Birds that only fly into the detection field momentarily will likely not be recorded by the radar. The duration that a target needs to be in the detection field to be considered a target can be reduced depending on the scope of the proposed project and the location of the radar; however, reducing the duration increases the likelihood of abiotic targets being detected and recorded.

7.2 Nighthawk

The Nighthawk model was designed for the detection and identification of avian nocturnal flight calls; however, not all birds migrate nocturnally. Finches, blackbirds, corvids, and swallows are examples of birds that primarily migrate during the day and may therefore go undetected by the model (Van Doren et al., 2023). It is assumed that these gaps will be filled using field surveys or other means of assessing the diurnal movement of birds through the Study Area.

It should be noted that while some species' nocturnal flight calls are distinctive, others can be very difficult to discern. In some instances, nocturnal flight calls cannot be identified with certainty by models or by the human ear. The Nighthawk model attempts to address this limitation by identifying on a broader level (e.g. to the group, family, or order level) when it cannot confidently identify a nocturnal flight call to species level.

Furthermore, Nighthawk often attempts (unsuccessfully) to classify daytime songs and calls as NFCs. This is a common source of error near sunset and sunrise, when many birds are still actively singing. To address this, the dataset was trimmed slightly to remove some of the hours when daytime bird songs and calls are most abundant (i.e., one hour before sunset and one hour after sunrise). This optimizes Nighthawk's accuracy by providing it with audio that primarily contains NFCs. Noise from non-target sources may also have an impact on the functionality of the model. Calls made by spring peeper frogs, for example, sound very similar to the nocturnal flight call of the Swainson's thrush and can mislead the model. Anthropogenic and environmental noise can also affect the model's accuracy.

The developers of Nighthawk preprogrammed the model with a set list of species that can be detected (82 species). Since this list cannot be manually modified, species cannot be added or removed. Common nighthawk (*Chordeiles minor*) is an example of a species that was missing from the preprogrammed Nighthawk list and could not be added manually. Like the other limitations listed above, it is assumed that this gap will be addressed using field surveys to capture a full representation of avian species richness within the Study Area.

8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of Exploits Valley Renewable Energy Corporation (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
- represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

Consultant will be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

Consultant agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but Consultant makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

The Report is to be treated as confidential and may not be used or relied upon by third parties, except:

- as agreed in writing by the Consultant and Client
- as required by law
- for use by governmental reviewing agencies

Consultant accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss, or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of Consultant to use and rely upon the Report and the Information. Any damages arising from improper use of the Report or parts thereof will be borne by the party making such use.

This Statement of Qualifications and Limitations forms part of the Report and any use of the Report is subject to the terms hereof.

Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Connor Nishikawa, Environmental Scientist and Polly Nguyen, Environmental Scientist, and was reviewed by Mark MacDonald, MSc., Project Manager and Senior Terrestrial Lead.

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APPENDIX A
DRAWINGS

EVREC Green Energy Hub

Project Locator

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area

Transportation

- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Waterbodies

Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-06	Project #: 24-10265
Scale: 1:200,000	Drawing #: 1
Drawn By: M. Partridge	
Checked By: N. Thomas	

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EVREC Green Energy Hub

Botwood Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Industrial Facility Infrastructure Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

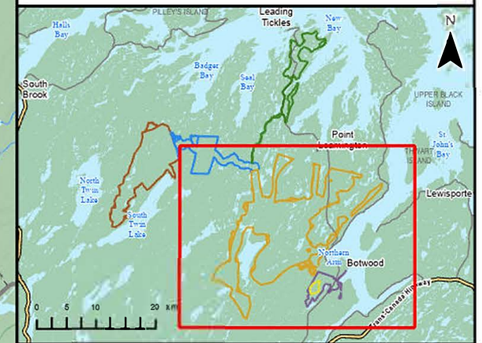
- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

Nanny Bag
Crow Valley
New Bay Radar
Rocks Pond
Point Leamington
Point of Bay
Botwood
Peterview
Alderburn
Lewis Lake
West Arm Brook
New Bay River
New Bay Pond
Northern Arm
Northern Arm Brook
Peters Pond
Peters River
Burnt Arm
Norris Arm
Rattling Brook
Exploits River
Frozen Ocean Lake
Highway 350
Trans-Canada-Highway

0 2 4 6 km



Coordinate System: NAD 1983 CSRS UTM Zone 21N
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Date: 2026-03-27	Project #: 24-10265
Scale: 1:117,000	Drawing #: 2A
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Checked By: P. Nguyen	

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EVREC Green Energy Hub

Twin Lakes Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

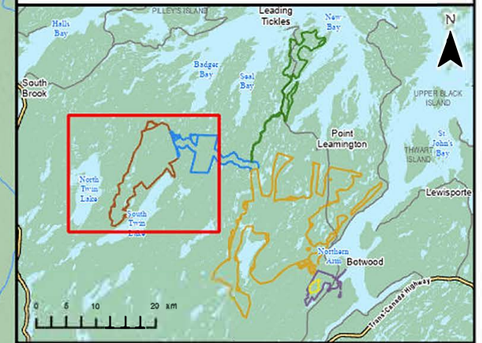
Marks Lake

Tommy's Arm River

North Twin Lake

South Twin Lake

0 1 2 3 km



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:75,000	Drawing #: 2B
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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EVREC Green Energy Hub

Leading Tickles Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

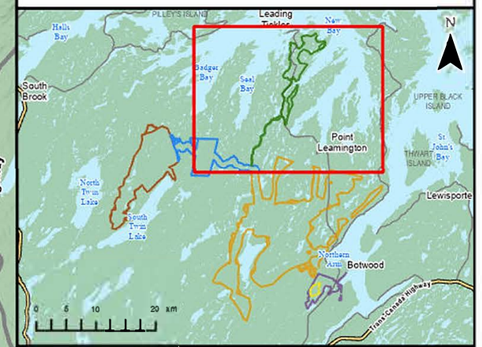
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Project Road
- Turbine
- Avian Radar Locations (2025)

Transportation

- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:94,000	Drawing #: 2C
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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0 1.5 3 4.5 km

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APPENDIX B
TABLES

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-01-01	2025	1	1		5.2		1.2		3.2		14.8		0						0.7		10					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-02	2025	1	2		6.1		-1		2.6		15.4		0						11.1		7		10		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-03	2025	1	3		3.5		-1.9		0.8		17.2		0						1.4		0		19		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-04	2025	1	4		1.5		-7.3		-2.9		20.9		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-05	2025	1	5		2.9		-1.6		0.7		17.3		0						23.2		2		6		64	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-06	2025	1	6		1.8		0.4		1.1		16.9		0						2.9		0		1		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-07	2025	1	7		1.7		-0.5		0.6		17.4		0						2.1		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-08	2025	1	8		1.3		-2.9		-0.8		18.8		0						0.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-09	2025	1	9		1.3		-3.2		-1		19		0						6		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-10	2025	1	10		1.2		-0.5		0.4		17.6		0						3.8		4		4		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-11	2025	1	11		1		-4		-1.5		19.5		0						0.5		2					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-12	2025	1	12		-2.8		-7.3		-5		23		0						0.1		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-13	2025	1	13		-1		-4.3		-2.7		20.7		0						0		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-14	2025	1	14		-2		-8.7		-5.3		23.3		0						0		4					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-15	2025	1	15		-1.1		-7.2		-4.2		22.2		0						2.6		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-16	2025	1	16		-0.3		-7.1		-3.7		21.7		0						1		10					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-17	2025	1	17		-4		-8.6		-6.3		24.3		0						0		8					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-18	2025	1	18		-1.2		-14.2		-7.7		25.7		0						0		7					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-19	2025	1	19		4.9		-1.3		1.8		16.2		0						8.8		7		17		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-20	2025	1	20		9.6		-3.9		2.9		15.1		0						2.7		0		18		54	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-21	2025	1	21		-3.7		-12.1		-7.9		25.9		0						0.4		0		25		55	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-22	2025	1	22		-8.4		-16		-12.2		30.2		0						0		1		26		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-23	2025	1	23		-7.2		-16.9		-12		30		0						0		1		28		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-24	2025	1	24		-2.3		-13		-7.7		25.7		0						0.5		1		26		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-25	2025	1	25		-4.3		-14		-9.2		27.2		0						0		1		24		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-26	2025	1	26		-2.5		-16.7		-9.6		27.6		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-01-27	2025	1	27		0		-16.7		-8.4		26.4		0						0		1		25		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-28	2025	1	28		3		-7.8		-2.4		20.4		0						1.6		1		18		51	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-29	2025	1	29		-5.9		-12.4		-9.2		27.2		0						5.1		1		30		49	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-30	2025	1	30		-7.5		-16		-11.7		29.7		0						5.3		20		27		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-01-31	2025	1	31		-5.4		-12.7		-9.1		27.1		0						0.1		14		24		47	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-01	2025	2	1		-6.5		-24		-15.3		33.3		0						0		9					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-02	2025	2	2		-10		-25.7		-17.9		35.9		0						0		8		25		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-03	2025	2	3		-5.6		-12.3		-9		27		0						0.6		7					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-04	2025	2	4		0.2		-7.8		-3.8		21.8		0						5.1		11		25		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-05	2025	2	5		-7.1		-19.1		-13.1		31.1		0						0		10		29		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-06	2025	2	6		-4.8		-20.1		-12.5		30.5		0						0.3		10		23		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-07	2025	2	7		4.7		-8.4		-1.8		19.8		0						2.1		11		19		47	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-08	2025	2	8		-2.1		-10.7		-6.4		24.4		0						0		7		26		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-09	2025	2	9		-6.6		-11.9		-9.3		27.3		0						0.2		6		24		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-10	2025	2	10		-8.7		-18.9		-13.8		31.8		0						0		7		28		47	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-11	2025	2	11		-7.5		-17		-12.3		30.3		0						0		6		26		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-12	2025	2	12		-7.4		-15.5		-11.4		29.4		0						0		6		29		52	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-13	2025	2	13		-5.4		-16.5		-11		29		0						2.5		6		28		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-14	2025	2	14		0.2		-9.5		-4.6		22.6		0						6.6		13		27		55	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-15	2025	2	15		-3.8		-9.9		-6.8		24.8		0						0		13		28		57	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-16	2025	2	16		2.4		-12		-4.8		22.8		0						0		12		26		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-17	2025	2	17		0.6		-10.5		-5		23		0						7.5		12					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-18	2025	2	18		1		-6.8		-2.9		20.9		0						10.6		22		34		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-19	2025	2	19		3.9		-4.6		-0.4		18.4		0						0.3		23		29		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-20	2025	2	20		1.3		-7.6		-3.1		21.1		0						0		17		25		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-21	2025	2	21		-3.1		-6.7		-4.9		22.9		0						0.3		17		35		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-22	2025	2	22		-3.5		-23.6		-13.6		31.6		0						0		17					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-23	2025	2	23		-1.3		-25.6		-13.5		31.5		0						0.1		16					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-24	2025	2	24		1.7		-19.5		-8.9		26.9		0						0.3		17					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-25	2025	2	25		2.5		-20		-8.7		26.7		0						0.1		17		20		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-26	2025	2	26		2.4		-4.5		-1.1		19.1		0						30.1		16		34		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-02-27	2025	2	27		-2.6		-7.8		-5.2		23.2		0						5		18					
-56.07	48.97	BADGER (AUT)	8400301	2025-02-28	2025	2	28		6.1		-3.3		1.4		16.6		0						24.5		19		24		45	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-01	2025	3	1		-1.9		-8.7		-5.3		23.3		0						0		11		25		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-02	2025	3	2		7.1		-6		0.5		17.5		0						2.9		11		17		43	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-03	2025	3	3		-5.8		-20.1		-13		31		0						0.1		8		26		43	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-04	2025	3	4		-4.8		-21.2		-13		31		0						0		8		26		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-05	2025	3	5		1.4		-9.1		-3.8		21.8		0						0.1		8		32		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-06	2025	3	6		5.7		-7.9		-1.1		19.1		0						3		8					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-07	2025	3	7		10.3		0.2		5.3		12.7		0						11		4		14		45	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-03-08	2025	3	8		0.2		-6		-2.9		20.9		0						2.3		3		23		57	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-09	2025	3	9		-0.6		-11.9		-6.2		24.2		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-10	2025	3	10			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-03-11	2025	3	11		-2.4		-13.3		-7.8		25.8		0						0		1		34		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-12	2025	3	12		3		-7		-2		20		0						1.8		1		18		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-13	2025	3	13		-1.4		-16.6		-9		27		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-14	2025	3	14		3.4		-18.7		-7.7		25.7		0						0.3		1		22		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-15	2025	3	15		-5.2		-10.2		-7.7		25.7		0						0.6		1		30		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-16	2025	3	16		0.2		-9.1		-4.4		22.4		0						5.5		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-17	2025	3	17		16.8		0.1		8.4		9.6		0						1.8		2		22		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-18	2025	3	18		13.8		-3.4		5.2		12.8		0						7.5		1		22		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-19	2025	3	19		-1.2		-4.4		-2.8		20.8		0						2.5		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-20	2025	3	20		6.6		-3.8		1.4		16.6		0						0		3					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-21	2025	3	21		12.7		1.6		7.1		10.9		0						3.2		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-22	2025	3	22		13.5		1		7.3		10.7		0						14.6		1		24		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-23	2025	3	23		9.4		-0.9		4.2		13.8		0						2.3		1		26		49	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-24	2025	3	24		-0.3		-7.3		-3.8		21.8		0						0.6		5		29		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-03-25	2025	3	25		5.6		-5.4		0.1		17.9		0						4		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-26	2025	3	26		6.5		-5.6		0.5		17.5		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-27	2025	3	27		0.6		-5.6		-2.5		20.5		0						14.3		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-28	2025	3	28		3.6		-3.1		0.3		17.7		0						5.8		10					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-29	2025	3	29			M		M		M		M		M						M	14			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-03-30	2025	3	30		3.7		-12.4		-4.4		22.4		0						1.1		9					
-56.07	48.97	BADGER (AUT)	8400301	2025-03-31	2025	3	31		0.8		-7.9		-3.6		21.6		0						10.9		7					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-01	2025	4	1		8.3		-1.9		3.2		14.8		0						7.1		11		26		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-02	2025	4	2		-0.3		-6.9		-3.6		21.6		0						0.5		6		27		62	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-03	2025	4	3		0.6		-9		-4.2		22.2		0						1.6		5		28		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-04	2025	4	4		1.3		-6.3		-2.5		20.5		0						2.6		12		8		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-05	2025	4	5		2		-12.1		-5.1		23.1		0						0		7					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-06	2025	4	6		2.1		-13.1		-5.5		23.5		0						1.6		5		16		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-07	2025	4	7		6.2		-3.6		1.3		16.7		0						0		5		28		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-08	2025	4	8			M		M		M		M		M						M	2			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-04-09	2025	4	9		3.5		-3.5		0		18		0						2.6		1		23		43	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-10	2025	4	10		4.8		-4.6		0.1		17.9		0						0		1		24		57	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-11	2025	4	11		10		-8.2		0.9		17.1		0						0		1		28		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-12	2025	4	12		10.8		-2.7		4.1		13.9		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-13	2025	4	13		14.3		-3		5.6		12.4		0						12.5		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-14	2025	4	14		2.2		0.3		1.2		16.8		0						29		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-15	2025	4	15		6.1		-2.4		1.9		16.1		0						0.3		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-16	2025	4	16		9.4		-2.7		3.3		14.7		0						0		1		18		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-17	2025	4	17		7.7		1.6		4.7		13.3		0						0		1		19		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-18	2025	4	18			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-04-19	2025	4	19		12		-1.9		5		13		0						5.1		0		24		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-20	2025	4	20			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-04-21	2025	4	21		3.4		-0.1		1.6		16.4		0						15.3		12		32		48	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-22	2025	4	22		6.8		-4.1		1.3		16.7		0						1.1		0		3		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-04-23	2025	4	23		10.4		-4.3		3.1		14.9		0						0.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-24	2025	4	24		7.6		-6.6		0.5		17.5		0						0.9							
-56.07	48.97	BADGER (AUT)	8400301	2025-04-25	2025	4	25		12.9		-7.9		2.5		15.5		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-26	2025	4	26		12.4		-1.1		5.6		12.4		0						0.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-27	2025	4	27		10		1.5		5.7		12.3		0						22.8		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-28	2025	4	28			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-04-29	2025	4	29		13.3		-6.9		3.2		14.8		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-04-30	2025	4	30		9.9		-3.5		3.2		14.8		0						1.3		0		17		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-01	2025	5	1			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-05-02	2025	5	2		13.2		1		7.1		10.9		0						0				30		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-03	2025	5	3		13		1.9		7.4		10.6		0						0				18		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-04	2025	5	4		16.3		2.5		9.4		8.6		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-05	2025	5	5		9		-3.6		2.7		15.3		0						0				28		55	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-06	2025	5	6		21.1		-2.5		9.3		8.7		0						0				24		47	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-07	2025	5	7		21.2		6.2		13.7		4.3		0						0				23		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-08	2025	5	8		20.3		0.3		10.3		7.7		0						2.5				3		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-09	2025	5	9		6.6		0.2		3.4		14.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-10	2025	5	10		19.8		4.9		12.3		5.7		0						4.6							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-11	2025	5	11		10.8		0.2		5.5		12.5		0						3.1				24		50	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-12	2025	5	12		4.9		-3.4		0.8		17.2		0						0.5				32		54	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-05-13	2025	5	13		5.6		-6.9		-0.6		18.6		0						0				26		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-14	2025	5	14		17.1		-6.8		5.1		12.9		0						1.5				31		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-15	2025	5	15		17.9		1.2		9.5		8.5		0						1.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-16	2025	5	16		13.8		-5.3		4.2		13.8		0						0.3				6		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-17	2025	5	17		18.1		-6		6.1		11.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-18	2025	5	18			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-05-19	2025	5	19		15.2		2.6		8.9		9.1		0						0				3		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-20	2025	5	20		6		2.5		4.3		13.7		0						0.8				4		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-21	2025	5	21		4.8		1.2		3		15		0						0.9				36		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-22	2025	5	22		3.2		0.8		2		16		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-23	2025	5	23		16		0.9		8.5		9.5		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-24	2025	5	24			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-05-25	2025	5	25		5.5		0.6		3.1		14.9		0						5.7				3		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-26	2025	5	26		15.1		-2.7		6.2		11.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-05-27	2025	5	27		21		-3.5		8.7		9.3		0						0				4		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-28	2025	5	28		21.8		9.8		15.8		2.2		0						0				30		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-29	2025	5	29		26		6.9		16.4		1.6		0						0				28		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-30	2025	5	30		24.4		5.1		14.8		3.2		0						0				18		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-05-31	2025	5	31			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-01	2025	6	1		21.3		7.3		14.3		3.7		0						5.6				16		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-02	2025	6	2		20.6		1.7		11.2		6.8		0						0				20		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-03	2025	6	3		21.6		1.7		11.7		6.3		0						0				23		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-04	2025	6	4		26.4		0.3		13.3		4.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-05	2025	6	5		28.8		7.1		18		0		0						0				25		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-06	2025	6	6		25.6		13.3		19.5		0		1.5						2.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-07	2025	6	7		20.1		10.8		15.5		2.5		0						1.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-08	2025	6	8		14.5		3.1		8.8		9.2		0						38.5				35		48	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-09	2025	6	9		21.8		2.6		12.2		5.8		0						0				26		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-10	2025	6	10		24.6		3.1		13.8		4.2		0						0				17		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-11	2025	6	11			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-12	2025	6	12		24.8		8.7		16.8		1.2		0						2.4				25		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-13	2025	6	13			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-14	2025	6	14		19		0.7		9.8		8.2		0						0				28		38	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-15	2025	6	15			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-16	2025	6	16		24.2		-1.4		11.4		6.6		0						0				20		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-17	2025	6	17		24.2		4.8		14.5		3.5		0						1.8				26		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-18	2025	6	18			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-19	2025	6	19		27.1		12.2		19.6		0		1.6						2.8							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-20	2025	6	20		26.6		15.6		21.1		0		3.1						2.7				19		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-21	2025	6	21			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-22	2025	6	22		22.2		7.2		14.7		3.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-23	2025	6	23			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-06-24	2025	6	24		20.3		7.5		13.9		4.1		0						0				20		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-25	2025	6	25		28.2		7.4		17.8		0.2		0						0				26		48	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-26	2025	6	26		17.9		6.2		12		6		0						0.7				27		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-27	2025	6	27		14.9		-0.3		7.3		10.7		0						0				32		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-28	2025	6	28		24.2		-1.3		11.5		6.5		0						0				26		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-06-29	2025	6	29		26.2		6.3		16.2		1.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-06-30	2025	6	30		17.5		6.3		11.9		6.1		0						4.2							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-01	2025	7	1		24.3		13.5		18.9		0		0.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-02	2025	7	2		27.7		16.8		22.3		0		4.3						0.1				27		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-03	2025	7	3		30.9		15.2		23.1		0		5.1						0.8				19		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-04	2025	7	4		20.6		12		16.3		1.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-05	2025	7	5		24.2		12.1		18.1		0		0.1						12.3							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-06	2025	7	6		27.1		12.2		19.7		0		1.7						0.1				22		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-07	2025	7	7		26.4		14		20.2		0		2.2						0.3				28		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-08	2025	7	8		25.6		8.3		16.9		1.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-09	2025	7	9		27.7		5.1		16.4		1.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-10	2025	7	10		28.5		3.2		15.9		2.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-11	2025	7	11		29.2		6.5		17.9		0.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-12	2025	7	12		29.4		9.1		19.2		0		1.2						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-13	2025	7	13		32.3		7.2		19.8		0		1.8						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-14	2025	7	14			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-07-15	2025	7	15		29.7		17		23.3		0		5.3						0				23		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-16	2025	7	16			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-07-17	2025	7	17			M		M		M		M		M						M				M		M

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-07-18	2025	7	18		28.3		11.6		20		0		2						4.5				19		52	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-19	2025	7	19		27		9.9		18.4		0		0.4						0				26		43	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-20	2025	7	20		27		13.6		20.3		0		2.3						2.4				18		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-21	2025	7	21		18.7		9.2		13.9		4.1		0						7.8				34		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-22	2025	7	22		16.4		7.4		11.9		6.1		0						3.5				33		43	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-23	2025	7	23		22.4		5.4		13.9		4.1		0						0				29		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-24	2025	7	24		23.5		7.8		15.6		2.4		0						1.5				23		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-25	2025	7	25		21.8		14.8		18.3		0		0.3						13.5							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-26	2025	7	26		22.1		7.8		15		3		0						18.7				34		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-27	2025	7	27		26.3		5.4		15.8		2.2		0						0				23		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-28	2025	7	28		20.2		11.9		16		2		0						0.4				19		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-29	2025	7	29		26.5		12		19.2		0		1.2						0				21		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-07-30	2025	7	30		26.8		13.8		20.3		0		2.3						3.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-07-31	2025	7	31		24.5		8.1		16.3		1.7		0						2.8				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-01	2025	8	1		23.6		3.6		13.6		4.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-02	2025	8	2		24.2		1.6		12.9		5.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-03	2025	8	3		25.8		1.5		13.7		4.3		0						0				21		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-04	2025	8	4		22.3		10.2		16.3		1.7		0						0				24		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-05	2025	8	5		24.3		4.2		14.3		3.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-06	2025	8	6		26.5		2.4		14.4		3.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-07	2025	8	7		25.9		4.1		15		3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-08	2025	8	8		31.2		6.7		18.9		0		0.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-09	2025	8	9		31		7.3		19.2		0		1.2						0					M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-10	2025	8	10		32.7		9.4		21		0		3						0				23		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-11	2025	8	11		33		16.7		24.8		0		6.8						0				23		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-12	2025	8	12		36.7		17.3		27		0		9						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-13	2025	8	13		32.4		18.3		25.3		0		7.3						0				18		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-14	2025	8	14		28.6		18.5		23.6		0		5.6						0.4				17		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-15	2025	8	15		26.2		5.3		15.8		2.2		0						0				2		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-16	2025	8	16		20.4		0.7		10.5		7.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-17	2025	8	17		27.7		0.7		14.2		3.8		0						0					M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-18	2025	8	18			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-19	2025	8	19		11		6.1		8.5		9.5		0						2.9				35		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-20	2025	8	20			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-21	2025	8	21		21.1		3.3		12.2		5.8		0						0				30		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-22	2025	8	22		15.3		7.1		11.2		6.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-23	2025	8	23		20.2		5.4		12.8		5.2		0						0.1					M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-24	2025	8	24		26.1		8.8		17.5		0.5		0						1.7				25		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-25	2025	8	25		26.7		16.1		21.4		0		3.4						1.5				24		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-26	2025	8	26		24.3		11.7		18		0		0						14				25		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-27	2025	8	27		25.1		10.1		17.6		0.4		0						0				21		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-08-28	2025	8	28		20.7		8		14.4		3.6		0						1.9							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-29	2025	8	29		23.7		10.3		17		1		0						0					M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-08-30	2025	8	30		14		5.7		9.9		8.1		0						27.5							
-56.07	48.97	BADGER (AUT)	8400301	2025-08-31	2025	8	31		21.7		5.1		13.4		4.6		0						14.9					M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-09-01	2025	9	1		18.5		6.3		12.4		5.6		0						0				3		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-02	2025	9	2		26.5		5.5		16		2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-03	2025	9	3		25.7		5.8		15.7		2.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-04	2025	9	4		26.5		8		17.2		0.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-05	2025	9	5		25.2		11.2		18.2		0		0.2						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-06	2025	9	6		24		10.7		17.3		0.7		0						0				20		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-07	2025	9	7		27.1		18.7		22.9		0		4.9						2.7				24		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-08	2025	9	8			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-09-09	2025	9	9		19.6		1.5		10.5		7.5		0						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-10	2025	9	10		20.2		-1.2		9.5		8.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-11	2025	9	11		18.4		2.8		10.6		7.4		0						17.7							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-12	2025	9	12		11.9		3.7		7.8		10.2		0						1.9				2		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-13	2025	9	13		17.3		-0.6		8.3		9.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-14	2025	9	14		18		5.8		11.9		6.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-15	2025	9	15		14		7.3		10.6		7.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-16	2025	9	16		17		3.2		10.1		7.9		0						0				29		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-17	2025	9	17		22.4		5.3		13.8		4.2		0						0				26		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-18	2025	9	18		25.9		5.2		15.5		2.5		0						0.4				23		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-19	2025	9	19		24		0.8		12.4		5.6		0						3.9				20		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-20	2025	9	20		13.6		2.4		8		10		0						2.6				29		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-21	2025	9	21		14.9		0.6		7.7		10.3		0						0				26		46	

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Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-09-22	2025	9	22		20.2		4.8		12.5		5.5		0						0				28		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-23	2025	9	23		18.2		3.9		11		7		0						2.3							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-24	2025	9	24		15.2		1.4		8.3		9.7		0						0.3							
-56.07	48.97	BADGER (AUT)	8400301	2025-09-25	2025	9	25		20.9		-0.1		10.4		7.6		0						0				28		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-26	2025	9	26		17.9		1.3		9.6		8.4		0						18.6				17		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-27	2025	9	27		16		3.4		9.7		8.3		0						0				26		47	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-28	2025	9	28		18.1		2.5		10.3		7.7		0						1.9				27		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-29	2025	9	29		15.3		7.2		11.3		6.7		0						0.3				28		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-09-30	2025	9	30		12.7		-2.7		5		13		0						0.3				31		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-01	2025	10	1		10.3		-3.7		3.3		14.7		0						0.2							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-02	2025	10	2		13.1		0.1		6.6		11.4		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-03	2025	10	3		19.6		1.8		10.7		7.3		0						0				25		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-04	2025	10	4		11.9		-2		5		13		0						0				35		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-05	2025	10	5		12.7		-3.4		4.6		13.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-06	2025	10	6		13.9		-1.9		6		12		0						1.2				22		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-07	2025	10	7		26.4		7.8		17.1		0.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-08	2025	10	8		18.4		5.6		12		6		0						0.8				19		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-09	2025	10	9		16.8		2.2		9.5		8.5		0						21.7				33		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-10	2025	10	10		9.4		-0.5		4.5		13.5		0						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-11	2025	10	11		14.1		3.2		8.6		9.4		0						1.2				28		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-12	2025	10	12		9.6		-4.1		2.7		15.3		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-13	2025	10	13		15.7		-5.4		5.2		12.8		0						0				27		37	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-14	2025	10	14		16		-2.4		6.8		11.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-15	2025	10	15		9.5		1.1		5.3		12.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-16	2025	10	16		10		4.8		7.4		10.6		0						1.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-17	2025	10	17		10		5.8		7.9		10.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-18	2025	10	18		11.2		5.8		8.5		9.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-19	2025	10	19		9.4		1.4		5.4		12.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-20	2025	10	20		14.1		-1.4		6.4		11.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-21	2025	10	21		13.3		-1.4		6		12		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-22	2025	10	22		14.9		7.2		11		7		0						1.4							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-23	2025	10	23		16.6		6		11.3		6.7		0						0				18		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-10-24	2025	10	24		12.7		3.4		8.1		9.9		0						0.8							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-25	2025	10	25		9.9		0.6		5.3		12.7		0						7.9							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-26	2025	10	26		10.8		-0.3		5.2		12.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-27	2025	10	27		8.3		0.6		4.4		13.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-28	2025	10	28		8.1		-4.7		1.7		16.3		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-29	2025	10	29			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2025-10-30	2025	10	30		13.4		-2.7		5.4		12.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-10-31	2025	10	31		9.2		-2.3		3.5		14.5		0						8.1							
-56.07	48.97	BADGER (AUT)	8400301	2025-11-01	2025	11	1		11.5		6.1		8.8		9.2		0						17.9		0		21		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-02	2025	11	2		6.1		-0.1		3		15		0						8.4		0		2		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-03	2025	11	3		4.8		-4.5		0.1		17.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2025-11-04	2025	11	4		4		-1.6		1.2		16.8		0						33.7		0		32		53	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-05	2025	11	5		4		1.2		2.6		15.4		0						0.4		4		28		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-06	2025	11	6		5.4		-0.4		2.5		15.5		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-07	2025	11	7		5.7		1.3		3.5		14.5		0						0		0		26		53	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-08	2025	11	8		6.9		-0.2		3.4		14.6		0						0.9		0		26		34	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-09	2025	11	9		8.1		-2.9		2.6		15.4		0						1.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-10	2025	11	10		3.6		-4.7		-0.6		18.6		0						0.1		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-11	2025	11	11		16.4		2.7		9.6		8.4		0						38.9		0		16		53	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-12	2025	11	12		15.2		-2.7		6.3		11.7		0						0.2		0		17		66	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-13	2025	11	13		6.4		-4.8		0.8		17.2		0						11.2				5		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-14	2025	11	14		6.1		3.2		4.7		13.3		0						12.1		0		3		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-15	2025	11	15		6.1		-3		1.5		16.5		0						2.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-16	2025	11	16		5.3		-3.8		0.8		17.2		0						2.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-17	2025	11	17		9		1.1		5		13		0						22.1		0		20		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-18	2025	11	18		7.4		0.8		4.1		13.9		0						0.3		0		21		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-19	2025	11	19		6.2		0		3.1		14.9		0						0.3		0		23		40	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-20	2025	11	20		6.2		-6.2		0		18		0						0		0		22		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-21	2025	11	21		5.8		-8.1		-1.1		19.1		0						0.9							
-56.07	48.97	BADGER (AUT)	8400301	2025-11-22	2025	11	22		6.7		-0.8		2.9		15.1		0						5.1		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-23	2025	11	23		2.9		-1.3		0.8		17.2		0						11.8		8		25		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-24	2025	11	24		3.3		-1.7		0.8		17.2		0						0		4					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-25	2025	11	25		2		-2.7		-0.4		18.4		0						0.7		4		27		32	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-26	2025	11	26		2.5		-3.5		-0.5		18.5		0						0.1		4					

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Direction of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2025-11-27	2025	11	27		1.8		-0.6		0.6		17.4		0						3.7		4					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-28	2025	11	28		2.7		-0.9		0.9		17.1		0						1.2		2					
-56.07	48.97	BADGER (AUT)	8400301	2025-11-29	2025	11	29		2.8		-1.8		0.5		17.5		0						0.5		2		23		35	
-56.07	48.97	BADGER (AUT)	8400301	2025-11-30	2025	11	30		-0.6		-8.3		-4.4		22.4		0						0		1		29		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-01	2025	12	1		6.4		-4.9		0.7		17.3		0						4.5		2		25		39	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-02	2025	12	2		-2.4		-9.2		-5.8		23.8		0						0		0		28		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-03	2025	12	3		-1.6		-4.2		-2.9		20.9		0						25.2		1		3		45	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-04	2025	12	4		-0.5		-10.8		-5.6		23.6		0						0.6		18					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-05	2025	12	5		0.2		-8.1		-4		22		0						5		20		27		63	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-06	2025	12	6		-3.5		-19.9		-11.7		29.7		0						0		8		27		50	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-07	2025	12	7		-1.2		-22.2		-11.7		29.7		0						0		8					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-08	2025	12	8		-3.3		-11.1		-7.2		25.2		0						4		8		33		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-09	2025	12	9		-5.3		-19.2		-12.2		30.2		0						0.3		11		27		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-10	2025	12	10		-1.9		-12.5		-7.2		25.2		0						0.3		11		18		31	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-11	2025	12	11		4.9		-3.1		0.9		17.1		0						3.9		11					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-12	2025	12	12		1.9		-7.7		-2.9		20.9		0						0		8		23		42	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-13	2025	12	13		2		-3.8		-0.9		18.9		0						0		8		27		49	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-14	2025	12	14		-1.2		-7.4		-4.3		22.3		0						2.6		8					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-15	2025	12	15		-0.8		-3.5		-2.2		20.2		0						20		13		30		62	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-16	2025	12	16		-2.2		-9.2		-5.7		23.7		0						0.2		15		28		41	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-17	2025	12	17		3.6		-11		-3.7		21.7		0						0.2		15		19		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-18	2025	12	18		3.1		-3.9		-0.4		18.4		0						0		12		29		49	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-19	2025	12	19		10.1		-8.3		0.9		17.1		0						0		12		20		57	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-20	2025	12	20		11.5		-4.6		3.5		14.5		0						14.5		0		17		69	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-21	2025	12	21		3.4		-6.3		-1.4		19.4		0						2.5		0		26		36	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-22	2025	12	22		1		-7.4		-3.2		21.2		0						0		0		31		33	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-23	2025	12	23		-6		-15		-10.5		28.5		0						0.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-24	2025	12	24		-4.8		-15.1		-9.9		27.9		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-25	2025	12	25		-1.8		-5.4		-3.6		21.6		0						18.9		1		32		55	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-26	2025	12	26		-3.4		-8.2		-5.8		23.8		0						4.5		16		36		44	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-27	2025	12	27		0		-3.4		-1.7		19.7		0						16.9		20		35		50	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-28	2025	12	28		1.1		-5		-1.9		19.9		0						7.6		37					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-29	2025	12	29		0.7		-13.1		-6.2		24.2		0						0.2		33					
-56.07	48.97	BADGER (AUT)	8400301	2025-12-30	2025	12	30		2.8		-1.4		0.7		17.3		0						5.3		31		26		46	
-56.07	48.97	BADGER (AUT)	8400301	2025-12-31	2025	12	31		1.6		-6.1		-2.2		20.2		0						0		25		18		40	

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	Total
2025-03-01	0	0	0	0	0	0	0	0
2025-03-02	0	0	0	0	0	0	0	0
2025-03-03	0	0	0	0	0	0	0	0
2025-03-04	0	0	0	0	0	0	0	0
2025-03-05	0	0	0	0	0	0	0	0
2025-03-06	0	0	0	0	0	0	0	0
2025-03-07	0	0	0	0	0	0	0	0
2025-03-08	0	0	0	0	0	0	0	0
2025-03-09	0	0	0	0	0	0	0	0
2025-03-10	0	0	0	0	0	0	0	0
2025-03-11	0	0	0	0	0	0	0	0
2025-03-12	0	0	0	0	0	0	0	0
2025-03-13	0	0	0	0	0	0	0	0
2025-03-14	0	0	0	0	0	0	0	0
2025-03-15	0	0	0	0	0	0	0	0
2025-03-16	0	0	0	0	0	0	0	0
2025-03-17	0	0	0	0	0	0	0	0
2025-03-18	0	0	0	0	0	0	0	0
2025-03-19	0	0	0	0	0	0	0	0
2025-03-20	0	0	0	0	0	0	0	0
2025-03-21	0	0	0	0	0	0	0	0
2025-03-22	0	0	0	0	0	0	0	0
2025-03-23	0	0	0	0	0	0	0	0
2025-03-24	0	0	0	0	0	0	0	0
2025-03-25	0	0	0	0	0	0	0	0
2025-03-26	0	0	0	0	0	0	0	0
2025-03-27	0	0	0	0	0	0	0	0
2025-03-28	0	0	0	0	0	0	0	0
2025-03-29	0	0	0	0	0	0	0	0
2025-03-30	0	0	0	0	0	0	0	0
2025-03-31	0	0	0	0	0	0	0	0
2025-04-01	0	0	0	0	0	0	0	0
2025-04-02	0	0	0	0	0	0	0	0
2025-04-03	0	0	0	0	0	0	0	0
2025-04-04	0	0	0	0	0	0	0	0
2025-04-05	0	0	0	0	0	0	0	0
2025-04-06	0	0	0	0	0	0	0	0
2025-04-07	0	0	0	0	0	0	0	0
2025-04-08	0	0	2	18	41	92	299	452
2025-04-09	0	0	4	23	44	101	327	499

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	Total
2025-04-10	0	0	0	0	0	0	0	0
2025-04-11	0	0	0	0	0	0	0	0
2025-04-12	0	0	0	0	0	0	0	0
2025-04-13	0	0	0	0	0	0	0	0
2025-04-14	0	0	0	0	0	0	0	0
2025-04-15	0	0	0	0	0	0	0	0
2025-04-16	0	0	0	0	0	0	0	0
2025-04-17	0	0	0	0	0	0	0	0
2025-04-18	0	0	0	0	0	0	0	0
2025-04-19	0	0	0	0	0	0	0	0
2025-04-20	0	0	0	0	0	0	0	0
2025-04-21	0	0	0	0	0	0	0	0
2025-04-22	0	0	0	0	0	0	0	0
2025-04-23	0	0	0	0	0	0	0	0
2025-04-24	0	0	0	0	0	0	0	0
2025-04-25	0	0	0	0	0	0	0	0
2025-04-26	0	0	0	0	0	0	0	0
2025-04-27	0	0	0	0	0	0	0	0
2025-04-28	0	0	0	0	0	0	0	0
2025-04-29	0	0	0	0	0	0	0	0
2025-04-30	0	0	0	0	0	0	0	0
2025-05-01	0	0	0	0	0	0	0	0
2025-05-02	0	0	0	0	0	0	0	0
2025-05-03	0	0	0	0	0	0	0	0
2025-05-04	0	0	0	0	0	0	0	0
2025-05-05	0	0	0	0	0	0	0	0
2025-05-06	0	0	0	0	0	0	0	0
2025-05-07	0	0	0	0	0	0	0	0
2025-05-08	0	0	0	0	0	0	0	0
2025-05-09	0	0	0	0	0	0	0	0
2025-05-10	0	0	0	0	0	0	0	0
2025-05-11	0	0	0	0	0	0	0	0
2025-05-12	0	0	0	0	0	0	0	0
2025-05-13	0	0	0	0	0	0	0	0
2025-05-14	0	0	0	0	0	0	59	59
2025-05-15	0	0	0	0	0	0	0	0
2025-05-16	0	0	0	0	0	0	0	0
2025-05-17	0	0	0	0	0	0	0	0
2025-05-18	0	0	0	9	236	189	244	678
2025-05-19	0	0	0	0	0	0	0	0

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	Total
2025-05-20	0	0	0	0	0	0	0	0
2025-05-21	0	0	0	0	0	0	0	0
2025-05-22	0	0	0	0	0	0	0	0
2025-05-23	0	0	0	0	0	0	0	0
2025-05-24	0	0	0	0	0	0	0	0
2025-05-25	0	0	0	0	0	0	0	0
2025-05-26	0	0	0	0	0	0	0	0
2025-05-27	0	0	0	0	0	0	0	0
2025-05-28	0	0	0	0	0	0	0	0
2025-05-29	0	0	0	0	0	0	0	0
2025-05-30	0	0	0	0	0	0	0	0
2025-05-31	0	0	0	0	0	0	0	0
2025-06-01	0	0	5	63	496	342	596	1502
2025-06-02	0	0	0	34	909	629	890	2462
2025-06-03	0	0	0	29	937	672	948	2586
2025-06-04	0	0	0	38	916	683	938	2575
2025-06-05	0	0	0	36	964	718	866	2584
2025-06-06	0	0	0	40	869	616	951	2476
2025-06-07	0	0	12	58	645	499	846	2060
2025-06-08	0	0	0	24	454	334	453	1265
2025-06-09	0	0	0	0	0	0	0	0
2025-06-10	0	0	0	18	412	306	421	1157
2025-06-11	0	0	0	26	758	559	768	2111
2025-06-12	0	0	8	47	731	586	830	2202
2025-06-13	0	0	0	46	749	550	681	2026
2025-06-14	0	0	0	30	732	575	665	2002
2025-06-15	0	0	0	28	797	603	765	2193
2025-06-16	0	0	0	29	793	574	751	2147
2025-06-17	0	0	0	19	405	297	362	1083
2025-06-18	0	2	33	63	42	38	37	215
2025-06-19	0	16	90	158	400	274	482	1420
2025-06-20	0	7	46	127	253	256	449	1138
2025-06-21	0	4	54	70	88	88	73	377
2025-06-22	0	59	61	46	36	33	41	276
2025-06-23	0	35	67	56	33	27	43	261
2025-06-24	0	5	50	48	23	15	39	180
2025-06-25	0	2	40	51	19	18	38	168
2025-06-26	0	4	40	71	52	29	31	227
2025-06-27	0	5	63	93	50	33	51	295
2025-06-28	0	0	50	112	50	34	43	289

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	Total
2025-06-29	0	7	63	113	80	43	58	364
2025-06-30	0	8	40	115	72	43	47	325
2025-07-01	0	4	47	130	69	51	65	366
2025-07-02	0	4	67	119	79	54	72	395
2025-07-03	0	21	58	87	72	31	42	311
2025-07-04	0	8	51	113	66	47	54	339
2025-07-05	0	17	57	105	86	35	50	350
2025-07-06	0	4	55	90	46	38	44	277
2025-07-07	0	3	62	122	66	34	50	337
2025-07-08	0	8	63	119	77	35	52	354
2025-07-09	0	8	53	123	69	41	54	348
2025-07-10	0	9	69	125	67	44	59	373
2025-07-11	0	8	55	100	78	37	41	319
2025-07-12	0	18	54	114	59	45	58	348
2025-07-13	0	56	58	122	64	41	57	398
2025-07-14	0	53	43	121	69	36	45	367
2025-07-15	0	3	63	79	49	34	35	263
2025-07-16	0	9	46	96	67	50	44	312
2025-07-17	0	21	56	100	72	46	68	363
2025-07-18	0	9	53	99	68	40	57	326
2025-07-19	0	11	54	117	80	42	46	350
2025-07-20	0	33	83	121	89	40	49	415
2025-07-21	0	37	57	98	59	44	56	351
2025-07-22	0	6	53	94	68	32	42	295
2025-07-23	0	8	52	111	74	41	42	328
2025-07-24	0	18	67	113	85	46	65	394
2025-07-25	0	2	49	118	82	41	49	341
2025-07-26	0	6	62	111	76	38	62	355
2025-07-27	0	5	46	107	68	40	52	318
2025-07-28	0	1	64	106	65	60	51	347
2025-07-29	0	8	53	112	77	42	43	335
2025-07-30	0	10	75	119	72	61	73	410
2025-07-31	0	10	44	132	87	47	72	392
2025-08-01	0	29	52	155	86	41	58	421
2025-08-02	0	5	57	135	86	41	66	390
2025-08-03	0	7	71	116	75	53	52	374
2025-08-04	0	8	51	131	67	52	66	375
2025-08-05	2	82	97	147	93	46	63	530
2025-08-06	0	84	110	135	80	52	51	512
2025-08-07	0	81	126	146	100	62	57	572

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	Total
2025-08-08	7	172	103	148	94	56	63	643
2025-08-09	6	134	124	149	74	54	65	606
2025-08-10	1	218	113	146	89	41	51	659
2025-08-11	9	340	127	115	84	54	70	799
2025-08-12	7	181	134	129	68	47	60	626
2025-08-13	1	283	143	143	81	68	62	781
2025-08-14	6	349	96	126	70	47	54	748
2025-08-15	2	318	154	142	62	48	66	792
2025-08-16	1	216	129	103	61	49	50	609
2025-08-17	0	101	72	106	64	47	66	456
2025-08-18	0	68	47	84	47	31	35	312
2025-08-19	1	251	70	66	49	25	35	497
2025-08-20	2	359	90	135	58	46	70	760
2025-08-21	1	317	109	175	72	59	77	810
2025-08-22	1	268	98	159	99	49	60	734
2025-08-23	3	187	81	147	82	51	55	606
2025-08-24	1	133	75	125	81	50	67	532
2025-08-25	1	410	125	143	73	43	58	853
2025-08-26	5	313	96	119	72	37	62	704
2025-08-27	1	295	90	123	82	52	60	703
2025-08-28	0	100	62	118	68	52	66	466
2025-08-29	0	11	36	77	41	20	27	212
Bin Total	**58**	**5892**	**5235**	**8904**	**17449**	**12542**	**17433**	**67513**

Table 3: Species Detectable by Nighthawk ***Project # 24-10266***

Common Name	Scientific Name
American Redstart	*Setophaga ruticilla*
American Bittern	*Botaurus lentiginosus*
American Pipit	*Anthus rubescens*
American Robin	*Turdus migratorius*
American Tree Sparrow	*Spizelloides arborea*
Bicknell's Thrush	*Catharus bicknelli*
Black Oystercatcher	*Haematopus bachmani*
Black Skimmer	*Rynchops niger*
Black-and-white Warbler	*Mniotilta varia*
Black-bellied Plover	*Pluvialis squatarola*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Black-crowned Night-Heron	*Nycticorax nycticorax*
Black-throated Blue Warbler	*Setophaga caerulescens*
Bobolink	*Dolichonyx oryzivorus*
Brewer's Sparrow	*Spizella breweri*
Canada Warbler	*Cardellina canadensis*
Cape May Warbler	*Setophaga tigrina*
Cerulean Warbler	*Setophaga cerulea*
Chestnut-sided Warbler	*Setophaga pensylvanica*
Chipping Sparrow	*Spizella passerina*
Clay-colored Sparrow	*Spizella pallida*
Common Tern	*Sterna hirundo*
Common Yellowthroat	*Geothlypis trichas*
Dark-eyed Junco	*Junco hyemalis*
Dickcissel	*Spiza americana*
Eastern Meadowlark	*Sturnella magna*
Forster's Tern	*Sterna forsteri*
Golden-crowned Kinglet	*Regulus satrapa*
Golden-winged Warbler	*Vermivora chrysoptera*
Grasshopper Sparrow	*Ammodramus savannarum*
Gray-cheeked Thrush	*Catharus minimus*
Great Egret	*Ardea alba*
Greater Yellowlegs	*Tringa melanoleuca*
Green Heron	*Butorides virescens*
Harris's Sparrow	*Zonotrichia querula*
Henslow's Sparrow	*Centronyx henslowii*
Hermit Thrush	*Catharus guttatus*
Hermit Warbler	*Setophaga occidentalis*
Hooded Warbler	*Setophaga citrina*
Indigo Bunting	*Passerina cyanea*
Kentucky Warbler	*Geothlypis formosa*
Killdeer	*Charadrius vociferus*
Kirtland's Warbler	*Setophaga kirtlandii*
Lapland Longspur	*Calcarius lapponicus*
Lark Sparrow	*Chondestes grammacus*
Least Bittern	*Ixobrychus exilis*
Least Sandpiper	*Calidris minutilla*
Lesser Yellowlegs	*Tringa flavipes*
Lincoln's Sparrow	*Melospiza lincolnii*
MacGillivray's Warbler	*Geothlypis tolmiei*
Mourning Warbler	*Geothlypis philadelphia*

Common Name	Scientific Name
Nashville Warbler	*Leiothlypis ruficapilla*
Northern Parula	*Setophaga americana*
Northern Waterthrush	*Parkesia noveboracensis*
Orchard Oriole	*Icterus spurius*
Ovenbird	*Seiurus aurocapilla*
Painted Bunting	*Passerina ciris*
Palm Warbler	*Setophaga palmarum*
Red-breasted Nuthatch	*Sitta canadensis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Savannah Sparrow	*Passerculus sandwichensis*
Scarlet Tanager	*Piranga olivacea*
Seaside Sparrow	*Ammospiza maritima*
Semipalmated Plover	*Charadrius semipalmatus*
Short-billed Dowitcher	*Limnodromus griseus*
Solitary Sandpiper	*Tringa solitaria*
Spotted Sandpiper	*Actitis macularius*
Sprague's Pipit	*Anthus spragueii*
Summer Tanager	*Piranga rubra*
Swainson's Thrush	*Catharus ustulatus*
Upland Sandpiper	*Bartramia longicauda*
Veery	*Catharus fuscescens*
Vesper Sparrow	*Pooecetes gramineus*
White-crowned Sparrow	*Zonotrichia leucophrys*
White-throated Sparrow	*Zonotrichia albicollis*
Wilson's Snipe	*Gallinago delicata*
Wilson's Warbler	*Cardellina pusilla*
Wood Thrush	*Hylocichla mustelina*
Worm-eating Warbler	*Helmitheros vermivorum*
Yellow-billed Cuckoo	*Coccyzus americanus*
Yellow-rumped Warbler	*Setophaga coronata*
Yellow-throated Warbler	*Setophaga dominica*

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2836.4	2838.2	0	11025	Passeriformes	0.9721805	Turdidae	0.9592144			amerob	0.99999976	amerob	0.999999762	2025-04-11	7:47:16 PM	Y
3067.2	3069.2	0	11025	Passeriformes	0.96188545	Turdidae	0.92839223			amerob	0.9861915	amerob	0.986191511	2025-04-11	7:51:07 PM	Y
3081.2	3082.6	0	11025	Passeriformes	0.97221404	Turdidae	0.9592204			amerob	0.9999994	amerob	0.999999404	2025-04-11	7:51:21 PM	Y
858.2	859.6	0	11025	Passeriformes	0.97145575	Turdidae	0.95819664			amerob	0.9999995	amerob	0.999999523	2025-04-13	6:14:23 AM	Y
1840.8	1842.6	0	11025	Passeriformes	0.97201914	Turdidae	0.9596239			amerob	0.9999999	amerob	0.999999881	2025-04-13	6:30:46 AM	Y
1576.4	1578	0	11025	Passeriformes	0.9672319	Turdidae	0.9535227	THSH	0.93710274	herthr	0.9999987	herthr	0.999998689	2025-04-15	6:26:21 AM	Y
3426.8	3428.6	0	11025	Passeriformes	0.9709917	Turdidae	0.9594402			amerob	0.9999938	amerob	0.999993801	2025-04-16	6:57:12 AM	Y
2401.4	2402.6	0	11025	Passeriformes	0.97192717	Turdidae	0.95696896			amerob	0.9999907	amerob	0.999990702	2025-04-19	6:40:06 AM	Y
2441.2	2442.8	0	11025	Passeriformes	0.96777624	Turdidae	0.9589953			amerob	0.99999976	amerob	0.999999762	2025-04-19	6:40:46 AM	Y
2613	2614.6	0	11025	Passeriformes	0.9713093	Turdidae	0.9572273			amerob	0.99999416	amerob	0.999994159	2025-04-19	6:43:38 AM	Y
3341.6	3343.2	0	11025	Passeriformes	0.97136545	Turdidae	0.94292355			amerob	0.99963987	amerob	0.999639869	2025-04-19	6:55:47 AM	Y
353.6	357.2	0	11025	Passeriformes	0.97196645	Passerellidae	0.99552476			daejun	0.99700326	daejun	0.997003257	2025-04-20	7:05:54 PM	Y
412.4	414.2	0	11025	Passeriformes	0.967508	Passerellidae	0.9947126			daejun	0.99666256	daejun	0.996662557	2025-04-20	7:06:52 PM	Y
430.2	431.8	0	11025	Passeriformes	0.8824269	Passerellidae	0.9681751			daejun	0.98773426	daejun	0.987734258	2025-04-20	7:07:10 PM	Y
467.2	469	0	11025	Passeriformes	0.968174	Passerellidae	0.9942048			daejun	0.9960335	daejun	0.99603349	2025-04-20	7:07:47 PM	Y
475.8	477.6	0	11025	Passeriformes	0.97102004	Passerellidae	0.99537945			daejun	0.9969227	daejun	0.996922672	2025-04-20	7:07:56 PM	Y
497.2	499	0	11025	Passeriformes	0.96377766	Passerellidae	0.99384004			daejun	0.99624974	daejun	0.996249735	2025-04-20	7:08:17 PM	Y
1405.8	1407.2	0	11025	Passeriformes	0.96953547	Passerellidae	0.9950169			daejun	0.9968182	daejun	0.996818185	2025-04-20	6:23:31 AM	Y
734.4	737.2	0	11025	Passeriformes	0.97014284	Passerellidae	0.9946497			daejun	0.9965475	daejun	0.99654752	2025-04-23	6:12:19 AM	Y
737.4	742.4	0	11025	Passeriformes	0.9708609	Passerellidae	0.9953844			daejun	0.99694556	daejun	0.99694556	2025-04-23	6:12:22 AM	Y
750.8	752.6	0	11025	Passeriformes	0.9701016	Passerellidae	0.99526983			daejun	0.9968964	daejun	0.996896386	2025-04-23	6:12:36 AM	Y
763.4	766.4	0	11025	Passeriformes	0.9665409	Passerellidae	0.99455833			daejun	0.99664885	daejun	0.996648848	2025-04-23	6:12:48 AM	Y
816.6	820	0	11025	Passeriformes	0.97191423	Passerellidae	0.9954744			daejun	0.9969553	daejun	0.996955276	2025-04-23	6:13:42 AM	Y
827.4	829.8	0	11025	Passeriformes	0.97194046	Passerellidae	0.99548966			daejun	0.9969393	daejun	0.996939301	2025-04-23	6:13:52 AM	Y
837.4	839.6	0	11025	Passeriformes	0.9722277	Passerellidae	0.99558866			daejun	0.9970113	daejun	0.997011304	2025-04-23	6:14:02 AM	Y
840.8	842.8	0	11025	Passeriformes	0.97214746	Passerellidae	0.9955552			daejun	0.99698406	daejun	0.996984065	2025-04-23	6:14:06 AM	Y
2945	2946.2	0	11025	Passeriformes	0.9711639	Turdidae	0.9578188	THSH	0.94149107	herthr	0.99999833	herthr	0.999998331	2025-04-23	5:49:07 AM	Y
1525.8	1527.6	0	11025	Passeriformes	0.9718431	Turdidae	0.9596958			amerob	0.9999999	amerob	0.999999881	2025-04-24	6:25:31 AM	Y
1540.4	1542	0	11025	Passeriformes	0.9697077	Turdidae	0.95579135			amerob	0.9999951	amerob	0.999995112	2025-04-24	6:25:45 AM	Y
1570.8	1572.6	0	11025	Passeriformes	0.96859366	Turdidae	0.95480996			amerob	0.9999863	amerob	0.999986291	2025-04-24	6:26:16 AM	Y
1840.6	1842	0	11025	Passeriformes	0.97210014	Turdidae	0.9594305			amerob	0.99999964	amerob	0.999999642	2025-04-24	6:30:46 AM	Y
1866.6	1868.2	0	11025	Passeriformes	0.9717586	Turdidae	0.9587844			amerob	0.9999994	amerob	0.999999404	2025-04-24	6:31:12 AM	Y
1869.6	1871.2	0	11025	Passeriformes	0.9720356	Turdidae	0.95973855			amerob	0.9999999	amerob	0.999999881	2025-04-24	6:31:15 AM	Y
1884.6	1886	0	11025	Passeriformes	0.9720845	Turdidae	0.9597003			amerob	0.9999999	amerob	0.999999881	2025-04-24	6:31:30 AM	Y
1892.4	1894.2	0	11025	Passeriformes	0.9719767	Turdidae	0.95951796			amerob	0.9999999	amerob	0.999999881	2025-04-24	6:31:37 AM	Y
112	113.4	0	11025	Passeriformes	0.9665119	Turdidae	0.95059776			amerob	0.99973327	amerob	0.999733269	2025-04-25	6:01:57 AM	Y
129.6	131.2	0	11025	Passeriformes	0.96869856	Turdidae	0.9585782			amerob	0.99999917	amerob	0.999999166	2025-04-25	6:02:15 AM	Y
1780.2	1781.6	0	11025	Passeriformes	0.9719126	Turdidae	0.95866024			amerob	0.9999994	amerob	0.999999404	2025-04-25	8:29:42 PM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1795.2	1796.6	0	11025	Passeriformes	0.96990114	Turdidae	0.9487682			amerob	0.99999845	amerob	0.99999845	2025-04-25	8:29:57 PM	Y
1813.2	1814.4	0	11025	Passeriformes	0.9669465	Turdidae	0.95130193			amerob	0.9999963	amerob	0.999996305	2025-04-25	8:30:15 PM	Y
1824.6	1826.2	0	11025	Passeriformes	0.97217023	Turdidae	0.95982283			amerob	0.9999999	amerob	0.999999881	2025-04-25	8:30:27 PM	Y
1839	1840.4	0	11025	Passeriformes	0.96595055	Turdidae	0.95856506			amerob	0.9999994	amerob	0.999999404	2025-04-25	8:30:41 PM	Y
2595.4	2596.6	0	11025	Passeriformes	0.9578485	Turdidae	0.93020403	THSH	0.906808	herthr	0.99999654	herthr	0.999996543	2025-04-25	8:43:17 PM	Y
2628.6	2630	0	11025	Passeriformes	0.969928	Turdidae	0.9555022	THSH	0.940109	herthr	0.99999857	herthr	0.999998569	2025-04-25	8:43:51 PM	Y
2941.4	2943.2	0	11025	Passeriformes	0.97210443	Turdidae	0.9597761			amerob	0.9999999	amerob	0.999999881	2025-04-25	6:49:06 AM	Y
3157.8	3159.2	0	11025	Passeriformes	0.9707379	Turdidae	0.95829797			amerob	0.9999896	amerob	0.999989629	2025-04-25	6:52:43 AM	Y
3319.8	3321.2	0	11025	Passeriformes	0.971194	Turdidae	0.9579072			amerob	0.99999356	amerob	0.999993563	2025-04-25	6:55:25 AM	Y
3322.6	3324	0	11025	Passeriformes	0.97170854	Turdidae	0.9594156			amerob	0.99999964	amerob	0.999999642	2025-04-25	6:55:28 AM	Y
2644.2	2648.2	0	11025	Passeriformes	0.9722168	Passerellidae	0.9955841			daejun	0.9970085	daejun	0.997008502	2025-04-26	6:44:09 AM	Y
3323.6	3325.8	0	11025	Passeriformes	0.9721862	Passerellidae	0.9955699			daejun	0.9970073	daejun	0.99700731	2025-04-26	6:55:29 AM	Y
3412	3413.8	0	11025	Passeriformes	0.96979785	Passerellidae	0.99406177			daejun	0.9963626	daejun	0.996362627	2025-04-26	6:56:57 AM	Y
3414.6	3416	0	11025	Passeriformes	0.8639282	Passerellidae	0.86183614			daejun	0.9520979	daejun	0.952097893	2025-04-26	6:57:00 AM	Y
3548.6	3550.4	0	11025	Passeriformes	0.9720948	Passerellidae	0.9955609			daejun	0.99700385	daejun	0.997003853	2025-04-26	6:59:14 AM	Y
3551.6	3556.6	0	11025	Passeriformes	0.97220844	Passerellidae	0.9955777			daejun	0.997008	daejun	0.997008026	2025-04-26	6:59:17 AM	Y
3557.4	3562.4	0	11025	Passeriformes	0.97223794	Passerellidae	0.99559253			daejun	0.99701273	daejun	0.997012734	2025-04-26	6:59:22 AM	Y
3562.4	3564.8	0	11025	Passeriformes	0.97223794	Passerellidae	0.99559253			daejun	0.99701273	daejun	0.997012734	2025-04-26	6:59:27 AM	Y
3565.2	3567.2	0	11025	Passeriformes	0.9722377	Passerellidae	0.99559194			daejun	0.9970124	daejun	0.997012377	2025-04-26	6:59:30 AM	Y
3568	3569.4	0	11025	Passeriformes	0.9709572	Passerellidae	0.9831845			daejun	0.9744845	daejun	0.974484503	2025-04-26	6:59:33 AM	Y
3573.8	3575.4	0	11025	Passeriformes	0.9620947	Passerellidae	0.9850691			daejun	0.99191976	daejun	0.991919756	2025-04-26	6:59:39 AM	Y
3576.6	3578.6	0	11025	Passeriformes	0.97053045	Passerellidae	0.9954136			daejun	0.9969021	daejun	0.996902108	2025-04-26	6:59:42 AM	Y
2425.4	2427.2	0	11025	Passeriformes	0.97220755	Passerellidae	0.9955812			daejun	0.9969995	daejun	0.996999502	2025-04-27	6:40:30 AM	Y
2752.4	2753.6	0	11025	Passeriformes	0.9604406	Turdidae	0.9320139	THSH	0.9009287	herthr	0.9999926	herthr	0.999992609	2025-04-28	6:45:57 AM	Y
264.8	266.4	0	11025	Passeriformes	0.9721038	Passerellidae	0.9955323	SFHS	0.9899917	whtspa	0.99709	whtspa	0.997089982	2025-05-14	6:04:30 AM	Y
372	373.4	0	11025	Passeriformes	0.97208405	Turdidae	0.8845986			amerob	0.98322874	amerob	0.983228743	2025-05-14	6:06:17 AM	Y
541.2	544.2	0	11025	Passeriformes	0.97223747	Passerellidae	0.9955923			daejun	0.9970126	daejun	0.997012615	2025-05-14	6:09:06 AM	Y
3037.2	3038.4	0	11025	Passeriformes	0.9333551	Parulidae	0.9088028	SBUF	0.8498981	palwar	0.9984586	palwar	0.998458624	2025-05-14	6:50:42 AM	Y
1166	1167.4	0	11025	Passeriformes	0.95861477	Turdidae	0.9199984	THSH	0.8820966	herthr	0.9999969	herthr	0.999996901	2025-05-16	5:19:28 AM	Y
1201.4	1203.2	0	11025	Passeriformes	0.9722312	Parulidae	0.95643836			bawwar	0.99999917	bawwar	0.999999166	2025-05-16	2:20:03 AM	Y
248.8	250.6	0	11025	Passeriformes	0.9721594	Passerellidae	0.99550194	SFHS	0.9899771	whtspa	0.9975076	whtspa	0.997507572	2025-05-17	9:04:11 PM	Y
494.4	496.4	0	11025	Passeriformes	0.97221595	Passerellidae	0.9955771			daejun	0.99700433	daejun	0.99700433	2025-05-17	6:08:19 AM	Y
623.8	625.8	0	11025	Passeriformes	0.9722377	Passerellidae	0.9955922			daejun	0.9970126	daejun	0.997012615	2025-05-17	6:10:29 AM	Y
662	663.8	0	11025	Passeriformes	0.9718052	Passerellidae	0.9953578	SFHS	0.9898308	whtspa	0.99841523	whtspa	0.998415232	2025-05-17	6:11:07 AM	Y
1036.6	1038.2	0	11025	Passeriformes	0.96561515	Parulidae	0.93174547	SBUF	0.9129604	palwar	0.99999976	palwar	0.999999762	2025-05-17	9:17:19 PM	Y
1219.8	1221.4	0	11025	Passeriformes	0.97158706	Parulidae	0.94960207	SBUF	0.9276118	palwar	0.9999999	palwar	0.999999881	2025-05-17	6:20:25 AM	Y
1593	1594.4	0	11025	Passeriformes	0.9718694	Turdidae	0.9592495	THSH	0.94646615	herthr	0.9999988	herthr	0.999998808	2025-05-17	9:26:35 PM	Y
3325.8	3327.4	0	11025	Passeriformes	0.9721672	Turdidae	0.9527323			amerob	0.99998164	amerob	0.999981642	2025-05-17	6:55:31 AM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
338	339.8	0	11025	Passeriformes	0.9699214	Parulidae	0.93551075			wlswar	0.9893506	wlswar	0.989350617	2025-05-18	3:05:40 AM	Y
1287.4	1289	0	11025	Passeriformes	0.97222453	Passerellidae	0.99557173	SWLI	0.99710566	linspa	0.9987754	linspa	0.998775423	2025-05-18	4:21:29 AM	Y
429.6	431	0	11025	Passeriformes	0.96983343	Passerellidae	0.99516284			daejun	0.9968047	daejun	0.996804714	2025-05-20	6:07:15 AM	Y
3002.8	3004.4	0	11025	Passeriformes	0.97173846	Passerellidae	0.99536717	SFHS	0.98804224	whtspa	0.9970372	whtspa	0.997037172	2025-05-20	6:50:08 AM	Y
3072.8	3074.6	0	11025	Passeriformes	0.970979	Turdidae	0.9587956			amerob	0.9999795	amerob	0.999979496	2025-05-23	6:51:18 AM	Y
3081.8	3083.6	0	11025	Passeriformes	0.9720144	Turdidae	0.95958			amerob	0.99999964	amerob	0.999999642	2025-05-23	6:51:27 AM	Y
11.4	12.8	0	11025	Passeriformes	0.97214645	Passerellidae	0.9954377	SWLI	0.9970193	linspa	0.94505215	linspa	0.945052147	2025-05-24	5:00:13 AM	Y
16.8	18.4	0	11025	Passeriformes	0.97222114	Passerellidae	0.9955603	SWLI	0.99704	linspa	0.9958443	linspa	0.995844305	2025-05-24	5:00:19 AM	Y
167.8	169.6	0	11025	Passeriformes	0.971741	Passerellidae	0.9953731	SFHS	0.9897427	whtspa	0.9923258	whtspa	0.992325783	2025-05-24	5:02:50 AM	Y
397.8	399.6	0	11025	Passeriformes	0.9721972	Passerellidae	0.99557495			daejun	0.9969981	daejun	0.996998072	2025-05-24	5:06:40 AM	Y
3235.6	3236.8	0	11025	Passeriformes	0.9476425	Turdidae	0.9129485	THSH	0.8749629	herthr	0.99999607	herthr	0.999996066	2025-05-24	5:53:58 AM	Y
3504	3505.8	0	11025	Passeriformes	0.9720891	Parulidae	0.9535875	ZEEP	0.960821	norwat	0.99998486	norwat	0.99998486	2025-05-24	3:58:26 AM	Y
18.4	20.2	0	11025	Passeriformes	0.9718256	Passerellidae	0.9953335	SFHS	0.9898915	whtspa	0.9984676	whtspa	0.998467624	2025-05-25	5:00:20 AM	Y
1206.2	1207.8	0	11025	Passeriformes	0.9670026	Turdidae	0.958193			amerob	0.9999938	amerob	0.999993801	2025-05-26	5:20:08 AM	Y
157.6	159.4	0	11025	Passeriformes	0.972192	Passerellidae	0.99547935	SFHS	0.990085	whtspa	0.99842536	whtspa	0.998425364	2025-05-27	5:02:40 AM	Y
347.4	348.8	0	11025	Passeriformes	0.9695116	Passerellidae	0.9948431			daejun	0.986414	daejun	0.986414015	2025-05-27	5:05:49 AM	Y
426.8	428	0	11025	Passeriformes	0.9705518	Turdidae	0.95776284	THSH	0.94437814	herthr	0.9999989	herthr	0.999998927	2025-05-27	5:07:09 AM	Y
1080.4	1082	0	11025	Passeriformes	0.9679108	Turdidae	0.9559751			amerob	0.99999833	amerob	0.999998331	2025-05-27	5:18:02 AM	Y
1457.8	1459.6	0	11025	Passeriformes	0.95973206	Passerellidae	0.9946548	DESP	0.9601346	savspa	0.98584324	savspa	0.985843241	2025-05-27	5:24:20 AM	Y
2118	2119.6	0	11025	Passeriformes	0.9662189	Parulidae	0.9496197			bawwar	0.9880163	bawwar	0.988016307	2025-05-27	5:35:20 AM	Y
1272.2	1274	0	11025	Passeriformes	0.97196263	Parulidae	0.9557101			bawwar	0.999987	bawwar	0.999987006	2025-05-28	1:21:14 AM	Y
2668	2669.8	0	11025	Passeriformes	0.9722363	Parulidae	0.95644194			bawwar	0.9999999	bawwar	0.999999881	2025-05-28	3:44:30 AM	Y
11	12.6	0	11025	Passeriformes	0.9721016	Passerellidae	0.9955728	SFHS	0.98997784	whtspa	0.99764484	whtspa	0.997644842	2025-05-29	9:00:13 PM	Y
24.6	26	0	11025	Passeriformes	0.9531599	Turdidae	0.93960947	THSH	0.91879725	herthr	0.9999958	herthr	0.999995828	2025-05-29	9:00:27 PM	Y
390.2	391.8	0	11025	Passeriformes	0.9722021	Parulidae	0.9564064			amered	0.90308553	amered	0.90308553	2025-05-29	4:06:32 AM	Y
862.4	864.2	0	11025	Passeriformes	0.97219527	Parulidae	0.9562384			bawwar	0.99999976	bawwar	0.999999762	2025-05-29	3:14:24 AM	Y
1611.4	1612.8	0	11025	Passeriformes	0.9721782	Turdidae	0.95633125			amerob	0.99999917	amerob	0.999999166	2025-05-29	6:26:55 AM	Y
2614	2615.4	0	11025	Passeriformes	0.9662361	Turdidae	0.9450413	THSH	0.92920476	herthr	0.99999845	herthr	0.99999845	2025-05-29	6:43:38 AM	Y
2659	2660.4	0	11025	Passeriformes	0.9313378	Passerellidae	0.9861632			daejun	0.97942376	daejun	0.979423761	2025-05-29	4:44:21 AM	Y
2960.2	2961.8	0	11025	Passeriformes	0.97218883	Turdidae	0.94674826	THSH	0.9310084	herthr	0.9999989	herthr	0.999998927	2025-05-29	4:49:22 AM	Y
715.8	718.6	0	11025	Passeriformes	0.96511483	Passerellidae	0.9947168			daejun	0.98402876	daejun	0.984028757	2025-05-30	5:11:58 AM	Y
961.6	963.4	0	11025	Passeriformes	0.9721843	Parulidae	0.9560871	BZWA	0.9831125	comyel	0.9999999	comyel	0.999999881	2025-05-30	3:16:04 AM	Y
1101.8	1103.8	0	11025	Charadriiformes	0.98130625	Scolopacidae	0.9955544			sposan	0.9994947	sposan	0.999494672	2025-05-30	3:18:24 AM	Y
1434.4	1435.6	0	11025	Passeriformes	0.97210205	Turdidae	0.9553131			amerob	0.99996185	amerob	0.999961853	2025-05-30	5:23:56 AM	Y
1740.8	1742	0	11025	Passeriformes	0.9721724	Passerellidae	0.9954946	SWLI	0.9970579	linspa	0.99458057	linspa	0.994580567	2025-05-30	4:29:03 AM	Y
1749	1750.4	0	11025	Passeriformes	0.9722187	Passerellidae	0.9955663	SWLI	0.99709713	linspa	0.99295056	linspa	0.992950559	2025-05-30	4:29:11 AM	Y
2020.4	2021.8	0	11025	Passeriformes	0.965651	Turdidae	0.95121485	THSH	0.9353377	herthr	0.99999785	herthr	0.999997854	2025-05-30	5:33:42 AM	Y
2067.2	2069	0	11025	Passeriformes	0.9722373	Parulidae	0.9564641			bawwar	0.99999976	bawwar	0.999999762	2025-05-30	5:34:29 AM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2173.8	2175.4	0	11025	Passeriformes	0.9719977	Parulidae	0.95607924			amered	0.90256697	amered	0.902566969	2025-05-30	5:36:16 AM	Y
2967.8	2969.4	0	11025	Passeriformes	0.9577774	Turdidae	0.89950025	THSH	0.8643555	herthr	0.9999982	herthr	0.999998212	2025-05-30	4:49:30 AM	Y
3582	3583.4	0	11025	Passeriformes	0.972219	Passerellidae	0.9955699	SFHS	0.99004364	whtspa	0.9980691	whtspa	0.998069108	2025-05-30	5:59:44 AM	Y
2369.8	2371.6	0	11025	Passeriformes	0.97212875	Parulidae	0.956027	BZWA	0.9831323	comyel	0.9999999	comyel	0.999999881	2025-05-31	2:39:32 AM	Y
2291.4	2293.2	0	11025	Passeriformes	0.97220653	Turdidae	0.9590965	THSH	0.94622713	herthr	0.99999905	herthr	0.999999046	2025-06-01	8:38:13 PM	Y
3284.6	3286.4	0	11025	Passeriformes	0.97199774	Passerellidae	0.99541867	SFHS	0.9897626	whtspa	0.9971008	whtspa	0.99710077	2025-06-01	8:54:47 PM	Y
499.2	501.4	0	11025	Passeriformes	0.972181	Passerellidae	0.9955681	SFHS	0.99017566	whtspa	0.9985493	whtspa	0.998549283	2025-06-02	9:08:21 PM	Y
2226.8	2228.2	0	11025	Passeriformes	0.9717828	Turdidae	0.95887536	THSH	0.9462174	herthr	0.9999989	herthr	0.999998927	2025-06-02	9:37:09 PM	Y
2983.4	2984.6	0	11025	Passeriformes	0.96722364	Turdidae	0.9579014			amerob	0.9999968	amerob	0.999996781	2025-06-02	5:49:45 AM	Y
3302.2	3303.6	0	11025	Passeriformes	0.9639953	Parulidae	0.94237185	BZWA	0.8968282	comyel	0.9824401	comyel	0.982440114	2025-06-03	6:55:06 AM	Y
377.8	379.4	0	11025	Passeriformes	0.97212595	Passerellidae	0.9954894	SFHS	0.9899503	whtspa	0.99608433	whtspa	0.996084332	2025-06-04	7:06:18 PM	Y
470.4	472.2	0	11025	Passeriformes	0.96973866	Parulidae	0.95437676			bawwar	0.9973863	bawwar	0.997386277	2025-06-04	7:07:50 PM	Y
1462.8	1464.2	0	11025	Passeriformes	0.95309097	Turdidae	0.93136716	THSH	0.9053096	herthr	0.9999981	herthr	0.999998093	2025-06-04	7:24:23 PM	Y
1491.8	1493.4	0	11025	Passeriformes	0.97134125	Turdidae	0.9569278	THSH	0.9429478	herthr	0.9999989	herthr	0.999998927	2025-06-04	8:24:54 PM	Y
1509.8	1511.6	0	11025	Passeriformes	0.97223556	Parulidae	0.9564803			bawwar	0.9999999	bawwar	0.999999881	2025-06-04	8:25:12 PM	Y
2684	2685.6	0	11025	Passeriformes	0.9695304	Parulidae	0.9483695	SBUF	0.91850764	palwar	0.99999976	palwar	0.999999762	2025-06-04	7:44:44 PM	Y
3383.4	3385.2	0	11025	Passeriformes	0.9721462	Turdidae	0.9593765			amerob	0.99999976	amerob	0.999999762	2025-06-04	8:56:25 PM	Y
50.4	54	0	11025	Passeriformes	0.97214794	Parulidae	0.95609134			bawwar	0.9999999	bawwar	0.999999881	2025-06-05	5:00:52 AM	Y
732.6	734.4	0	11025	Passeriformes	0.9716313	Parulidae	0.9553898			bawwar	0.99999726	bawwar	0.999997258	2025-06-06	5:12:15 AM	Y
1016.2	1017.6	0	11025	Passeriformes	0.9720659	Turdidae	0.9598066			amerob	0.9999999	amerob	0.999999881	2025-06-06	7:16:56 PM	Y
1110.4	1111.8	0	11025	Passeriformes	0.9715973	Turdidae	0.92860264			amerob	0.99988365	amerob	0.999883652	2025-06-06	5:18:32 AM	Y
1788.4	1789.8	0	11025	Passeriformes	0.9721347	Passerellidae	0.9954106	SFHS	0.98978287	whtspa	0.9977106	whtspa	0.997710586	2025-06-06	5:29:50 AM	Y
2842.6	2845.4	0	11025	Passeriformes	0.97197086	Passerellidae	0.99545515			daejun	0.99694675	daejun	0.996946752	2025-06-06	5:47:25 AM	Y
2890.8	2892	0	11025	Passeriformes	0.97223645	Parulidae	0.95634896	DBUP	0.9565806	naswar	0.93494123	naswar	0.934941232	2025-06-06	5:48:13 AM	Y
869.2	870.6	0	11025	Passeriformes	0.9689075	Passerellidae	0.99482876			daejun	0.9964561	daejun	0.996456087	2025-06-08	5:14:31 AM	Y
1996	1997.8	0	11025	Passeriformes	0.97190565	Parulidae	0.95580375			bawwar	0.99999964	bawwar	0.999999642	2025-06-08	5:33:18 AM	Y
3221	3222.8	0	11025	Passeriformes	0.972181	Passerellidae	0.99546367	SFHS	0.9899254	whtspa	0.9953082	whtspa	0.99530822	2025-06-08	5:53:43 AM	Y
3434.6	3436.4	0	11025	Passeriformes	0.9722045	Parulidae	0.95646924			amered	0.9032799	amered	0.903279901	2025-06-08	5:57:17 AM	Y
2340	2341.2	0	11025	Passeriformes	0.96800464	Parulidae	0.94775575	BZWA	0.96011364	comyel	0.99997413	comyel	0.999974132	2025-06-09	10:39:02 PM	Y
2413	2414.8	0	11025	Passeriformes	0.9695249	Passerellidae	0.9941618	SFHS	0.98781186	whtspa	0.9958984	whtspa	0.995898426	2025-06-10	9:40:03 PM	Y
1433	1434.6	0	11025	Passeriformes	0.9707518	Parulidae	0.95302427			canwar	0.99518967	canwar	0.995189667	2025-06-10	10:23:43 PM	Y
95.8	98.2	0	11025	Passeriformes	0.9667545	Sittidae	0.98377866			rebnut	0.9974366	rebnut	0.997436583	2025-06-16	6:01:40 AM	Y
1667.2	1668.6	0	11025	Passeriformes	0.97034746	Turdidae	0.95460224	THSH	0.9391779	herthr	0.99999845	herthr	0.99999845	2025-06-16	6:27:51 AM	Y
3243	3244.8	0	11025	Passeriformes	0.9705867	Passerellidae	0.9942935	SFHS	0.9876764	whtspa	0.9945253	whtspa	0.994525313	2025-06-16	6:54:07 AM	Y
3455.8	3457.2	0	11025	Passeriformes	0.957789	Turdidae	0.9425784			amerob	0.99715257	amerob	0.997152567	2025-06-16	6:57:40 AM	Y
3472.4	3474.2	0	11025	Passeriformes	0.9722091	Parulidae	0.95636976			bawwar	0.99999976	bawwar	0.999999762	2025-06-16	6:57:56 AM	Y
2293.8	2295.4	0	11025	Passeriformes	0.97192603	Turdidae	0.95701534			amerob	0.9999964	amerob	0.999996424	2025-06-22	6:38:18 AM	Y
261.6	263	0	11025	Passeriformes	0.9544946	Turdidae	0.93805254	THSH	0.9147613	herthr	0.9999795	herthr	0.999979496	2025-06-27	7:04:22 PM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1830.6	1832.2	0	11025	Passeriformes	0.9722216	Parulidae	0.95642877			bawwar	0.999998	bawwar	0.999997973	2025-06-27	7:30:31 PM	Y
329.8	331.2	0	11025	Passeriformes	0.9583903	Turdidae	0.9160595	THSH	0.8838261	herthr	0.99999607	herthr	0.999996066	2025-06-30	7:05:30 PM	Y
149.8	151	0	11025	Passeriformes	0.9631265	Passerellidae	0.99344146			daejun	0.9949915	daejun	0.994991481	2025-07-01	7:02:30 PM	Y
413	414.8	0	11025	Passeriformes	0.97218084	Parulidae	0.9562897			bawwar	0.9999999	bawwar	0.999999881	2025-07-01	7:06:53 PM	Y
850	851.6	0	11025	Passeriformes	0.9694253	Turdidae	0.9528978			amerob	0.99995136	amerob	0.999951363	2025-07-01	7:14:10 PM	Y
1034.2	1036.8	0	11025	Charadriiformes	0.9812345	Scolopacidae	0.99562633			greyel	0.99970657	greyel	0.999706566	2025-07-03	6:17:19 AM	Y
3349.8	3351.2	0	11025	Passeriformes	0.9679685	Turdidae	0.9486592	THSH	0.93279153	herthr	0.9999982	herthr	0.999998212	2025-07-03	6:55:55 AM	Y
415.2	416.6	0	11025	Cuculiformes	0.9923779	Cuculidae	0.992857			bkbcuc	0.9997856	bkbcuc	0.999785602	2025-07-04	3:06:57 AM	Y
441.6	443.4	0	11025	Cuculiformes	0.9932805	Cuculidae	0.9940899			bkbcuc	0.99997675	bkbcuc	0.999976754	2025-07-04	3:07:24 AM	Y
467.8	469.2	0	11025	Cuculiformes	0.9932601	Cuculidae	0.99405354			bkbcuc	0.99974054	bkbcuc	0.999740541	2025-07-04	3:07:50 AM	Y
490.2	492	0	11025	Cuculiformes	0.9929547	Cuculidae	0.99353904			bkbcuc	0.9999422	bkbcuc	0.999942183	2025-07-04	3:08:12 AM	Y
671.8	673.6	0	11025	Passeriformes	0.9722297	Parulidae	0.9564209			bawwar	0.9999999	bawwar	0.999999881	2025-07-07	5:11:14 AM	Y
2924.6	2926.4	0	11025	Passeriformes	0.97195387	Passerellidae	0.99534637	SFHS	0.98982275	whtspa	0.997957	whtspa	0.997956991	2025-07-07	5:48:47 AM	Y
1314.6	1316.4	0	11025	Charadriiformes	0.97960645	Charadriidae	0.99951947			semplo	0.905091	semplo	0.905090988	2025-07-07	7:21:55 PM	Y
1349.2	1351	0	11025	Passeriformes	0.97136724	Passerellidae	0.9953446			daejun	0.99684674	daejun	0.996846735	2025-07-07	7:22:29 PM	Y
851	852.6	0	11025	Passeriformes	0.9710616	Passerellidae	0.9954928	SFHS	0.989345	whtspa	0.98816365	whtspa	0.98816365	2025-07-09	9:14:13 PM	Y
1944	1945.8	0	11025	Passeriformes	0.9721734	Passerellidae	0.9955771			daejun	0.9969343	daejun	0.996934295	2025-07-12	5:32:26 AM	Y
1999.4	2000.6	0	11025	Passeriformes	0.972119	Passerellidae	0.99552083	SFHS	0.9899492	whtspa	0.9971916	whtspa	0.997191608	2025-07-12	5:33:21 AM	Y
2067.8	2069.4	0	11025	Passeriformes	0.97206706	Turdidae	0.9594811			amerob	0.9999999	amerob	0.999999881	2025-07-12	5:34:30 AM	Y
3080.4	3082.2	0	11025	Passeriformes	0.97223544	Parulidae	0.9564689			bawwar	0.9999999	bawwar	0.999999881	2025-07-12	5:51:22 AM	Y
3182.2	3183.6	0	11025	Charadriiformes	0.9811621	Charadriidae	0.9995995			semplo	0.96346796	semplo	0.963467956	2025-07-12	5:53:04 AM	Y
1524.2	1525.8	0	11025	Passeriformes	0.97223085	Turdidae	0.95934176	THSH	0.9466021	herthr	0.99999905	herthr	0.999999046	2025-07-13	8:25:26 PM	Y
1607.4	1609	0	11025	Passeriformes	0.9721067	Turdidae	0.9595136			amerob	0.99999976	amerob	0.999999762	2025-07-13	8:26:49 PM	Y
1687.6	1689.4	0	11025	Passeriformes	0.97162265	Passerellidae	0.99541193			daejun	0.9969125	daejun	0.996912479	2025-07-16	5:28:10 AM	Y
3165	3167.8	0	11025	Passeriformes	0.9716213	Passerellidae	0.99506265	SFHS	0.9889703	whtspa	0.9965758	whtspa	0.996575773	2025-07-16	5:52:47 AM	Y
778.6	780	0	11025	Charadriiformes	0.98141253	Charadriidae	0.99962986			semplo	0.9827157	semplo	0.982715726	2025-07-19	9:13:01 PM	Y
2463.4	2465.2	0	11025	Passeriformes	0.9717757	Parulidae	0.9521485	BZWA	0.9806029	comyel	0.99999976	comyel	0.999999762	2025-07-21	7:41:05 PM	Y
187.6	189.2	0	11025	Passeriformes	0.9718393	Turdidae	0.95810854			amerob	0.99999905	amerob	0.999999046	2025-07-25	6:03:08 PM	Y
293.4	294.8	0	11025	Passeriformes	0.965028	Turdidae	0.95419055			amerob	0.9838277	amerob	0.98382771	2025-07-27	6:04:53 PM	Y
316	317.6	0	11025	Passeriformes	0.97175115	Parulidae	0.9539434	SBUF	0.9162264	palwar	0.9999912	palwar	0.999991179	2025-07-27	7:05:18 PM	Y
408.8	410.2	0	11025	Passeriformes	0.96464777	Parulidae	0.89348215	SBUF	0.8460773	palwar	0.99999857	palwar	0.999998569	2025-07-27	7:06:51 PM	Y
412	414.6	0	11025	Passeriformes	0.96947205	Parulidae	0.95315367	SBUF	0.9327856	palwar	0.9999999	palwar	0.999999881	2025-07-27	7:06:54 PM	Y
1448.6	1450.4	0	11025	Passeriformes	0.9720486	Parulidae	0.9542738	SBUF	0.9358236	palwar	0.9999999	palwar	0.999999881	2025-07-27	7:24:11 PM	Y
1458.8	1460.2	0	11025	Passeriformes	0.9671445	Parulidae	0.9436498	SBUF	0.9222168	palwar	0.9999994	palwar	0.999999404	2025-07-27	7:24:21 PM	Y
2948.6	2950	0	11025	Passeriformes	0.9632364	Turdidae	0.9574982			amerob	0.9999994	amerob	0.999999404	2025-07-27	7:49:11 PM	Y
346.2	348	0	11025	Passeriformes	0.9586997	Parulidae	0.9150379	BZWA	0.97424	comyel	0.9999256	comyel	0.999925613	2025-07-27	8:05:48 PM	Y
1109.6	1111	0	11025	Passeriformes	0.97223127	Turdidae	0.9565308			amerob	0.99999714	amerob	0.999997139	2025-07-27	8:18:32 PM	Y
1469.8	1471.6	0	11025	Passeriformes	0.97221214	Passerellidae	0.99554306	SFHS	0.9900525	whtspa	0.9983903	whtspa	0.998390317	2025-07-28	4:24:32 AM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
3036	3037.4	0	11025	Charadriiformes	0.9800531	Scolopacidae	0.99502987			greyel	0.99842227	greyel	0.998422265	2025-07-28	4:50:38 AM	Y
1077.2	1078.6	0	11025	Passeriformes	0.96761346	Parulidae	0.9258271	SBUF	0.9083304	palwar	0.9999126	palwar	0.99991262	2025-07-28	6:17:57 PM	Y
1789.2	1790.8	0	11025	Passeriformes	0.9707418	Parulidae	0.947265	SBUF	0.8544891	palwar	0.99999785	palwar	0.999997854	2025-07-28	7:29:51 PM	Y
2685.6	2687.2	0	11025	Charadriiformes	0.98132885	Scolopacidae	0.9955348			greyel	0.99963367	greyel	0.99963367	2025-07-29	4:44:48 AM	Y
2694.4	2696.6	0	11025	Charadriiformes	0.98118067	Scolopacidae	0.9954136			greyel	0.99970007	greyel	0.999700069	2025-07-29	4:44:56 AM	Y
3136.4	3138.2	0	11025	Passeriformes	0.96783966	Parulidae	0.9512881			wlswar	0.9754946	wlswar	0.975494623	2025-07-30	11:52:20 PM	Y
1512.6	1514	0	11025	Charadriiformes	0.9812416	Scolopacidae	0.99536407			greyel	0.9996929	greyel	0.999692917	2025-07-31	3:25:15 AM	Y
3372.8	3374.4	0	11025	Passeriformes	0.97222406	Parulidae	0.9555719	ZEEP	0.9586422	norwat	0.9999889	norwat	0.999988914	2025-07-31	3:56:15 AM	Y
3556.2	3558	0	11025	Passeriformes	0.9721568	Parulidae	0.95607513			amered	0.90303457	amered	0.903034568	2025-07-31	3:59:18 AM	Y
2599.4	2601	0	11025	Passeriformes	0.97206086	Passerellidae	0.99505866	SFHS	0.98552936	whtspa	0.9937757	whtspa	0.993775725	2025-08-01	6:43:19 PM	Y
3128	3129.2	0	11025	Passeriformes	0.9701656	Passerellidae	0.9951148			daejun	0.9968004	daejun	0.996800423	2025-08-01	6:52:08 PM	Y
787.6	789.4	0	11025	Passeriformes	0.97217	Turdidae	0.95926493	THSH	0.94665486	herthr	0.9999988	herthr	0.999998808	2025-08-01	9:13:10 PM	Y
214.8	216	0	11025	Charadriiformes	0.9475816	Scolopacidae	0.98780626			shbdow	0.99885726	shbdow	0.99885726	2025-08-02	7:03:37 PM	Y
362.4	364.2	0	11025	Charadriiformes	0.98133343	Scolopacidae	0.9956338			leasan	0.9999999	leasan	0.999999881	2025-08-02	8:06:04 PM	Y
3492.8	3494.6	0	11025	Charadriiformes	0.978676	Scolopacidae	0.9948419			leasan	0.99999976	leasan	0.999999762	2025-08-02	11:58:17 PM	Y
1078.6	1080.2	0	11025	Charadriiformes	0.9808592	Scolopacidae	0.9941182			leasan	0.99999964	leasan	0.999999642	2025-08-04	9:18:01 PM	Y
1107.8	1109.2	0	11025	Charadriiformes	0.9672848	Scolopacidae	0.93964076			leasan	0.98534226	leasan	0.985342264	2025-08-04	9:18:30 PM	Y
447.4	449	0	11025	Passeriformes	0.9721439	Parulidae	0.9564172			amered	0.9031052	amered	0.903105199	2025-08-05	4:07:29 AM	Y
504.8	506.4	0	11025	Passeriformes	0.97223645	Parulidae	0.95619196	ZEEP	0.96206594	norwat	0.9989661	norwat	0.998966098	2025-08-05	4:08:27 AM	Y
1023.4	1025.2	0	11025	Passeriformes	0.9713135	Passerellidae	0.99396247	SFHS	0.9884007	whtspa	0.9974119	whtspa	0.997411907	2025-08-05	4:17:05 AM	Y
2872.4	2874	0	11025	Passeriformes	0.9719847	Parulidae	0.95554185			canwar	0.9948303	canwar	0.99483031	2025-08-05	4:47:54 AM	Y
682	683.8	0	11025	Passeriformes	0.9720923	Parulidae	0.95619565			wlswar	0.9951953	wlswar	0.995195329	2025-08-05	11:11:26 PM	Y
2142.2	2144	0	11025	Passeriformes	0.9649454	Parulidae	0.95079076			amered	0.88559806	amered	0.885598063	2025-08-06	12:35:44 AM	Y
3399	3400.8	0	11025	Passeriformes	0.972224	Parulidae	0.95630753			bawwar	0.99999976	bawwar	0.999999762	2025-08-06	12:56:41 AM	Y
399	400.8	0	11025	Passeriformes	0.9721682	Parulidae	0.95623076			bawwar	0.99999976	bawwar	0.999999762	2025-08-06	3:06:41 AM	Y
2310.4	2312.4	0	11025	Charadriiformes	0.9811029	Scolopacidae	0.9952922			sposan	0.9994604	sposan	0.999460399	2025-08-06	4:38:32 AM	Y
187.4	189	0	11025	Passeriformes	0.9722272	Turdidae	0.95961183			amerob	0.9999999	amerob	0.999999881	2025-08-06	6:03:07 PM	Y
298.2	300	0	11025	Passeriformes	0.97176963	Parulidae	0.95593			amered	0.90216374	amered	0.902163744	2025-08-06	6:04:58 PM	Y
366.8	368.8	0	11025	Passeriformes	0.97215444	Passerellidae	0.99557364			daejun	0.9970049	daejun	0.997004926	2025-08-06	6:06:07 PM	Y
702.4	704	0	11025	Passeriformes	0.9686933	Passerellidae	0.9941315	SFHS	0.9849203	whtspa	0.9903301	whtspa	0.9903301	2025-08-06	6:11:42 PM	Y
1726	1727.8	0	11025	Passeriformes	0.9722276	Turdidae	0.9597683			amerob	0.9999999	amerob	0.999999881	2025-08-06	6:28:46 PM	Y
1879.6	1881.2	0	11025	Passeriformes	0.9704131	Turdidae	0.92411035			amerob	0.9974221	amerob	0.997422099	2025-08-06	6:31:20 PM	Y
1882.8	1884.4	0	11025	Charadriiformes	0.9813138	Scolopacidae	0.99561703			greyel	0.99959725	greyel	0.999597251	2025-08-06	7:31:25 PM	Y
1070.2	1071.6	0	11025	Charadriiformes	0.9725864	Scolopacidae	0.99069804			sposan	0.9830071	sposan	0.983007073	2025-08-07	1:17:52 AM	Y
1087.4	1088.8	0	11025	Charadriiformes	0.97584516	Scolopacidae	0.9917532			sposan	0.9967871	sposan	0.996787071	2025-08-07	1:18:09 AM	Y
1371	1372.4	0	11025	Passeriformes	0.9522293	Parulidae	0.9372473			wlswar	0.9467584	wlswar	0.946758389	2025-08-07	1:22:53 AM	Y
287	289	0	11025	Charadriiformes	0.9813959	Scolopacidae	0.9956375			sposan	0.9995204	sposan	0.999520421	2025-08-07	11:04:51 PM	Y
1839.2	1841.6	0	11025	Charadriiformes	0.98140806	Scolopacidae	0.99562174			sposan	0.99953306	sposan	0.999533057	2025-08-07	11:30:43 PM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1921.8	1923.4	0	11025	Passeriformes	0.97216415	Parulidae	0.95009863	ZEEP	0.9545612	norwat	0.999997	norwat	0.99999702	2025-08-07	11:32:06 PM	Y
1927.6	1929.2	0	11025	Passeriformes	0.9692703	Parulidae	0.95277625			wlswar	0.9697519	wlswar	0.969751894	2025-08-07	11:32:12 PM	Y
1615.4	1616.6	0	11025	Passeriformes	0.97125334	Turdidae	0.9545468			amerob	0.99999774	amerob	0.999997735	2025-08-08	6:26:55 PM	Y
3250	3251.6	0	11025	Passeriformes	0.97075564	Turdidae	0.9538896	THSH	0.93793464	herthr	0.9999914	herthr	0.999991417	2025-08-08	6:54:10 PM	Y
270.8	272.2	0	11025	Passeriformes	0.9691827	Turdidae	0.9561334			amerob	0.99941266	amerob	0.999412656	2025-08-08	7:04:33 PM	Y
2794.6	2796	0	11025	Passeriformes	0.9704851	Turdidae	0.9547734	THSH	0.93872887	herthr	0.999998	herthr	0.999997973	2025-08-08	7:46:37 PM	Y
3210.4	3212.2	0	11025	Passeriformes	0.9715137	Turdidae	0.9579272	THSH	0.94429064	herthr	0.9999988	herthr	0.999998808	2025-08-08	7:53:32 PM	Y
1108.8	1110	0	11025	Passeriformes	0.97011244	Turdidae	0.9547218	THSH	0.940379	herthr	0.99999225	herthr	0.999992251	2025-08-08	8:18:31 PM	Y
1153	1154.8	0	11025	Passeriformes	0.97221273	Turdidae	0.95824075	THSH	0.9449688	herthr	0.9999988	herthr	0.999998808	2025-08-08	8:19:15 PM	Y
2433.8	2435.4	0	11025	Passeriformes	0.9668601	Turdidae	0.9344621	THSH	0.9068935	herthr	0.9999943	herthr	0.999994278	2025-08-08	8:40:36 PM	Y
2616.8	2618.4	0	11025	Passeriformes	0.97150064	Turdidae	0.9051402	THSH	0.87770337	herthr	0.9999542	herthr	0.999954224	2025-08-08	8:43:39 PM	Y
3347.6	3349.4	0	11025	Passeriformes	0.9681153	Turdidae	0.95512265	THSH	0.93984234	herthr	0.9999975	herthr	0.999997497	2025-08-08	8:55:50 PM	Y
3352.8	3354.6	0	11025	Passeriformes	0.97168016	Turdidae	0.9594633			amerob	0.99999964	amerob	0.999999642	2025-08-08	8:55:55 PM	Y
3459.2	3460.8	0	11025	Passeriformes	0.9696147	Turdidae	0.95568985	THSH	0.94087607	herthr	0.99999833	herthr	0.999998331	2025-08-08	8:57:41 PM	Y
865.4	867	0	11025	Passeriformes	0.97219014	Parulidae	0.9562578	SBUF	0.9259598	ovenbi1	0.9244669	ovenbi1	0.924466908	2025-08-09	8:14:27 PM	Y
1320.6	1322.2	0	11025	Passeriformes	0.97185844	Turdidae	0.9586141	THSH	0.94513744	herthr	0.9999989	herthr	0.999998927	2025-08-09	8:22:03 PM	Y
546.8	548.4	0	11025	Passeriformes	0.9706119	Parulidae	0.95391846			wlswar	0.9932985	wlswar	0.993298471	2025-08-10	1:09:09 AM	Y
3496.2	3497.8	0	11025	Passeriformes	0.9697188	Passerellidae	0.9927448			daejun	0.9955901	daejun	0.995590091	2025-08-10	2:58:18 AM	Y
2174.8	2178.4	0	11025	Passeriformes	0.972233	Passerellidae	0.99558395			daejun	0.9970112	daejun	0.997011185	2025-08-10	7:36:17 PM	Y
2565	2566.6	0	11025	Passeriformes	0.9713746	Parulidae	0.95459235	BZWA	0.9744503	comyel	0.99999976	comyel	0.999999762	2025-08-10	7:42:47 PM	Y
3587.2	3588.4	0	11025	Charadriiformes	0.9797432	Scolopacidae	0.99503064			greyel	0.98667204	greyel	0.986672044	2025-08-10	7:59:49 PM	Y
3596	3597.6	0	11025	Charadriiformes	0.9783718	Scolopacidae	0.99464613			greyel	0.9987826	greyel	0.998782575	2025-08-10	7:59:58 PM	Y
3307.8	3309.4	0	11025	Passeriformes	0.9706975	Passerellidae	0.9951381			daejun	0.9967182	daejun	0.996718228	2025-08-10	8:55:10 PM	Y
1652.2	1654	0	11025	Passeriformes	0.9718755	Parulidae	0.9555241			amered	0.90284747	amered	0.902847469	2025-08-11	6:27:32 PM	Y
3578.2	3579.8	0	11025	Passeriformes	0.9710388	Passerellidae	0.99539316			daejun	0.9967309	daejun	0.996730924	2025-08-11	6:59:38 PM	Y
137	138.6	0	11025	Passeriformes	0.97166675	Parulidae	0.95264065			bawwar	0.9999994	bawwar	0.999999404	2025-08-11	7:02:19 PM	Y
3522	3523.8	0	11025	Passeriformes	0.97210646	Passerellidae	0.99529016	SFHS	0.9879667	whtspa	0.9959557	whtspa	0.995955706	2025-08-11	7:58:44 PM	Y
3523	3525	0	11025	Passeriformes	0.9722376	Passerellidae	0.99559206			daejun	0.9970124	daejun	0.997012377	2025-08-11	7:58:45 PM	Y
3532.8	3535.6	0	11025	Passeriformes	0.9722177	Parulidae	0.9531223	BZWA	0.98205745	comyel	0.99999976	comyel	0.999999762	2025-08-11	7:58:55 PM	Y
1037	1038.6	0	11025	Passeriformes	0.97214	Parulidae	0.95602036			bawwar	0.990267	bawwar	0.990266979	2025-08-12	1:17:19 AM	Y
1074	1075.6	0	11025	Passeriformes	0.9649317	Parulidae	0.94945073			wlswar	0.9592328	wlswar	0.959232807	2025-08-12	1:17:56 AM	Y
1263.6	1265.4	0	11025	Passeriformes	0.97218883	Parulidae	0.9560697	BZWA	0.98305976	comyel	0.9999999	comyel	0.999999881	2025-08-12	1:21:06 AM	Y
1668	1669.6	0	11025	Charadriiformes	0.9813644	Scolopacidae	0.99560404			greyel	0.9993156	greyel	0.999315619	2025-08-12	1:27:50 AM	Y
679	680.4	0	11025	Passeriformes	0.97181475	Parulidae	0.9512742	MWAR	0.9987081	mouwar	0.9931473	mouwar	0.993147314	2025-08-12	2:11:21 AM	Y
697.4	699	0	11025	Passeriformes	0.9713757	Parulidae	0.9549657			bawwar	0.99999964	bawwar	0.999999642	2025-08-12	2:11:39 AM	Y
885.4	886.6	0	11025	Passeriformes	0.9720001	Parulidae	0.955668	BZWA	0.9369934	comyel	0.999777	comyel	0.999777019	2025-08-12	2:14:47 AM	Y
1179.8	1181.6	0	11025	Passeriformes	0.9722143	Parulidae	0.9552283	ZEEP	0.96062636	norwat	0.99999917	norwat	0.999999166	2025-08-12	2:19:42 AM	Y
2480.6	2482.2	0	11025	Passeriformes	0.97208303	Parulidae	0.95625746			amered	0.9028133	amered	0.902813315	2025-08-12	2:41:23 AM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
441.8	443.6	0	11025	Passeriformes	0.971632	Sittidae	0.9844318			rebnut	0.99802643	rebnut	0.998026431	2025-08-12	3:07:24 AM	Y
443.8	445.8	0	11025	Passeriformes	0.97219443	Sittidae	0.98455584			rebnut	0.9981495	rebnut	0.998149514	2025-08-12	3:07:26 AM	Y
1356	1357.4	0	11025	Passeriformes	0.96975136	Parulidae	0.9510488			wlswar	0.9748771	wlswar	0.974877119	2025-08-12	4:22:38 AM	Y
1598.6	1600.2	0	11025	Charadriiformes	0.98121417	Scolopacidae	0.99556017			greyel	0.9994844	greyel	0.99948442	2025-08-12	4:26:41 AM	Y
393.4	394.8	0	11025	Passeriformes	0.96325785	Passerellidae	0.99335194			daejun	0.99551153	daejun	0.995511532	2025-08-12	7:06:35 PM	Y
593.8	595.8	0	11025	Passeriformes	0.9722286	Passerellidae	0.99556714			daejun	0.99700314	daejun	0.997003138	2025-08-12	7:09:56 PM	Y
1755.8	1757.4	0	11025	Passeriformes	0.97123474	Turdidae	0.95722795			amerob	0.99998736	amerob	0.999987364	2025-08-12	7:29:18 PM	Y
1946	1948.6	0	11025	Passeriformes	0.97214276	Passerellidae	0.9914289			daejun	0.9966185	daejun	0.996618509	2025-08-12	7:32:28 PM	Y
2104.6	2106.8	0	11025	Passeriformes	0.9716433	Passerellidae	0.9950736			daejun	0.9963983	daejun	0.99639833	2025-08-12	7:35:07 PM	Y
2358.6	2361.6	0	11025	Passeriformes	0.9717924	Passerellidae	0.9954326			daejun	0.9969471	daejun	0.99694711	2025-08-12	7:39:21 PM	Y
3545.6	3547	0	11025	Passeriformes	0.9712742	Turdidae	0.9019605			amerob	0.9992912	amerob	0.999291182	2025-08-12	7:59:08 PM	Y
848.2	850.2	0	11025	Passeriformes	0.9681539	Passerellidae	0.9931103			daejun	0.99627954	daejun	0.996279538	2025-08-12	8:14:10 PM	Y
995.2	996.6	0	11025	Passeriformes	0.97162277	Parulidae	0.9533535	BZWA	0.9680099	comyel	0.99999917	comyel	0.999999166	2025-08-12	8:16:37 PM	Y
543	544.8	0	11025	Passeriformes	0.96868604	Parulidae	0.9519437	BZWA	0.9753338	comyel	0.9968887	comyel	0.996888697	2025-08-13	1:09:05 AM	Y
3066.6	3068.2	0	11025	Passeriformes	0.97194934	Parulidae	0.9557856			wlswar	0.98841685	wlswar	0.988416851	2025-08-13	1:51:09 AM	Y
245.6	247.2	0	11025	Passeriformes	0.9588827	Parulidae	0.9437227			wlswar	0.9847238	wlswar	0.984723806	2025-08-13	2:04:08 AM	Y
748	749.8	0	11025	Passeriformes	0.9720844	Parulidae	0.9548544			bawwar	0.99999976	bawwar	0.999999762	2025-08-13	4:12:30 AM	Y
1190.6	1192.4	0	11025	Passeriformes	0.972071	Parulidae	0.95621496			amered	0.902941	amered	0.902940989	2025-08-13	4:19:53 AM	Y
1558.4	1560	0	11025	Passeriformes	0.9720843	Parulidae	0.9550715	MWAR	0.99898964	mouwar	0.99440163	mouwar	0.994401634	2025-08-13	4:26:00 AM	Y
1889	1890.4	0	11025	Passeriformes	0.9605884	Turdidae	0.95359	THSH	0.9394951	swathr	0.8720401	swathr	0.872040093	2025-08-13	4:31:31 AM	Y
2809.2	2810.4	0	11025	Passeriformes	0.9721218	Parulidae	0.9552076	ZEEP	0.95877784	norwat	0.9999013	norwat	0.999901295	2025-08-13	4:46:51 AM	Y
500.6	502.4	0	11025	Cuculiformes	0.9926891	Cuculidae	0.9932266			bkbcuc	0.99992406	bkbcuc	0.999924064	2025-08-13	10:08:23 PM	Y
2573.6	2574.8	0	11025	Passeriformes	0.9718898	Parulidae	0.9553984	BZWA	0.9824157	comyel	0.99866855	comyel	0.998668551	2025-08-13	11:42:58 PM	Y
3077.2	3078.4	0	11025	Passeriformes	0.9719535	Parulidae	0.95535445			wlswar	0.99372923	wlswar	0.993729234	2025-08-13	11:51:21 PM	Y
3150	3151.4	0	11025	Passeriformes	0.97196317	Parulidae	0.95564437	SBUF	0.9308633	ovenbi1	0.91539913	ovenbi1	0.915399134	2025-08-13	11:52:34 PM	Y
367.6	369	0	11025	Passeriformes	0.9711685	Parulidae	0.9544747	BZWA	0.98199683	chswar	0.9640532	chswar	0.964053214	2025-08-14	12:06:10 AM	Y
676.4	677.8	0	11025	Passeriformes	0.97217214	Parulidae	0.9341268	ZEEP	0.9488551	norwat	0.99998546	norwat	0.999985456	2025-08-14	12:11:18 AM	Y
797.6	798.8	0	11025	Passeriformes	0.97205836	Parulidae	0.95609814			amered	0.9028015	amered	0.902801514	2025-08-14	12:13:20 AM	Y
1334.2	1336	0	11025	Passeriformes	0.9722066	Parulidae	0.9561	BZWA	0.9805962	comyel	0.99999607	comyel	0.999996066	2025-08-14	12:22:16 AM	Y
1348.2	1350	0	11025	Passeriformes	0.9722304	Parulidae	0.95631504	BZWA	0.9832122	comyel	0.9999999	comyel	0.999999881	2025-08-14	12:22:30 AM	Y
1397.6	1398.8	0	11025	Passeriformes	0.9700206	Parulidae	0.9450592	SBUF	0.9243084	palwar	0.9999957	palwar	0.999995708	2025-08-14	12:23:20 AM	Y
1531	1532.8	0	11025	Passeriformes	0.97223747	Parulidae	0.9564807			bawwar	0.9999999	bawwar	0.999999881	2025-08-14	12:25:33 AM	Y
1637	1638.8	0	11025	Passeriformes	0.9721076	Passerellidae	0.9954352	SFHS	0.98995835	whtspa	0.99842	whtspa	0.99842	2025-08-14	12:27:19 AM	Y
1071.6	1073.4	0	11025	Passeriformes	0.97205484	Parulidae	0.95560074			wlswar	0.99549675	wlswar	0.99549675	2025-08-14	1:17:54 AM	Y
303	304.2	0	11025	Passeriformes	0.97107834	Passerellidae	0.99431866	SFHS	0.9876337	whtspa	0.9844616	whtspa	0.984461606	2025-08-14	2:05:05 AM	Y
695	696.4	0	11025	Passeriformes	0.9453591	Passerellidae	0.9861421			daejun	0.9940363	daejun	0.994036317	2025-08-14	2:11:37 AM	Y
1639	1640.6	0	11025	Passeriformes	0.9722305	Parulidae	0.9564251	SBUF	0.9401879	ovenbi1	0.9605863	ovenbi1	0.960586309	2025-08-14	2:27:21 AM	Y
139.6	141.4	0	11025	Passeriformes	0.97193795	Parulidae	0.9562033			amered	0.90264326	amered	0.902643263	2025-08-14	3:02:22 AM	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1971	1972.8	0	11025	Passeriformes	0.97222847	Parulidae	0.95634687			bawwar	0.99999976	bawwar	0.999999762	2025-08-14	3:32:53 AM	Y
3569.8	3571.6	0	11025	Passeriformes	0.9722234	Parulidae	0.9562747	MWAR	0.999138	mouwar	0.9967573	mouwar	0.996757329	2025-08-14	3:59:32 AM	Y
3584	3585.4	0	11025	Passeriformes	0.97207	Parulidae	0.9507572	MWAR	0.99889284	mouwar	0.94808644	mouwar	0.948086441	2025-08-14	3:59:46 AM	Y
3594.4	3595.8	0	11025	Passeriformes	0.9713534	Parulidae	0.95333153	MWAR	0.9986129	mouwar	0.9851835	mouwar	0.985183477	2025-08-14	3:59:56 AM	Y
130	131.8	0	11025	Passeriformes	0.972234	Parulidae	0.9562989	MWAR	0.9991605	mouwar	0.9959479	mouwar	0.995947897	2025-08-15	1:02:12 AM	Y
520.2	522	0	11025	Passeriformes	0.9722047	Parulidae	0.95585495	MWAR	0.99906343	mouwar	0.9949108	mouwar	0.994910777	2025-08-15	1:08:42 AM	Y
1220.4	1222.2	0	11025	Passeriformes	0.97223127	Parulidae	0.95645505			bawwar	0.99999964	bawwar	0.999999642	2025-08-15	1:20:22 AM	Y
2819.8	2821	0	11025	Charadriiformes	0.98144287	Scolopacidae	0.995708			solsan	0.9438714	solsan	0.943871379	2025-08-15	1:47:02 AM	Y
3337.4	3339.2	0	11025	Passeriformes	0.972172	Parulidae	0.9564559			amered	0.9031284	amered	0.903128386	2025-08-15	1:55:39 AM	Y
795.2	797	0	11025	Charadriiformes	0.98140126	Scolopacidae	0.9956571			sposan	0.9994573	sposan	0.9994573	2025-08-15	9:13:17 PM	Y
3247	3248.4	0	11025	Passeriformes	0.96295285	Turdidae	0.9478468	THSH	0.93109226	swathr	0.85390735	swathr	0.853907347	2025-08-17	2:54:09 AM	Y
1609	1610.4	0	11025	Passeriformes	0.971483	Parulidae	0.95231247	SBUF	0.9230113	ovenbi1	0.90612805	ovenbi1	0.906128049	2025-08-18	12:26:51 AM	Y
1196.6	1198	0	11025	Passeriformes	0.9716741	Parulidae	0.9552171	BZWA	0.9678178	comyel	0.9999589	comyel	0.999958873	2025-08-18	1:19:59 AM	Y
2040	2041.8	0	11025	Passeriformes	0.97186613	Turdidae	0.958899	THSH	0.94597644	swathr	0.8803677	swathr	0.880367696	2025-08-18	1:34:02 AM	Y
266	267.6	0	11025	Passeriformes	0.9716822	Parulidae	0.9531154			bawwar	0.99999774	bawwar	0.999997735	2025-08-18	2:04:28 AM	Y
596.2	597.8	0	11025	Passeriformes	0.97208416	Passerellidae	0.9954259	SFHS	0.98975813	whtspa	0.9982181	whtspa	0.998218119	2025-08-18	2:09:58 AM	Y
1781.2	1783	0	11025	Passeriformes	0.9719507	Parulidae	0.95627177			amered	0.9031082	amered	0.90310818	2025-08-18	2:29:43 AM	Y
1936.8	1938.6	0	11025	Passeriformes	0.9716095	Parulidae	0.95396495	MWAR	0.99880195	mouwar	0.98822826	mouwar	0.988228261	2025-08-18	2:32:19 AM	Y
2994.2	2996	0	11025	Passeriformes	0.9720767	Passerellidae	0.9954151	DESP	0.99155384	savspa	0.998058	savspa	0.998058021	2025-08-18	2:49:56 AM	Y
3285.4	3287	0	11025	Passeriformes	0.954953	Parulidae	0.911597	BZWA	0.8993226	chswar	0.8915753	chswar	0.891575277	2025-08-18	2:54:47 AM	Y
5	6.8	0	11025	Passeriformes	0.97175705	Parulidae	0.9555199			canwar	0.9553551	canwar	0.955355108	2025-08-18	3:00:07 AM	Y
98.6	100.2	0	11025	Passeriformes	0.9718441	Parulidae	0.95593995			bawwar	0.9999889	bawwar	0.999988914	2025-08-18	3:01:41 AM	Y
649.8	651.6	0	11025	Passeriformes	0.97104293	Parulidae	0.9547137			wlswar	0.9925242	wlswar	0.992524207	2025-08-18	3:10:52 AM	Y
1022.4	1024.2	0	11025	Passeriformes	0.9718677	Parulidae	0.9523411	ZEEP	0.9613061	norwat	0.9999994	norwat	0.999999404	2025-08-18	3:17:04 AM	Y
1572	1573.8	0	11025	Passeriformes	0.97222024	Parulidae	0.95642984			amered	0.90318966	amered	0.903189659	2025-08-18	3:26:14 AM	Y
326.8	328.6	0	11025	Passeriformes	0.9722248	Parulidae	0.95647573			amered	0.9033262	amered	0.903326213	2025-08-18	4:05:29 AM	Y
1410.2	1412	0	11025	Passeriformes	0.97077584	Parulidae	0.9538542			wlswar	0.98960423	wlswar	0.989604235	2025-08-18	4:23:32 AM	Y
1711.4	1713.2	0	11025	Passeriformes	0.968614	Parulidae	0.9522997	BZWA	0.9743154	comyel	0.99986124	comyel	0.99986124	2025-08-18	4:28:33 AM	Y
2166.8	2168.2	0	11025	Passeriformes	0.972231	Parulidae	0.95643723			bawwar	0.9970342	bawwar	0.997034192	2025-08-18	4:36:09 AM	Y
3544.8	3546.4	0	11025	Passeriformes	0.9719141	Parulidae	0.95507747	MWAR	0.9982638	mouwar	0.97616607	mouwar	0.97616607	2025-08-18	4:59:07 AM	Y

strum

CONSULTING

BASELINE RADAR/ACOUSTIC REPORT, TWIN LAKES WIND PROJECT AREA
EVREC Green Energy Hub
Near Botwood, NL

May 11, 2026

EXECUTIVE SUMMARY

Exploits Valley Renewable Energy Corporation (EVREC), is proposing to develop, construct, and operate a wind to green ammonia project near Botwood, in central Newfoundland (the “Project”). EVREC will develop a wind project consisting of up to 534 wind turbines, a 150 megawatt (MW) solar project area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an industrial facility. For the purposes of this baseline study, only the Wind Project Area (WPA) was assessed.

A full year of avian radar and acoustic monitoring was completed beginning spring of 2024 to November 2024 to assess target movements and species presence within the WPA, and to support the assessment of the potential effects of the Project on avifauna. Both systems were deployed simultaneously in an open area near Marks Lake, approximately 700 m of the closest boundary of the Twin Lake Wind Project Area (TLWPA).

The results of the avian radar program showed varying levels of target detections within the WPA, with most detections occurring in mid-April and early to mid September. Target detected within the radar also primarily occurred above the rotor swept area where avian species will interact with the WPA infrastructures. A variety of environmental and climatic factors were investigated to determine any influences on migration timing, which results demonstrated some variability in influences between the external factors. Similarly, the results of the avian acoustic program showed high detections in peak migratory periods, with April, May, September and October seeing high positive identifications of species within the WPA. No Species at Risk (SAR) or Species of Conservation Concern (SOCC) was identified within the dataset.

The results above provided an overview of baseline conditions within the WPA, including number of target detections, migration timing, and species presence and diversity. The TLWPA is primarily located inland, therefore occurrences of shorebirds and seabirds within the WPA were low. Despite some level of data gaps in-between the monitoring period, the results of the avian radar and acoustic monitoring help to predict potential migration timing that may occur within the WPA when infrastructures are operational.

TABLE OF CONTENTS

page

1.0 INTRODUCTION 1
2.0 REGULATORY CONTEXT 2
3.0 AVIAN RADAR SYSTEM 3
3.1 Radar Methodology 3
3.1.1 Acoustic Radar System Deployment 3
3.1.1.1 Habitat Description 4
3.1.1.2 Avian Radar Assessment 4
3.1.1.3 Discussion of Migration Cues in Radar Results 4
3.1.1.4 Discussion of Migratory Bird Density in Radar Results 5
3.1.1.5 Avian Interaction Model 6
3.2 Avian Radar Assessment 7
3.2.1 Cues for Avian Migration 9
3.2.2 Migratory Bird Density 14
3.2.3 Migratory Bird Interaction Index 15
4.0 ACOUSTIC RECORDING UNIT 17
4.1 Avian Acoustic Methodology 17
4.1.1 Avian Acoustic Monitor Deployment 17
4.1.2 Avian Acoustic Data Processing 17
4.1.2.1 Nighthawk 18
4.1.2.2 Raven Pro 18
4.2 Acoustic Monitoring Results 18
4.2.1 2023 Nighthawk Results 19
4.2.2 2024 Nighthawk Results 23
5.0 DISCUSSION 28
5.1 Radar 28
5.1.1 Cues for Avian Migration 28
5.1.2 Migratory Bird Density 29
5.1.3 Avian Interaction Model 29
5.2 Acoustics 29
5.2.1 Detection of Vocalizations 30
5.2.2 Species Richness 30
5.3 General Avian Migration Trends 30
5.3.1 Radar and Acoustic 30
6.0 SUMMARY 31
6.1 Radar 31
6.2 Acoustics 31
6.3 Notable Migration Times 32
7.0 LIMITATIONS 32
7.1 Radar Data 32

7.2 Nighthawk 33
8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY 34
9.0 REFERENCES 36

LIST OF FIGURES

Figure 3.1: Number of BTs Detected throughout the 2024 Monitoring Period at Marks Lake 8
Figure 3.2: Wind Direction by Number of BTs Detected, Spring 2024 9
.....10
Figure 3.3: Wind Direction by Number of BTs Detected, Fall 2024 10
Figure 3.4: Wind Speed (km/h) by Number of BTs Detected, Spring 2024 11
.....11
Figure 3.5: Wind Speed (km/h) by Number of BTs Detected, Fall 2024 11
Figure 3.6: Number of BTs Detected during the 2024 ARS Monitoring Campaign compared to Daily Average Temperatures (°C) 12
Figure 3.7: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Moonlight Exposure (%) 13
Figure 3.8: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Moonlight Exposure (%) 13
.....14
Figure 3.9: Number of Targets Detected and Target Density within Height Bins – Spring 2024 14
.....15
Figure 3.10: Number of Targets Detected and Target Density within Height Bins – Fall 2024 15
Figure 3.11: Migratory Bird Interaction Index – Projected Daily for the Spring 2024 Monitoring Period 16
Figure 3.12: Migratory Bird Interaction Index – Projected Daily for the Fall 2024 Monitoring Period ...16
Figure 4.1: Total Number of Detections made by Nighthawk during the 2023/January 2024 TLWPA Monitoring Period 19
Figure 4.2: Total Number of Detections made by Nighthawk during the 2023/January 2024 Acoustic Monitoring Period across the ARU 22
.....23
Figure 4.3: Nighthawk Species Richness during the 2023/January 2024 TLWPA Monitoring Period .23
Figure 4.4: Total number of Detections made by Nighthawk during the 2024 TLWPA Monitoring Period 24
Figure 4.5: Nighthawk Positive Detections during the 2024 TLWPA Monitoring Period 27
Figure 4.6: Nighthawk Species Richness during the 2024 TLWPA Monitoring Period 28

LIST OF TABLES

Table 3.1: Date Range when the ARS was Active within the TLWPA 3
Table 3.2: Airspace Scanned (km^3) within the ARS' Height Bins 5
Table 3.3: Turbine – Avifauna Interaction Volume Calculation Information 6
Table 3.4: Number of BTs Detected in the Marks Lake ARS Height Bins during the 2024 Monitoring Period 8

Table 3.5: Target Density detected in the ARS height bins during the 2024 monitoring period. 14
Table 4.1: Date Range when the ARU was Active within the BWPA 17
Table 4.2: Summary of 2023 Nighthawk Results[1] 19
Table 4.3: Summary of Species Confirmed During the 2023/January 2024 Nighthawk Acoustic Analysis 22
Table 4.4: Summary of 2024 Nighthawk Results[1] 24
Table 4.5: Summary of Species Confirmed During the 2024 Nighthawk Acoustic Analysis.....27

LIST OF APPENDICES

Appendix A: Drawings
Appendix B: Tables

LIST OF ACRONYMS

ARS	Avian radar system
ARU	Autonomous recording unit
BWPA	Botwood Wind Project Area
BT	Biological Targets
CEPA	*Canadian Environmental Protection Act*
CWS	Canadian Wildlife Service
EIS	Environmental Impact Statement
ECCC	Environment and Climate Change Canada
EVREC	Exploits Valley Renewable Energy Corporation
GW	Gigawatt
ha	Hectare
Hz	Hertz
km	kilometre
km/hr	kilometre/hour
LTWPA	Leading Tickles Wind Project Area
MW	Megawatt
MBCA	*Migratory Bird Convention Act*
MBR	Migratory Bird Regulations
MBII	Migratory Bird Interaction Index
MW	Megawatt
m	Metre
mm	millimetre
nBTs	Number of biological targets
NFC	Nocturnal flight calls
NL ESA	Newfoundland and Labrador *Endangered Species Act*
SAR	Species at risk
SARA	*Species at Risk Act*
SLWPA	Seabrights Lakes Wind Project Area
SOCC	Species of conservation concern
TLWPA	Twin Lakes Wind Project Area
V	Volts
WTG	Wind turbine generator

1.0 INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC, the "Proponent"), is proposing to develop, construct, and operate a wind to green ammonia project on the brownfield, former Abitibi lands, near Botwood in central Newfoundland, Canada (the "Project") (Drawing 1, Appendix A). EVREC will develop an onshore wind project consisting of up to 534 wind turbines, a 150-megawatt (MW) Solar Area, and associated off-site infrastructure (export and import terminals, access roads, collector substations, and water pipelines). Included as part of the Project will be an Industrial Facility comprised of 2.6 gigawatt (GW) of electrolysers utilizing a combination of proton exchange membrane and aqueous solution units, air separation plants, ammonia plant, electrical energy storage facilities, molecular storage, water purification systems, warehousing, administrative buildings, and other associated utility infrastructure (switchyards, transformers, pipelines, emergency generators, and cooling systems) including an electrical grid connection for critical loads.

The Project nameplate capacity will be up to 3.5 GW of electrical power and produce 925,000 to 1,000,000 tons per year of certified green ammonia. The Project is considered an undertaking under Section 34 (1f) of the Newfoundland and Labrador Environmental Assessment Regulations, (2003), where electrical power generation that has a capacity greater than 1 MW and engages in the manufacturing of green hydrogen and ammonia, which requires the submission of an Environmental Impact Statement (EIS). The Project will involve development, construction, operations, decommissioning, and reclamation of wind project areas, a solar area, an industrial facility, and water supply for green hydrogen production and ammonia synthesis, including air separation, water treatment, and ammonia storage.

The Project will use the existing Port of Botwood for its shipping needs, which has historically served various clients across industrial sectors for over 100 years. The Project is proposed on land parcels totaling 35,834 hectares (ha) in central Newfoundland (defined hereafter as the Project Area). The Project is centered at 49.161441° N, 55.486669° W.

Within the Project Area (PA), siting of wind turbine generators (WTGs) will be within four areas: Botwood, Seabrights Lake, Twin Lakes, and Leading Tickles (Drawing 1, Appendix A). The Industrial Facility and Solar Area, along with associated infrastructure, are co-located on a parcel southwest of the Town of Botwood. For the purposes of the EIS, the Project consists of three components: (i) Wind Project Area (WPA) and transmission line; (ii) Solar Area; and (iii) hydrogen and ammonia production facilities (defined hereafter as the Industrial Facility).

The Proponent has retained Strum Consulting to provide avian radar and acoustic assessment services within the PA of the WTGs. Avian radar systems (ARS) and autonomous recording units (ARU) were deployed throughout the PA of the WTGs throughout varying monitoring periods.

- Botwood Wind Project Area (BWPA)
    - Four ARS deployed in 2024
    - Four ARU deployed in 2023 and 2024

- Twin Lakes Wind Project Area (TLWPA)
  - One ARS deployed in 2024
  - One ARU deployed in 2023 and 2024
- Leading Tickles Wind Project Area (LTWPA)
  - One ARS and one ARU deployed in 2025

This report summarizes the findings for the radar and acoustic monitoring periods at the TLWPA.

2.0 REGULATORY CONTEXT

This Report has been developed in accordance with applicable laws and regulations relating to the protection of avian species, including the following:

- *Canadian Environmental Protection Act* (CEPA) (1999)
- *Canada Wildlife Act* (2000)
- *Environment Act* (2002)
- *Migratory Birds Convention Act* (MBCA) (2018)
- *Species at Risk Act* (SARA) (2002)
- Newfoundland and Labrador *Endangered Species Act* (NL ESA) (2001)

CEPA (1999) provides protection of the federal environment through pollution prevention, toxic substance control, waste management, and emissions management. Similarly, the *Environment Act* (2002) supports and promotes the protection, enhancement, and use of the provincial environment while maintaining ecosystem integrity and sustainable development, along with pollution prevention and reduction.

The *Canada Wildlife Act* (2000) provides a framework at the federal level for the creation of protected wildlife areas. In May 2018, Canadian Wildlife Services (CWS), a division of Environment and Climate Change Canada (ECCC) responsible for enforcing the MBCA (2018), updated guidance stipulating that two years of radar monitoring should be completed for projects that propose the installation of wind turbines that are greater than 150 m tall. This guidance suggests that migrating birds travel in an airspace between 150 m and 600 m above the ground as they migrate, which would put them at risk of interacting with tall turbines that extend into this corridor. As the corridor is too high for traditional survey methods (e.g., ground-based ornithological studies), the guidance requires the use of avian radar assessments to characterize high altitude migratory bird movements so regulators can evaluate the risk that the proposed development would pose to migrating birds.

The MBCA (2018) prohibits the deposit of harmful substances into waters or areas frequented by migratory birds, along with the disturbance, destruction, or possession of migratory birds, their occupied nests, and/or eggs. The new Migratory Bird Regulations (MBR) became effective as of July 30, 2022. Under the new regulations, occupied nests (and parts of the nests) of migratory birds are protected until they no longer provide high conservation value for migratory birds. Nests are not considered high conservation value if they no longer contain a living bird or eggs. Year-

round protection is only provided for nests of migratory birds known to reuse nesting areas as listed under Schedule 1 of the regulations.

For species designated as rare or at risk, their dwellings are protected provincially, under the provincial ESA, and federally, under SARA. The provincial ESA and SARA prohibit harm to listed Species at Risk (SAR) along with their habitually occupied space and core/critical habitat.

3.0 AVIAN RADAR SYSTEM

This section outlines methodologies that were followed during the 2024 radar and acoustic monitoring programs. Data collection and analysis were determined following the ECCC-CWS guidance for passive bird monitoring programs (2022).

The guidance recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

3.1 Radar Methodology

3.1.1 Acoustic Radar System Deployment

Avian radar assessments were undertaken during the 2024 spring and fall migratory periods. One ARS was deployed from April 3 to November 5, 2024 (Table 3.1; Drawing 2, Appendix A).

Sensitive equipment in harsh, remote environments is prone to malfunction and difficult to monitor and maintain in remote areas. Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARS experienced interruption during its monitoring period. Inclement weather events near the PA, particularly in July and August, also affected the ARS' outputs. Ultimately, the periods when the ARS were active are as follows:

Table 3.1: Date Range when the ARS was Active within the TLWPA

ARS Location	Active Periods
Marks Lake	April 5 – April 26 May 9 – May 29 June 8 – June 29* August 14* September 12 – September 25 October 3 – October 22 November 5*

*The ARS was active during these dates, but a combination of inclement weather and internal malfunction had resulted in unreadable data.

During the deployment period, one Simrad Halo20 pulse compression marine surveillance radar was used and was angled diagonally at 45° above the horizon. The ARS consists of two x-band pulse-compression surveillance radars oriented specifically to scan the airspace approximately 50 m to 3000 m above the Project. The diagonal orientation allowed for a 150° scan of the

airspace above the radar, while the 210° below the radar is blanked. The diagonal orientation also allows for the calculation of the height of any potential avian target.

The ARS was deployed with an off grid 12V system that was designed for optimal active monitoring and flexibility in deployment. The 12V system charged and stored energy using solar panels and a battery bank and powered the radar and associated equipment for data collection and remote communications. The system in its entirety was mobile, so the movement of the ARS was possible throughout a season, if desired.

The ARS was deployed approximately 700 m northwest of the TLWPA (Drawing 2, Appendix A). The site was selected for being at a high elevation, located on a clearing at the top of a hill that is accessible via a resource road. This location provided a good line of sight (relatively few trees in the immediate area) into the airspace above the Project, and accessibility for spot checks. The ARS was mounted off the ground to minimize ground noise interference and lessen the impacts of local microtopography on data collection and quality.

3.1.1.1 Habitat Description

The ARS was deployed in a clearing atop a hill surrounded by mixedwood habitat. Within 1 km of the selected ARS deployment site there was evidence of previous logging activity.

3.1.1.2 Avian Radar Assessment

Avian radar assessment results were processed using the radR platform, an open-source platform designed for the processing of radar data for biological applications (Taylor et al., 2010). Outputs from radR were then analyzed using Microsoft Excel. Standard settings for the identification of biological targets (BTs), such as birds and bats, were used. Targets reflected by the radar generated blips in the image of the radar scan. The radR platform helps filter sequential images of radar scans to identify blips that occur in the same area over at least four out of five scans. Should these constraints be met, a BT is generated. BTs are most likely generated by birds, but could also be bats and insects, or even drones and planes. Weather occurrences, such as fog, rain, and low cloud cover, may cause interference with the radar (similarly to weather radar), which lowers the effectiveness of the system and reduces the reliability of the system's ability to detect birds. As such, data was excluded from the analysis when the minimum hourly rainfall was ≥ 0.5 mm. Rainfall data for obtained from ECCC's Badger (AUT) Weather Station (ECCC, 2025).

3.1.1.3 Discussion of Migration Cues in Radar Results

Migratory bird activity tends to be stochastic in nature, which is attributable in large part to weather, as it is well understood that weather, atmospheric, and environmental conditions influence bird migration activity, especially wind speed and direction (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Conditions when tailwinds assist the migration objective are often exploited by migrating birds to travel farther with less energy (Nussbaumer et al., 2022). As such, birds migrating into North Atlantic Canada during the spring likely proceed in a northeasterly direction and likely proceed in a south-westerly direction during the fall.

Migratory birds can also take advantage of favourable wind speed to expedite their migration or to fight against unfavourable headwinds (Nussbaumer et al., 2022). Other environmental and climatic cues are theorized to play a role in migratory bird activity (Brisson-Curadeau et al., 2020; Korpach et al., 2024). The list of cues that are theorized and studied to play a role in avian migration includes the following:

- Wind speed and direction (Gudmundsson et al., 2011; La Sorte & Fink, 2017; Nussbaumer et al., 2022)
- Photoperiod (Assadi & Fraser, 2021; Helm & Liedvogel, 2024; Robart et al., 2018; Sockman & Hurlbert, 2020)
- Temperature (Brisson-Curadeau et al., 2020; Burnside et al., 2021)
- Changes in migration cohort or population sizes (Miller-Rushing et al., 2008)
- Food Availability (Robart et al., 2019)
- Lunar cycle (Bonnet-Lebrun et al., 2021; Korpach et al., 2024; Norevik et al., 2019; Pyle et al., 1993)

These cues mostly affect the internal avian migration clock; hence, helping to determine the migration timing of birds traveling in and out of the province. Correlating the role of internal avian migration clocks with this with radar monitoring data proves challenging (Helm & Liedvogel, 2024; Korpach et al., 2024).

3.1.1.4 Discussion of Migratory Bird Density in Radar Results

The Halo 20 radar emits a beam that is angled 12.5° upward and downward from the radar's antenna. The volume of airspace that the radar scans increase with range as the radar beam extends outwards; therefore, the number of BTs detected by the ARS generally increases with range, until such a point that the radar becomes limited by range and the number of BTs detected drops. To correct the distortions in BT detection counts at different ranges, it is necessary to correct the airspace volume scanned by the radar at each height bin.

Based on the geometry of the radar's beam angle, the volume of airspace scanned in each of the height bins was determined using CAD software. These volumes are shown for each height bin in Table 3.2 and were used to determine the target density (i.e., the number of targets detected per cubic kilometre of airspace) based on number of BTs detected in each height bin (seen in Section 3.1.1.5). Birds per km^3 has been used as a metric of bird migration in avifauna for other studies (Farnsworth, 2013). Target density is representative of, and likely proportional to, the migratory bird activity in the airspace above the Project for the cumulative monitoring period (in this case, for the 2024 avian radar monitoring campaign).

Table 3.2: Airspace Scanned (km^3) within the ARS' Height Bins

Range Bin (m)	Airspace Scanned (km^3)
0-25	0.1015
25-50	0.1015
50-100	0.2036
100-150	0.2043

Range Bin (m)	Airspace Scanned (km^3)
150-200	0.2052
200-250	0.2063
250-500	1.052
500-1000	2.226
1000-1500	2.337
1500-2000	2.426
2000-3000	3.774
Total	**12.8375**

3.1.1.5 Avian Interaction Model

The level of interaction between migratory birds and the Project turbines can be estimated using data collected from the radar monitoring in 2024. Interactions may include sensory disturbance to birds passing near the turbines, requiring birds to maneuver around the turbines and forcing migratory birds to expend additional energy; bird collisions with the turbine components; or blade strikes (for operating turbines).

The Migratory Bird Interaction Index (MBII, $\boldsymbol{M}$) is an estimate of the level of risk that aerial infrastructure for a Project poses to migratory birds. This index is calculated using the following expression.

Equation 1: $\boldsymbol{M} = \boldsymbol{D} \div \boldsymbol{I}$

Where $\boldsymbol{D}$ is the migratory bird density, and $\boldsymbol{I}$ is the volume of airspace that the infrastructure being assessed would occupy.

The volume of airspace where avifauna would interact with the turbines ($\boldsymbol{I}$) was estimated using CAD software based on the design of the proposed turbines. The volume of airspace was calculated based on specifications from an example turbine model that overestimates the volume of the turbine's physical components to provide the largest volume or airspace where the turbines would influence avifauna. Table 3.3 shows the turbine dimensions for this Project and the parameters used to calculate the interaction airspace volume for the turbine model.

Table 3.3: Turbine – Avifauna Interaction Volume Calculation Information

Turbine Model Information	
Component	**Description**
Turbine Model	Unspecified Model
Number of Turbines*	3
Hub Height	135 m
Total Height	226 m
Rotor Diameter	182 m
Blade Length	91 m
Rotor Sweep Area	26,015 m^2

*Number of turbines is a representation for the application of statistical analysis. Actual turbine number varies.

3.2 Avian Radar Assessment

Data collected by the ARS for the 2023 and 2024 radar monitoring campaign were analysed to provide the number of BTs by date, possible migration cues, and height (Table 2, Appendix B). Data was divided into two monitoring periods in accordance with the ECCC-CWS guidance (2022): spring (March 15 to June 6) and fall (July 16 to November 30). Discussion about the summer period (June 7 to July 15) was added based on data availability, but it was assumed that these vocalizations were representative of localized activities during peak breeding period and were not discussed in terms of migration cues and migratory bird density.

The ARS identified 3,394 BTs during the 2024 spring monitoring period. Peak days where high numbers of BTs were detected occurred on April 15 (number of Biological Targets [nBTs] = 1,531) and April 18 (nBTs = 754) (Figure 3.1). All BTs were detected at heights between 500 m to 2,000 m and the largest number of BTs occurred between 1,000 m to 1,500m (nBTs = 2,727) (Table 3.4).

The ARS identified 19,829 BTs during the 2024 summer monitoring period. Peak days where high numbers of BTs were detected occurred on June 8 (nBTs = 1,558), June 9 (nBTs = 2,022), June 11 (nBTs = 1,010), June 12 (nBTs = 1,623), June 25 (nBTs = 2,825), and June 26 (nBTs = 1,877) (Figure 3.1). The highest portion of BTs were detected at heights between 1,000 m to 3,000 m. The largest number of BTs occurred between 1,000 m to 1,500 m (nBTs = 10,097) (Table 3.4).

The ARS identified 10,049 BTs during the 2024 fall monitoring period. Peak days where high numbers of BTs were detected occurred between September 12 to September 24 where nBTs ranged from 485 to 1,016 (Figure 3.1). The highest portion of BTs were detected at heights between 500 m to 2,000 m. The largest number of BTs occurred between 1,000 m to 1,500 m (nBTs = 9,882) (Table 3.4).

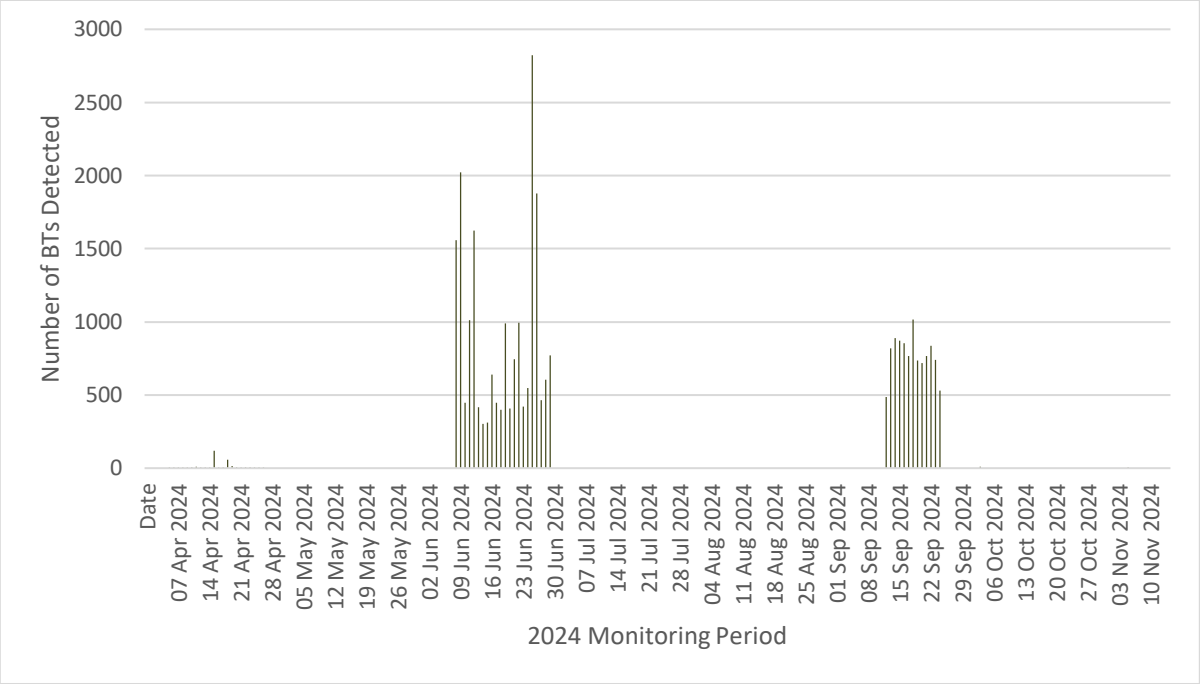

Figure 3.1: Number of BTs Detected throughout the 2024 Monitoring Period at Marks Lake

Table 3.4: Number of BTs Detected in the Marks Lake ARS Height Bins during the 2024 Monitoring Period

Range bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Fall)
0-25	0	0
25-50	0	0
50-100	0	0
100-150	0	0
150-200	0	0
200-250	0	0
250-500	0	9
500-1000	403	54
1000-1500	2727	9882
1500-2000	264	104
2000-3000	0	0
Total	**3394**	**10049**

The results of the 2024 monitoring campaign suggest that avian migration activity occurred consistently throughout the monitoring periods. The ARS detected large migration events that occurred over the course of three to five consecutive days in the spring and fall. It is likely that migration conditions were favourable during these relatively short mass migration events.

3.2.1 Cues for Avian Migration

The list of environmental cues that were used to compare with the data collected by the avian radar systems included the following:

- Wind direction
- Wind speed
- Temperature
- Lunar cycle

A variety of migration cues not discussed above (e.g., tidal phases) may have also affected bird migration timing. Data analysis was conducted to test the correlation between these cues and migration timing; however, the relationships were deemed too weak to support evidence of these cues affecting migration timing.

Wind Direction and Wind Speed

BTs detected during the spring 2024 monitoring campaign primarily occurred when the winds were blowing from the north, south, and southeast (Figure 3.2). Birds will often take advantage of northeasterly tailwinds to aid migratory movements in the spring (Gudmundsson et al., 2011). Southeast and south winds were also frequent at the time of target detection despite the most frequent wind direction at the time of target detection being north. Notably, approximately half of all BTs were detected when winds were moving either southeast or south. Birds may show no wind selectivity during migration depending on their energy cost of travel and their need for migratory stopovers (Thorup et al., 2006). Birds showing no clear preference for wind direction suggest no migratory wind selectivity during the spring 2024 monitoring period. In these cases, migration cues may be related to other factors such as wind speed, temperature, and lunar cycle (Brisson-Curadeau et al., 2020; Korpach et al., 2024; La Sorte & Fink, 2017)

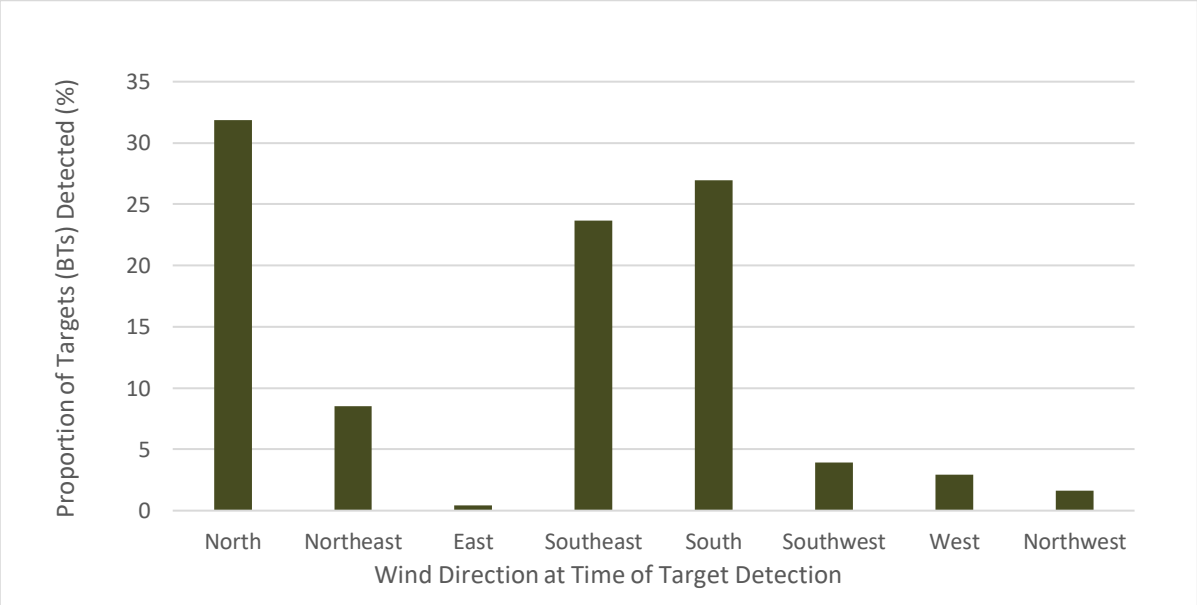

Figure 3.2: Wind Direction by Number of BTs Detected, Spring 2024

The largest proportion of BT detections in the fall 2024 monitoring period were associated with winds from the north, followed by winds from the west, southwest and northeast (Figure 3.3). Similarly to trends in the spring monitoring period, winds are most commonly going against the direction that would aid avian species in migration. Again, this suggest that wind direction does not influence bird movement through the TLWPA and that migration cues are likely related to other factors (Brisson-Curadeau et al., 2020; Korpach et al., 2024; La Sorte & Fink, 2017).

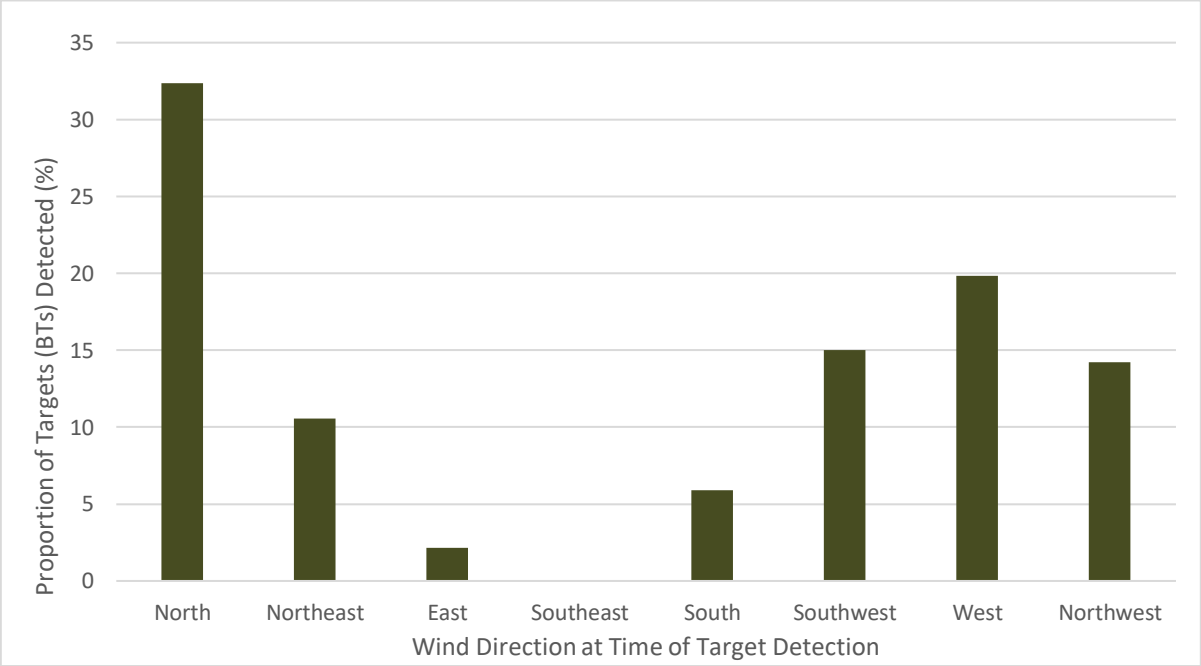

Figure 3.3: Wind Direction by Number of BTs Detected, Fall 2024

Most BTs detected during the spring 2024 monitoring period were detected when wind speeds were less than 1 km/hr (Figure 3.4). This result was expected as birds prefer to fly during favourable wind conditions (Dossman et al., 2023). This correlated with the wind direction data as seen during the spring monitoring period, with slower wind speed encouraging birds to migrate to their destination regardless of wind direction (Alerstam, 2011; Nussbaumer et al., 2022). Wind speed and direction explained the migratory movements seen during this period, with a distinct peak on April 15 leading into late April where wind speed and direction were most favourable.

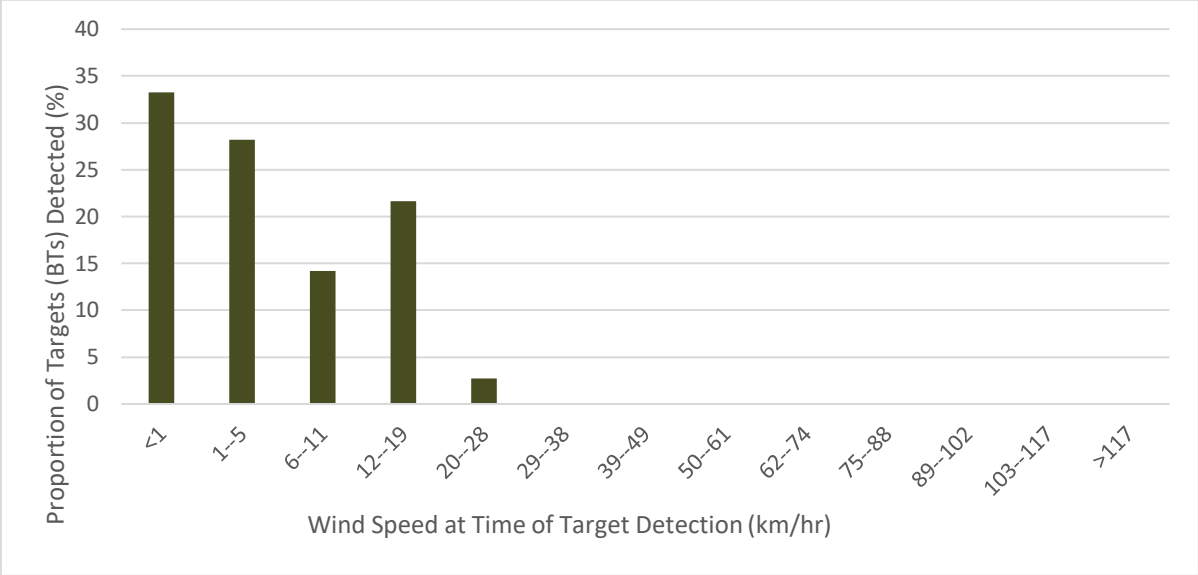

Figure 3.4: Wind Speed (km/h) by Number of BTs Detected, Spring 2024

During fall migration, the highest portion of BTs were detected when wind speed was less than 1 km/hr and when wind speed was between 6 to 11 km/hr (Figure 3.5). In combination with the wind direction data present during this period, it can be assumed that birds may have taken advantage of periods of weaker winds to migrate out of the region and are then less dependent on wind direction. The detection of BTs when wind speed was between 6 to 11 km/hr may also suggest that birds are less influenced by wind conditions during fall migration, and are instead more influenced by other factors such as temperature (Brisson-Curadeau et al., 2020; Thorup et al., 2006).

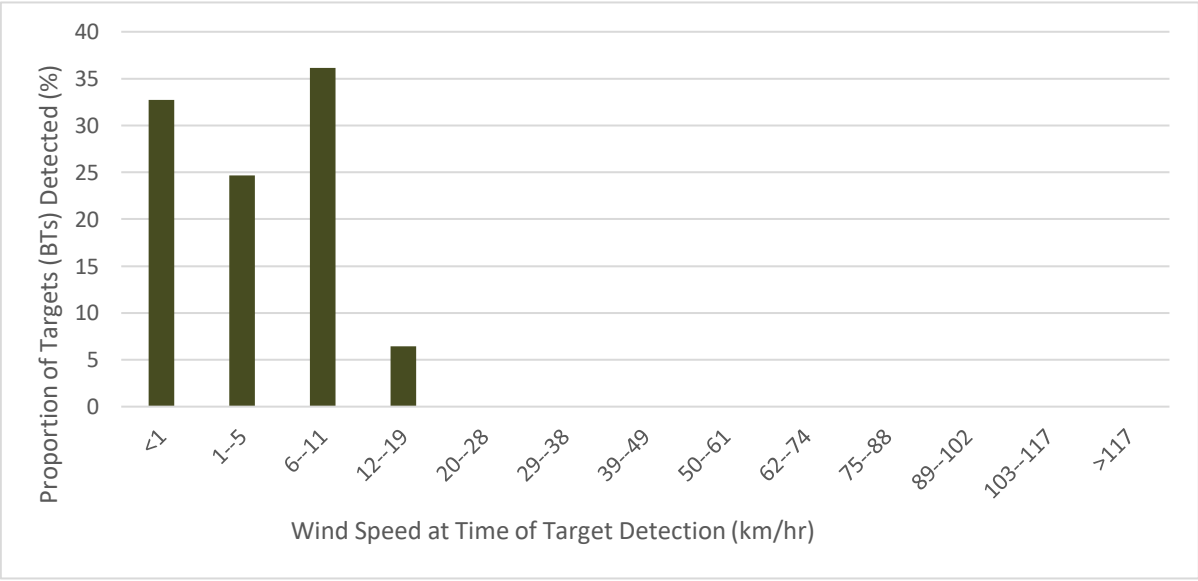

Figure 3.5: Wind Speed (km/h) by Number of BTs Detected, Fall 2024

Temperature

The most noticeable migration events observed during the spring monitoring campaign occurred when average daily temperatures were between 5 and 10 °C (Figure 3.6). A similar trend was observed for the fall monitoring period where the most BTs activity occurred once temperature dropped to 10 °C (Figure 3.6). Birds take advantage of warming weather to predict migration timings and best foraging opportunities during peak breeding season (Brisson-Curadeau et al., 2020; La Sorte et al., 2015).Birds will often use decreasing temperatures as trigger to begin their fall migration (Brisson-Curadeau et al., 2020). Temperatures shifts may have influenced migration events considering that daily average temperature shifted considerably across both the spring and fall migration periods.

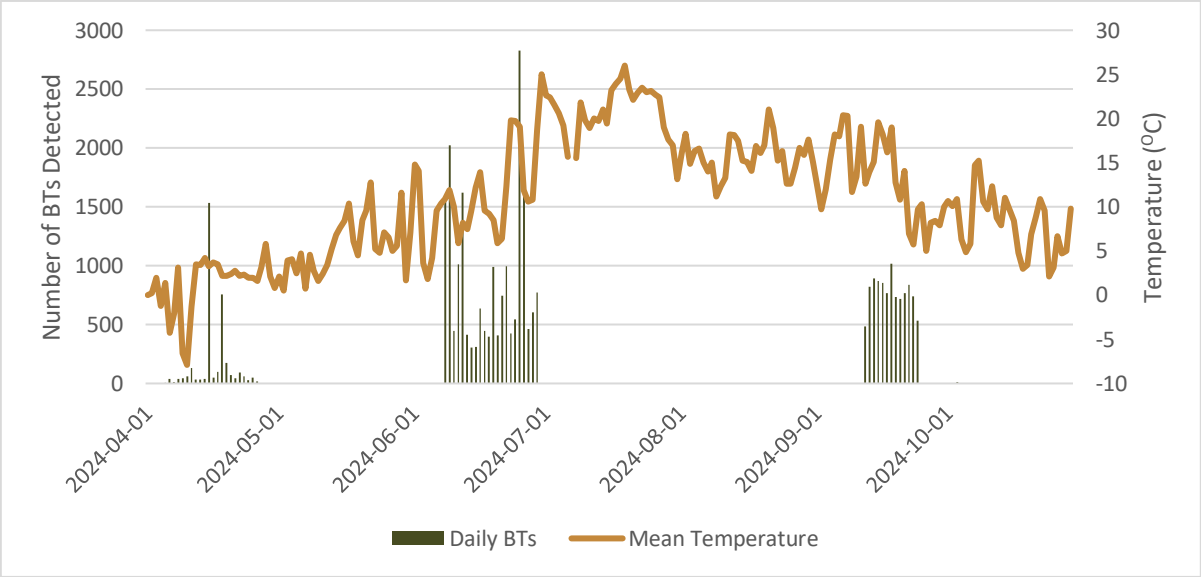

Figure 3.6: Number of BTs Detected during the 2024 ARS Monitoring Campaign compared to Daily Average Temperatures (°C)

Lunar Cycle

The relationship between lunar cycles and daily number of BTs detected by each of the avian radars during the 2024 monitoring period was quantified according to the percentage of exposed moonlight during each of moon's phases (i.e., new moon = 0%, first quarter = 50%, full moon = 100%, last quarter = 50%). During spring migration, most BTs detected by the radar occurred during lunar phases where the percentage of exposed moonlight was between 0 to 50 % visible (Figure 3.7). This suggests that for the spring migration period birds may have migrated during periods of less light because their migration cues were more heavily influenced by other factors.

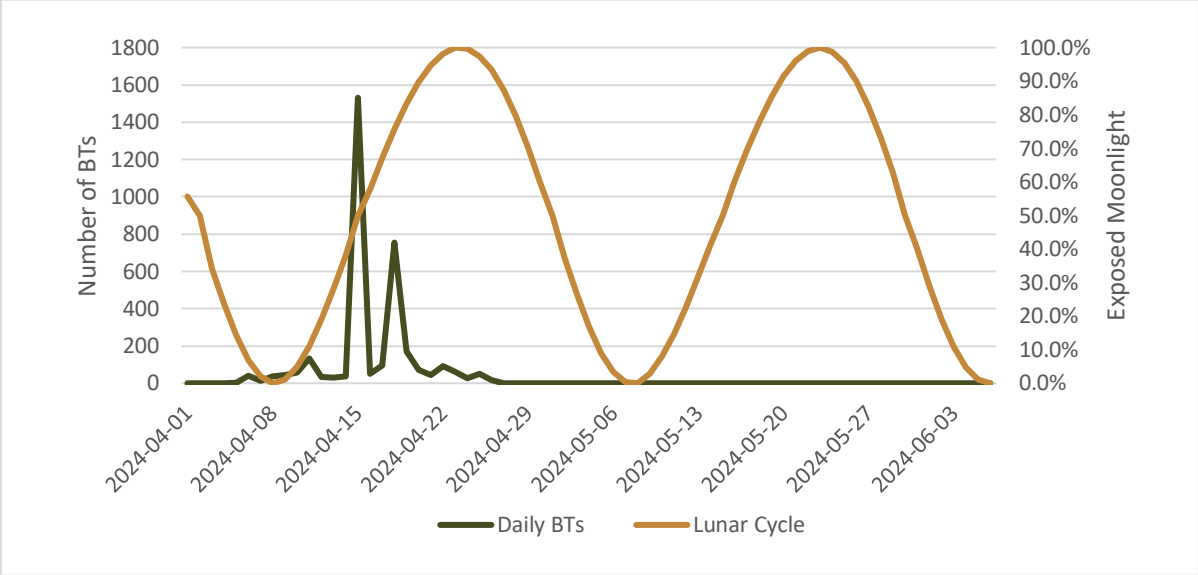

Figure 3.7: Number of BTs Detected during the 2024 Spring ARS Monitoring Campaign compared to Daily Moonlight Exposure (%)

In contrast to the effect of lunar phases on migration in the spring, most fall migration BTs detected by the radar were during periods with elevated levels of exposed moonlight (between 50 to 100%; Figure **3**.8). These results suggest that during the fall, nocturnal birds may have taken advantage of the higher visibility caused by the increased light from the moon to forage in preparation for migration following periods of full moon (Norevik et al., 2019).

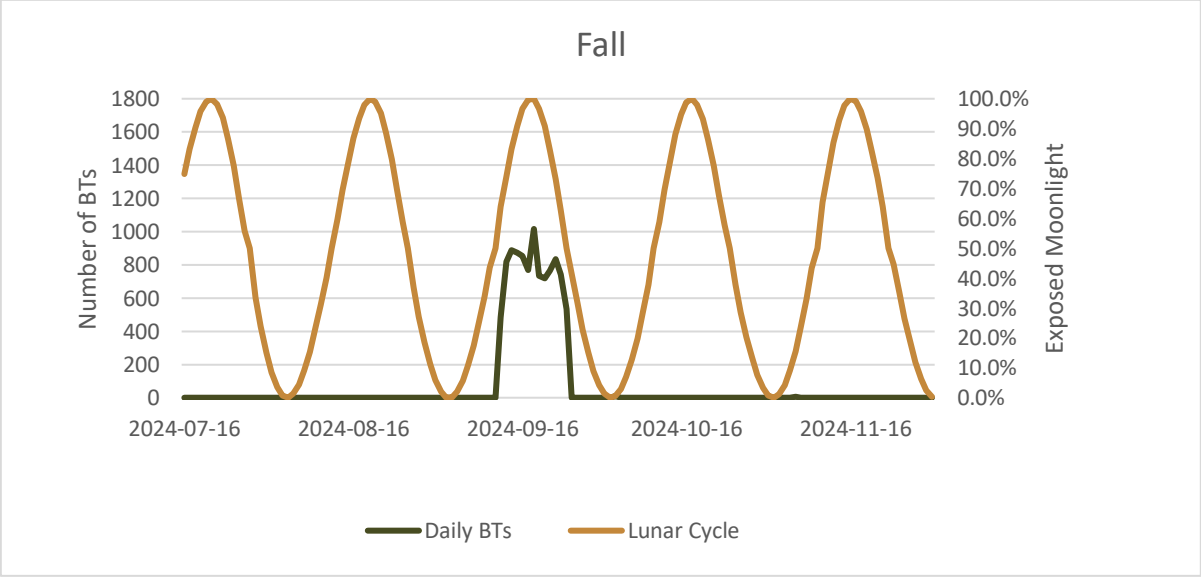

Figure 3.8: Number of BTs Detected during the 2024 Fall ARS Monitoring Campaign compared to Daily Moonlight Exposure (%)

3.2.2 Migratory Bird Density

Table 4.2 details the target density of the ARS location calculated using the volume of airspace scanned (Table 3.3) and the number of BTs detected at each height during the spring and fall monitoring period (Table 3.5).

Table 3.5: Target Density detected in the ARS height bins during the 2024 monitoring period.

Range Bin (m)	Target Density (Spring)	Target Density (Fall)
0-25	0	0
25-50	0	0
50-100	0	0
100-150	0	0
150-200	0	0
200-250	0	0
250-500	0	8.56
500-1000	181.04	24.25
1000-1500	1166.88	4228.50
1500-2000	108.82	42.87
2000-3000	0	0
Total	**264.38**	**782.78**

The ARS detected most targets in the height range between 500 m to 2,000 m, with the highest peak detected within the 1,000 m to 1,500 m height bin during the spring monitoring period (Figure 3.9). Most BTs that were detected within the 1,000 m to 1,500 m height bin occurred in mid-April. Approximately 30% of all BTs recorded by the ARS occurred on April 15 in the 1,000 m to 1,500 m bin. Approximately 80% if all BTs occurred within this heigh bin throughout the spring monitoring period (Table 3.5). Similar trends are observed with target density with the highest concentration of BTs being observed in the 1,000 to 1,500 m range (Figure 3.9).

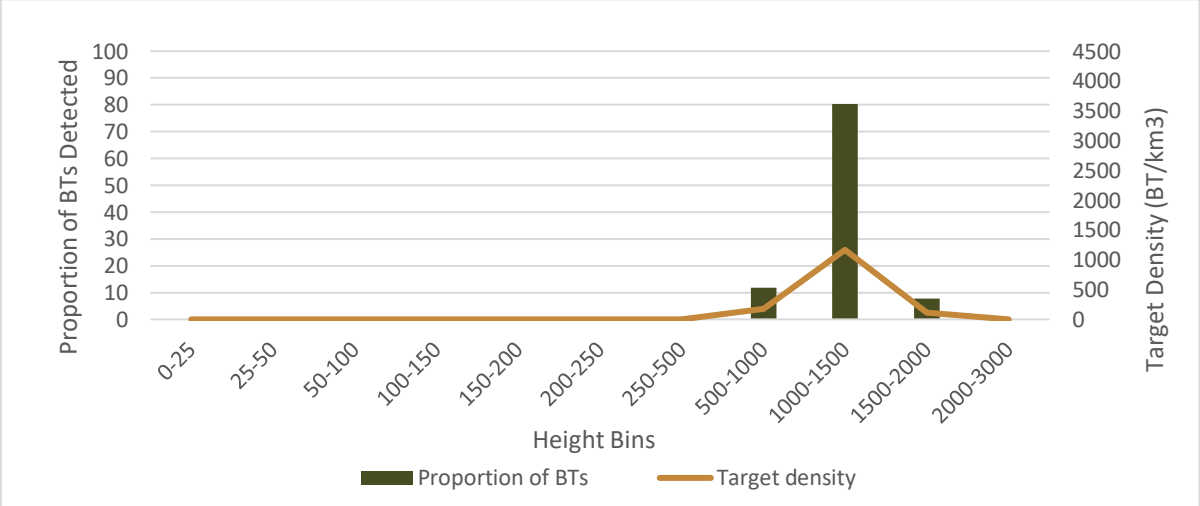

Figure 3.9: Number of Targets Detected and Target Density within Height Bins – Spring 2024

The ARS detected most targets in height range between 500 m and 2,000 m, with most ARS observing the highest detections within the 1,000 m to 1,500 m height bin, making up 98% of all detections during the fall monitoring period (Figure 3.10). The number of total detections was greater in the spring (nBTs = 10,049) than in the fall (nBTs = 3,394), suggesting there is more migration activity over the TLWPA in the spring compared to the fall. Target density for the fall was also the highest within the height bin. All BTs that were detected in the 1,000 m to 1,500 m height bin occurred from September 12 to 24 (Figure 3.10), which suggest migration over the TLWPA occurred in this timeframe.

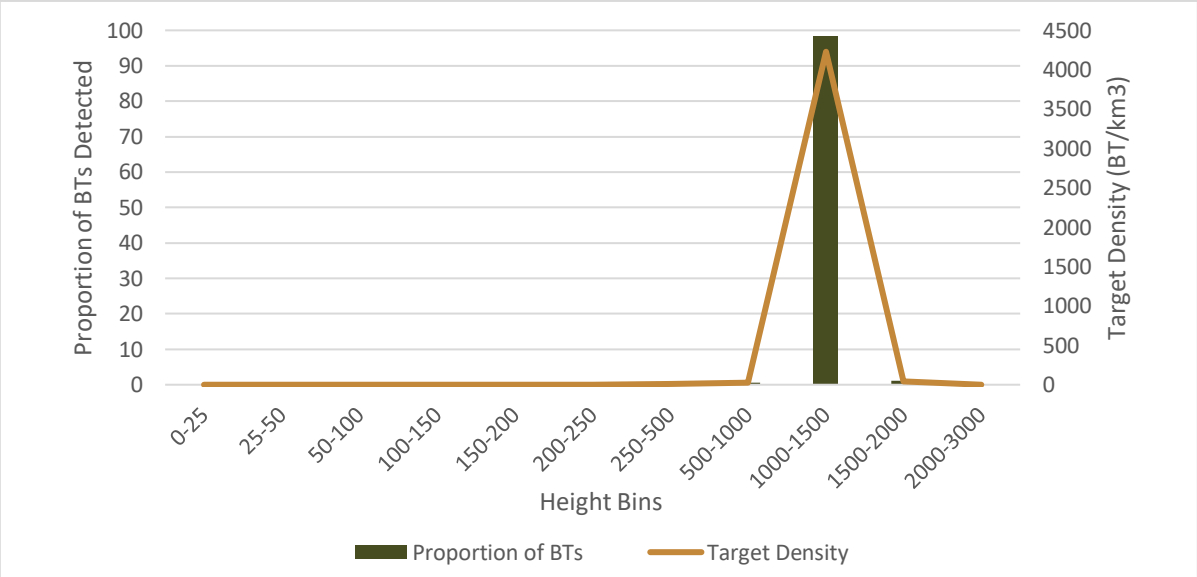

Figure 3.10: Number of Targets Detected and Target Density within Height Bins – Fall 2024

Target density was observed to be highest above 500 m, while target density in the fall peaked in the 100 to 1,500 m height bin for the spring monitoring period (Figures 4.9 and 4.10). Birds flying at heights between 44 m and 226 m, also referred to as the rotor swept zone, would be at potential risk of interacting with the turbines based on the height of the proposed turbines and diameter of the turbine blades (Table 3.3); however, less than 0.1% of observed BTs were detected in the rotor swept zone during the spring and fall monitoring periods (Table 3.5) and approximately 5% were observed in the zone during the summer monitoring periods (Table 3.5).

3.2.3 Migratory Bird Interaction Index

The ARS data was used to determine target density for each day of the monitoring program (calculated from Table 3, Appendix B) and the interaction airspace volume (determined in Table 3.3) was used to calculate and project the MBII values (Figures 3.11 and 3.12) over the 2024 monitoring period.

The MBII values were above zero in mid to late April, with the highest MBII occurring in mid-April, with a secondary peak in late April, during the spring monitoring period across the four ARS locations (Figure 4.11). This suggested that spring migration may have occurred rapidly in two instances to facilitate birds competing for forage and breeding opportunities in the area.

Once migration started in the fall there was not a distinct drop in MBII (Figure 3.12), suggesting that the Fall Migration happened in one instance. The highest MBII for the fall monitoring period occurred in mid-September (Figure 3.12). The fall MBII may contrast with the spring MBII because competition for breeding partners and resources is not a limiting factor in the fall, or because resources are not as limited during the post-breeding season. The total number of migratory instances for the fall is also lower than for the spring, which may suggest that more species may migrate through the TLWPA in the spring compared to the fall.

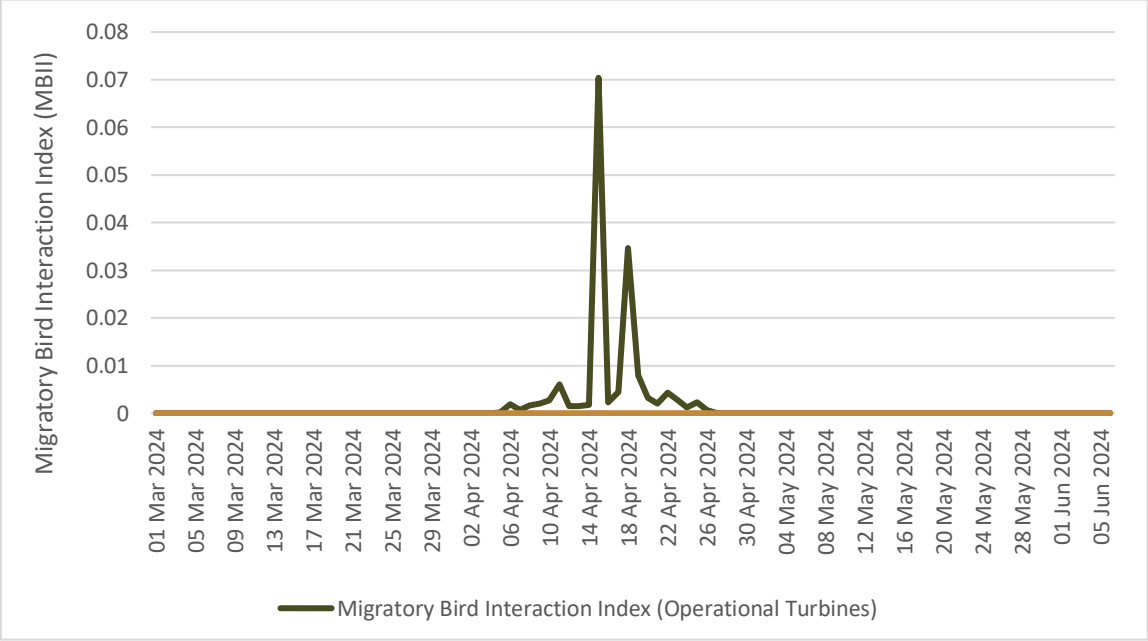

Figure 3.11: Migratory Bird Interaction Index – Projected Daily for the Spring 2024 Monitoring Period

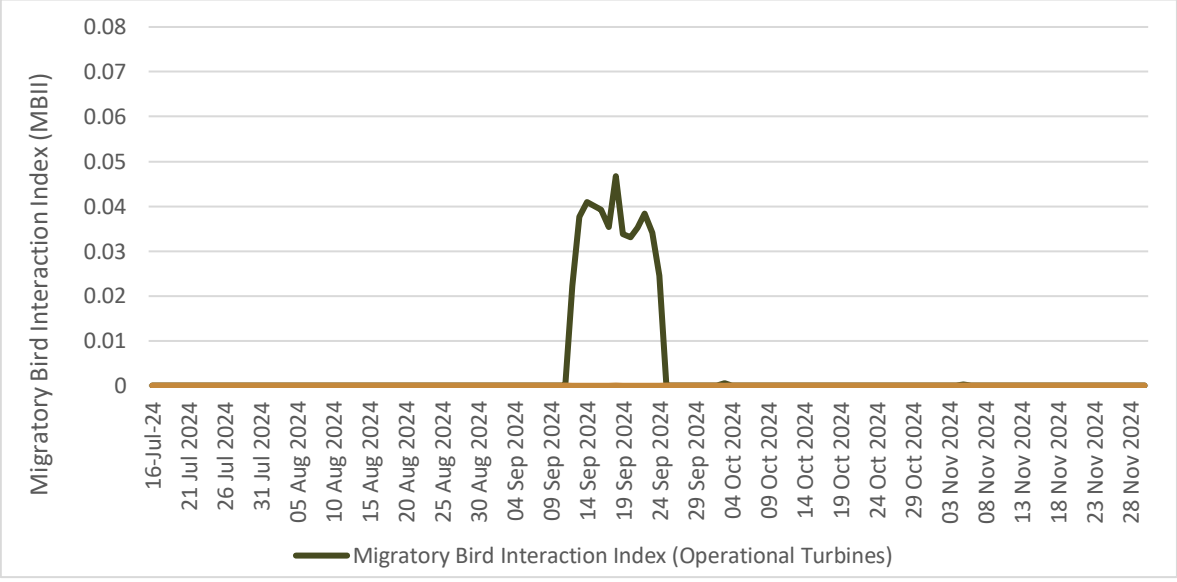

Figure 3.12: Migratory Bird Interaction Index – Projected Daily for the Fall 2024 Monitoring Period

4.0 ACOUSTIC RECORDING UNIT

This section outlines methodologies and results for the 2025 radar monitoring program. Data collection and analysis were determined following the ECCC-CWS guidance for passive bird monitoring programs (2022).

The guidance recommends that acoustic and radar studies be conducted from March 15 to June 7 to capture migratory bird activity in the spring season, and from July 15 to November 30 for the fall migration season (ECCC-CWS, 2022).

4.1 Avian Acoustic Methodology

4.1.1 Avian Acoustic Monitor Deployment

One ARU, a Wildlife Acoustic Song Meter 4, was deployed within the PA in tandem with the ARS from March 15 to November 30, 2024 (Drawing 2, Appendix A). The monitor was programmed to record from 19:00 to 6:00 with the intention of capturing the nocturnal flight calls (NFCs) of migrating birds during spring, summer, and fall. ARU data was trimmed to only include data starting at sunset up until sunrise to maintain consistent data records and avoid confusing the machine learning model used to process avian NFCs. This time constraint was set since breeding calls for avian species are concentrated to dusk and dawn during the spring.

Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARU experienced interruptions during its monitoring periods. Inclement weather events near the PA also affected the ARU output. Ultimately, the periods when the ARU was active are as follows:

Table 4.1: Date Range when the ARU was Active within the BWPA

ARS Location	Active Periods
Marks Lake	September 22 – November 21, 2023 December 6, 2023 – January 14, 2024 April 2 – May 5, 2024 May 16 – May 23, 2024 July 16 – September 9, 2024

4.1.2 Avian Acoustic Data Processing

The acoustic data collected by the ARU were ran through Nighthawk, a machine learning model that specializes in the detection and classification of avian NFCs. The output files from these models were then brought into Raven Pro (2022), a computer program specializing in visualization and analysis of sounds, for manual analysis.

4.1.2.1 Nighthawk

Nighthawk is a deep learning model designed by researchers at the Cornell Lab of Ornithology (Van Doren et al., 2023). The Nighthawk model was designed to detect and identify vocalizations made by nocturnally migrating birds and was trained using recordings of NFCs from throughout the Americas. For the purposes of this analysis, Nighthawk was run in its own computer programming environment using Python programming language, and was set using the following default parameters:

- Model sample rate: 22,050 Hz
- Model input duration: 1 s
- Hop size: 20% (percentage of the model input duration)
- Length of detections: 0.2 s

Nighthawk can assign a probability score to each detection it makes, which represents the likelihood of the model making a correct prediction. For this analysis, only detections with a probability score of 0.8 (80%) or above were considered for further analysis in Raven Pro.

Nighthawk can identify 82 bird species (Table 3, Appendix B), although a species-level identification is not always possible (Van Doren et al., 2023). In instances where a species-level identification cannot be achieved, the model may identify vocalizations to the order, family, or group level. Order and family refer to the taxonomic levels, whereas group level refers to a subset of species with similar sounding NFCs. For example, the 'ZEEP' group consists of several similar-sounding warbler species that can be exceptionally difficult to vocally separate from one another. Nighthawk was fed a list containing only species that are likely to occur in this region to limit false species-level identifications.

Nighthawk produced a series of text files containing all detections and predictions for a given audio file input. The text files and audio files were then brought into Raven Pro (version 1.6) for manual verification.

4.1.2.2 Raven Pro

Raven Pro is a software program that specializes in the visualization and analysis of sounds. Environmental scientists with experience in bird identification brought raw audio files recorded by the ARU and the text files containing the detections made by Nighthawk into Raven Pro. The scientists were then able to manually verify the detections and assess the accuracy of the Nighthawk results by listening to sound clips and visually analyzing the spectrograms of NFCs. The scientists listened to 30 vocalizations (or all vocalizations if fewer than 30 were detected) for each species identified by Nighthawk. The vocalizations were annotated 'Y' if the species-level identification made by the model was correct, or 'N' if the identification was incorrect.

4.2 Acoustic Monitoring Results

Data collected by the ARU was analyzed and manually verified to produce a list of species present near the Project during the 2024 monitoring season.

Results include avian vocalizations detected using Nighthawk. Data was collected in 2023 (September 21 to November 20), and 2024 (April 2 to May 23, July 16 to September 5).

4.2.1 2023 Nighthawk Results

The Nighthawk model made a total of 9,479 detections during the 2023/January 2024 monitoring period, most of which occurred in September (25%), October (40%), and December (35%) (Table 4, Appendix B; Figure 4.1). Notably, the ARU had high detections in the winter months; however, these detections are attributed to winter bird activity and thus did not count towards positive NFC detections during manual verification.

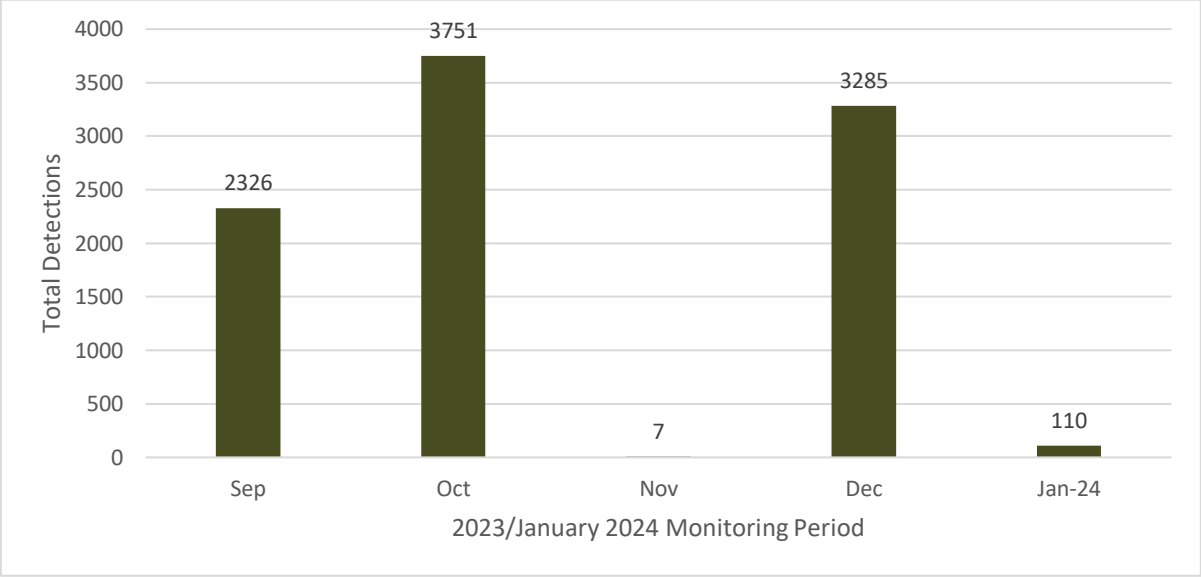

Figure 4.1: Total Number of Detections made by Nighthawk during the 2023/January 2024 TLWPA Monitoring Period

A total of 303 detections were manually verified by Strum environmental scientists, and of those, 114 (38%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting chipping sparrow (*Spizella passerina*), chestnut-sided warbler (*Setophaga pensylvanica*), dark-eyed junco (*Junco hyemalis*), greater yellowlegs (*Tringa melanoleuca*), hermit thrush (*Catharus guttatus*), and Wilson's warbler (*Cardellina pusilla*); all of which had a success rate of 90% or higher when a sample of detections were manually verified. Nighthawk also made 1,574 detections at the group level, 2,923 detections at the family detections, and 3,791 detections at the order level, which are included in Table 4.2. Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Table 4.2: Summary of 2023 Nighthawk Results[1]

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American pipit	4	4	0%	0.92
American redstart	62	32	0%	0.87

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American tree sparrow	6	6	0%	0.99
Black-and-white warbler	3	3	33%	0.99
Black-throated blue warbler	31	29	0%	0.88
Chipping sparrow	17	15	100%	0.92
Chestnut-sided warbler	10	10	100%	0.93
Comon yellowthroat	19	18	0%	1.00
Dark-eyed junco	38	27	96%	0.99
Dickcissel	6	6	0%	1.00
Grasshopper sparrow	5	5	40%	0.98
Greater yellowlegs	2	2	100%	0.99
Grey-cheeked thrush	1	1	0%	1.00
Hermit thrush	40	20	100%	0.99
Hooded warbler	1	1	0%	0.88
Indigo bunting	1	1	0%	0.93
Least sandpiper	7	7	0%	0.99
Lincoln's sparrow	1	1	0%	0.98
Northern waterthrush	3	3	0%	0.99
Ovenbird	3	3	33%	0.94
Palm warbler	3	3	67%	0.99
Rose-breasted grosbeak	1	1	0%	1.00
Savannah sparrow	36	33	42%	0.99
Short-billed dowitcher	25	24	0.0%	0.99
Solitary sandpiper	2	2	0%	0.97
Spotted sandpiper	1	1	0%	0.99
Swainson's thrush	6	6	50%	0.87
Vesper sparrow	4	4	0%	0.99
White-throated sparrow	837	20	70%	0.99
Wilson's warbler	5	4	0%	0.96
Yellow-billed cuckoo	11	11	0%	0.98
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	7	0	N/A	N/A
BZWA	318	0	N/A	N/A
CUPS	21	0	N/A	N/A
DBUP	140	0	N/A	N/A
DESP	27	0	N/A	N/A
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
HSSP	4	0	N/A	N/A
MWAR	1	0	N/A	N/A

Nighthawk Group Name[2]	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
SBUF	284	0	N/A	N/A
SFHS	226	0	N/A	N/A
SWLI	66	0	N/A	N/A
THSH	5	0	N/A	N/A
ZEEP	475	0	N/A	N/A
Family Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Ardeidae	4	0	N/A	N/A
Bombycillidae	1	0	N/A	N/A
Calcariidae	17	0	N/A	N/A
Cardinalidae	1	0	N/A	N/A
Charadriidae	1	0	N/A	N/A
Cuculidae	4	0	N/A	N/A
Haematopodidae	2	0	N/A	N/A
Motacillidae	3	0	N/A	N/A
Parulidae	2485	0	N/A	N/A
Passerellidae	342	0	N/A	N/A
Scolopacidae	43	0	N/A	N/A
Turdidae	20	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	17	0	N/A	N/A
Cuculiformes	5	0	N/A	N/A
Passeriformes	3769	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.3 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).
[2] Groupings of birds with similar NFCs.

False positive detections can be attributed to an oversensitivity of the model in conjunction with noise interference from wind, vegetation, frogs, insects, and other environmental factors.

Most of the confirmed positive vocalizations were detected in September (57%), which represented the peak of fall migration for many species that passed through Newfoundland (Figure 4.2). There were also detections that ended in October (33%), which indicated later migratory movement in the season. The peaks in fall migration movement in September and October are expected as birds are anticipated to leave during fall migratory periods before temperatures and environmental conditions worsen (Brisson-Curadeau et al., 2020).

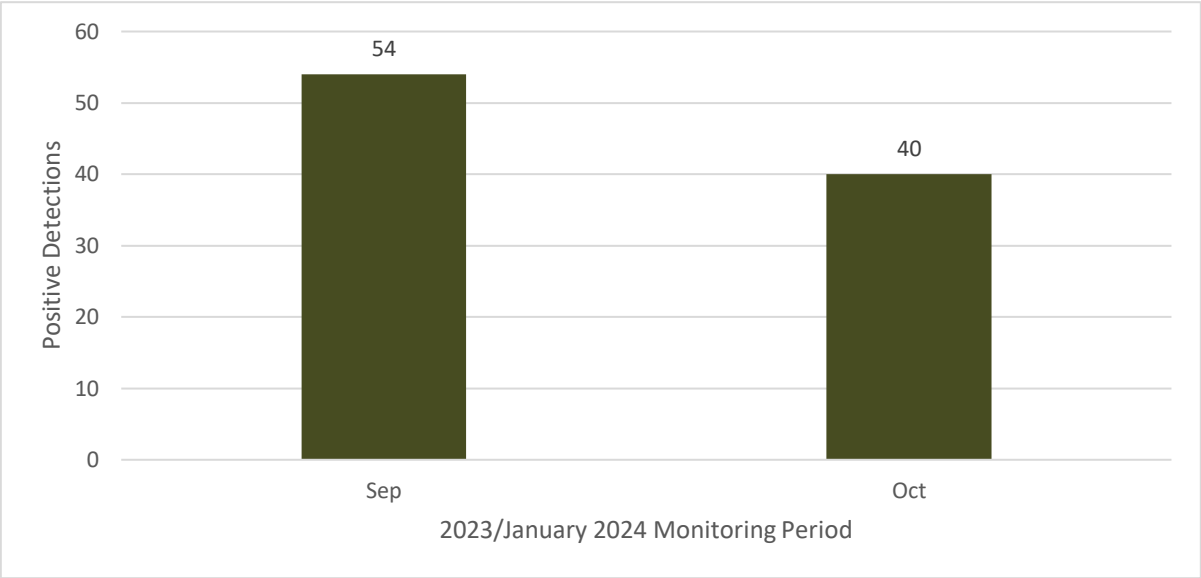

Figure 4.2: Total Number of Detections made by Nighthawk during the 2023/January 2024 Acoustic Monitoring Period across the ARU

Across all seasons, 13 different species were confirmed to have been positively detected by Nighthawk for the 2023 monitoring period (Table 4.3). Of these, the most detected species were dark-eyed junco (26), hermit thrush (20), savannah sparrow (*Passerculus sandwichensis*) (14), and white-throated sparrow (*Zonotrichia albicolis*) (14). No SAR or Species of Conservation Concern (SOCC) were identified during this timeframe.

Table 4.3: Summary of Species Confirmed During the 2023/January 2024 Nighthawk Acoustic Analysis

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank
American redstart	*Setophaga ruticilla*	---	---	---	S5B
American robin	*Turdus migratorius*	---	---	---	S5B
Black-and-white warbler	*Mniotilta varia*	---	---	---	S5B
Chipping sparrow	*Spizella passerine*	---	---	---	S5B
Chestnut-sided warbler	*Setophaga pensylvanica*	---	---	---	SNA
Common yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed junco	*Junco hyemalis*	---	---	---	S5
Grasshopper sparrow	*Ammodramus savannarum*				SNA
Greater yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Hermit thrush	*Catharus guttatus*	---	---	---	S5B
Least sandpiper	*Calidris minutilla*	---	---	---	S3B,S4M
Ovenbird	*Seiurus aurocapilla*	---	---	---	S3B,SUM
Palm warbler	*Setophaga palmarum*	---	---	---	S4B
Savannah sparrow	*Passerculus sandwichensis*	---	---	---	S5B

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank
Short-billed dowitcher	*Limnodromus griseus*	---	---	---	S3M
Solitary sandpiper	*Tringa solitaria*	---	---	---	S4M
Spotted sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
Swainson's thrush	*Catharus ustulatus*	---	---	---	S5B
Upland sandpiper	*Bartramia longicauda*				SNA
White-throated sparrow	*Zonotrichia albicolis*	---	---	---	S5B
Wilson's warbler	*Cardellina pusilla*				S5B

Source: (ACCDC, 2025)

September and May had the highest number of unique species detected, with 11 species in September and eight species detected in May (Figure 4.3).

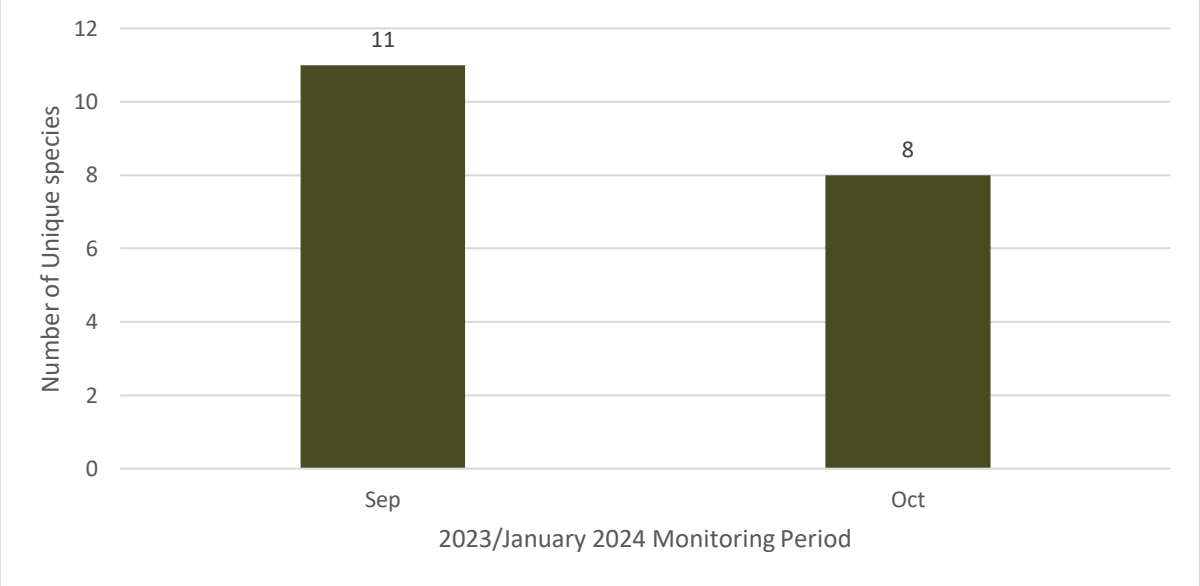

Figure 4.3: Nighthawk Species Richness during the 2023/January 2024 TLWPA Monitoring Period

4.2.2 2024 Nighthawk Results

The Nighthawk model made a total of 15,261 detections in the 2024 monitoring period, most of which were in April (31%) (Table 5, Appendix B; Figure 4.4). The NFCs detection decreased as the spring and summer progressed.

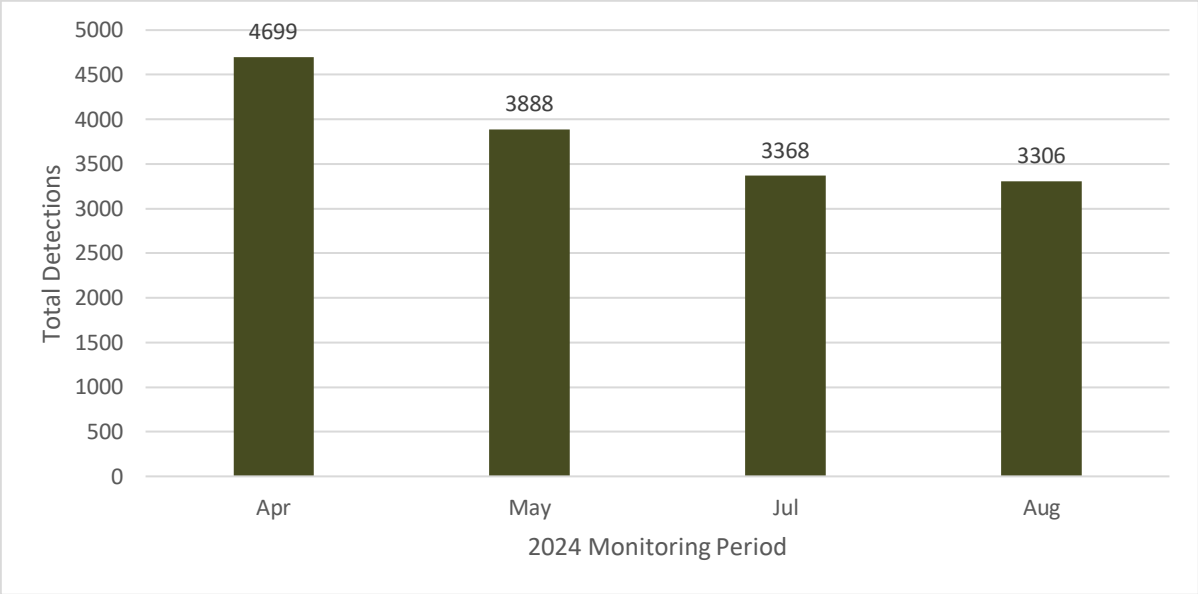

Figure 4.4: Total number of Detections made by Nighthawk during the 2024 TLWPA Monitoring Period

A total of 423 detections were manually verified by Strum environmental scientists, and of those, 109 (26%) were correctly identified by Nighthawk (Table 5, Appendix B). Nighthawk was most successful at detecting American robin (*Turdus migratorius*), which had success rate of 100% when a sample of detections were manually verified by scientists. Nighthawk also made 2,925 detections at the group level, 5,127 detections at the family level, and 5,687 detections at the order level (Table 4.4).

Table 4.4: Summary of 2024 Nighthawk Results[1]

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American redstart	101	30	10%	0.89
American robin	4	4	100%	0.99
American tree sparrow	4	4	0%	0.99
Black-and-white warbler	28	28	54%	1.00
Black-billed cuckoo	1	1	0%	1.00
Black-throated blue warbler	15	14	0%	0.88
Cape May warbler	2	2	0%	0.98
Chipping sparrow	7	7	0%	0.93
Chestnut-sided warbler	18	18	0%	0.92
Comon yellowthroat	26	26	4%	0.99
Dark-eyed junco	35	30	53%	0.99
Dickcissel	2	2	0%	1.00
Grasshopper sparrow	11	11	36%	0.99
Greater yellowlegs	2	2	0%	0.94

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Grey-cheeked thrush	1	1	0%	1.00
Hermit thrush	227	29	55%	1.00
Hooded warbler	5	5	0%	0.92
Killdeer	4	4	0%	1.00
Least sandpiper	27	27	33%	1.00
Lincoln's sparrow	1	1	0%	0.86
Northern waterthrush	5	5	0%	1.00
Ovenbird	3	2	0%	0.94
Red Breasted nuthatch	35	31	0%	0.98
Savannah sparrow	13	12	33%	0.98
Short-billed dowitcher	42	31	6%	0.99
Solitary sandpiper	12	12	42%	0.96
Spotted sandpiper	8	8	50%	0.98
Swainson's thrush	7	7	43%	0.85
Upland sandpiper	15	15	20%	0.98
Veery	2	2	0%	0.98
Vesper sparrow	1	1	0%	1.00
White-throated sparrow	841	34	59%	0.98
Wilson's warbler	4	4	0%	0.98
Yellow-billed cuckoo	13	13	0%	0.99
Nighthawk Group Name[2]	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
BUNT	19	0	N/A	N/A
BZWA	447	0	N/A	N/A
CUPS	18	0	N/A	N/A
DBUP	185	0	N/A	N/A
DESP	19	0	N/A	N/A
DEWA	1	0	N/A	N/A
HSSP	5	0	N/A	N/A
SBUF	104	0	N/A	N/A
SFHS	809	0	N/A	N/A
SWLI	685	0	N/A	N/A
TANA	3	0	N/A	N/A
THSH	19	0	N/A	N/A
ZEEP	611	0	N/A	N/A

Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Ardeidae	15	0	N/A	N/A
Bombycillidae	7	0	N/A	N/A
Calcariidae	33	0	N/A	N/A
Cardinalidae	6	0	N/A	N/A
Charadriidae	3	0	N/A	N/A
Cuculidae	29	0	N/A	N/A
Haematopodidae	22	0	N/A	N/A
Motacillidae	1	0	N/A	N/A
Parulidae	3507	0	N/A	N/A
Passerellidae	1288	0	N/A	N/A
Scolopacidae	152	0	N/A	N/A
Sittidae	6	0	N/A	N/A
Turdidae	58	0	N/A	N/A
Order Name	**Total Detections**	**Number Manually Verified**	**Correct Detections (%)**	**Confidence**
Charadriiformes	145	0	N/A	N/A
Cuculiformes	4	0	N/A	N/A
Passeriformes	5538	0	N/A	N/A

[1] Detections were identified to the highest taxonomic level possible using Nighthawk. Table 4.5 was organized so as to avoid counting any given detection in more than one category (i.e. if a detection was identified to species level, it was not also counted in the group, family, or order level categories).
[2] Groupings of birds with similar NFCs.

Most of the confirmed positive vocalizations during the spring monitoring period occurred in May (36%), which represented peak spring migration movement before the breeding season (Figure 4.5). There was also high detection in April, supporting evidence that spring migration occurred from April to May. The highest portion of confirmed positive vocalizations occurred in August, with high detections from late July to early August during the fall monitoring period (Figure 4.5). These detections represented early fall migration, with the detections in late July also potentially representing post-breeding dispersal (Stone et al., 2025).

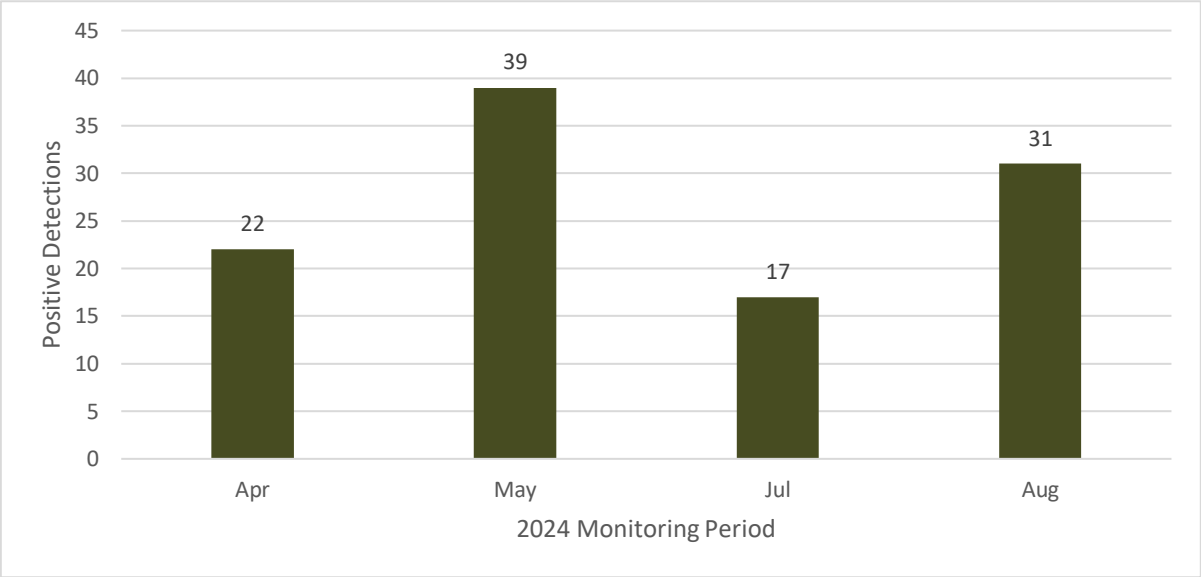

Figure 4.5: Nighthawk Positive Detections during the 2024 TLWPA Monitoring Period

There were 15 different species confirmed to have been positively detected by Nighthawk during the 2024 monitoring period (Table 4.5). Of these, the most detected species were white-throated sparrow (20), hermit thrush (16), dark-eyed junco (16), and black-and-white warbler (*Mniotilla varia*) (15). No SAR or SOCC were identified by Nighthawk during this period.

Table 4.5: Summary of Species Confirmed During the 2024 Nighthawk Acoustic Analysis

Common Name	Scientific Name	COSEWIC Status	SARA Status	NL ESA Status	NL S-Rank
American redstart	*Setophaga ruticilla*	---	---	---	S5B
American robin	*Turdus migratorius*	---	---	---	S5B
Black-and-white warbler	*Mniotilta varia*	---	---	---	S5B
Common yellowthroat	*Geothlypis trichas*	---	---	---	S5B
Dark-eyed junco	*Junco hyemalis*	---	---	---	S5
Grasshopper sparrow	*Ammodramus savannarum*				SNA
Greater yellowlegs	*Tringa melanoleuca*	---	---	---	S3B,S4M
Hermit thrush	*Catharus guttatus*	---	---	---	S5B
Least sandpiper	*Calidris minutilla*	---	---	---	S3B,S4M
Savannah sparrow	*Passerculus sandwichensis*	---	---	---	S5B
Short-billed dowitcher	*Limnodromus griseus*	---	---	---	S3M
Solitary sandpiper	*Tringa solitaria*	---	---	---	S4M
Spotted sandpiper	*Actitis macularius*	---	---	---	S4B,SUM
Swainson's thrush	*Catharus ustulatus*	---	---	---	S5B
Upland sandpiper	*Bartramia longicauda*				SNA
White-throated sparrow	*Zonotrichia albicolis*	---	---	---	S5B

Source: (ACCDC, 2025)

May had the highest number of unique species (39), followed by August (31) for seasonal species richness (Figure 4.6).

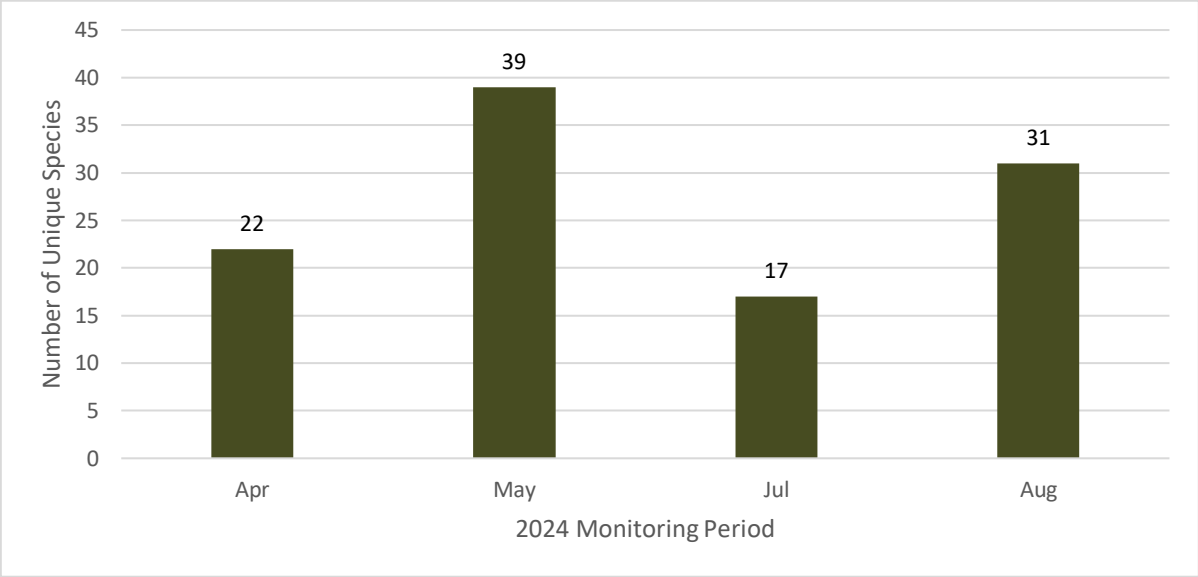

Figure 4.6: Nighthawk Species Richness during the 2024 TLWPA Monitoring Period

5.0 DISCUSSION

5.1 Radar

The ARS was deployed near the TLWPA to capture the avian migration movements over the western portion of the PA. The results of the 2024 radar monitoring campaign indicated two migration events in spring and one longer migration event in fall. These peaks occurred in mid-April (April 15 and April 18 to19) and mid-September (September 12 to 24), suggesting that most migration activity within the TLWPA occurs at these times. It is possible that large migration events may have also occurred during these down periods that were not recorded by the radar. It is also expected that migration events will become increasingly difficult to predict as birds adapt to changing weather conditions and climate change (Burnside et al., 2021; La Sorte & Fink, 2017; Nilsson et al., 2013).

5.1.1 Cues for Avian Migration

Several cues for migratory movements were analyzed and discussed to determine possible correlations to migratory timing. Cues for migratory movements can include any of the following: wind direction, wind speed, temperature changes, lunar cycle, photoperiod, and potential variations in migration cohort size (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Miller-Rushing et al., 2008; Robart et al., 2019). Migratory bird activity observed for this Project is likely related to a number of these avian migration cues. The results of this report suggest that favorable winds were a predictive factor for when avian species migrate through the TLWPA. Most migration activity occurred when wind speeds were low, without much preference for wind direction, during spring migration. There was not a notable preference for either wind speed or direction besides that migration did not occur once wind speeds reached 20 km/hr or greater for

the fall monitoring period. Most detections for both spring and fall occurred when wind speeds were less than 11 km/h. This may imply that wind has less influence on migratory timing through the TLWPA as opposed to other migratory cues (Brisson-Curadeau et al., 2020; Nussbaumer et al., 2022).

Temperature and the lunar cycle influenced both spring and fall migration. Seasonal temperature changes may have been a trigger for species to begin their migrations (Brisson-Curadeau et al., 2020). This report found that spring migration occurred once temperatures stabilized above 0°C and that the beginning of fall migration aligned with a distinct and quick drop in temperature. The influence of lunar cycle was prevalent throughout both seasons, indicating birds in the area may prefer to take advantage of the increased nighttime visibility provided by increased moonlight. These findings were partially consistent with the findings of other studies that examined the effects of weather and atmospheric conditions on bird migrations.

5.1.2 Migratory Bird Density

The ARS target count within height bins and target density for the 2024 monitoring period indicated very low levels of interaction between migratory avifauna and the Project. This report found that any avifauna flying at heights between 44 m to 226 m would potentially be within the rotor swept zone and at risk of interacting with the turbine. Less than 0.1% of observed targets were detected within the interaction corridor during the entirety of the 2024 monitoring period.

It is important to note that migrating birds tend to not make many acute adjustments over 200 m to the altitude at which they are flying (Bowlin et al., 2015; Norevik et al., 2021); therefore, the risk of interaction with the turbine blades would likely have not changed during the radar's inactive periods.

5.1.3 Avian Interaction Model

Studies that examined interactions between wind turbines and avifauna have determined the level of avian mortality caused by wind turbines to be low (Zimmerling et al., 2013). These studies are consistent with several post-construction avian mortality monitoring programs conducted by Strum at operational wind power projects within Atlantic Canada over the past decade (i.e., approximately one detectable bird mortality per wind turbine per year on average). The MBII model projection indicates that interactions between birds and wind turbines would be low and would have occurred on a few nights during the 2024 monitoring period. These predicted low interaction levels indicate that the level of avian mortality caused by the Project would be low for most of the Project's operation, and mortality events would be limited to a few events during the migration periods.

5.2 Acoustics

Acoustic monitoring provides a simple and reliable passive data collection method that supplements field surveys. Data was collected in a standardized manner by using the same equipment, at the same time of day, and in the same location. This standardization generates a presence-absence indicator, which enables the tracking of environmental changes in a reliable way. Acoustic monitoring, along with field assessments, allows for a better overall understanding of avian abundance and species richness within the TLWPA.

5.2.1 Detection of Vocalizations

The results of the 2023/January 2024 ARU monitoring period show peak vocalization detections during September, October, and December. It is important to note that data for this monitoring period was only collected from September to January. Most NFCs detections were in September which represents the peak of fall migration for many migrating species in Newfoundland.

April had the most NFCs detections and decreased as the spring migration period progressed for the 2024 monitoring period. Environmental factors such as temperature, wind speed and direction, and photoperiod may have affected migration arrival (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Helm & Liedvogel, 2024; Robart et al., 2018, 2019).

5.2.2 Species Richness

This report found that species richness was highest in September for the 2023/January 2024 monitoring period. Species richness was highest in May, followed by August, for the 2024 monitoring period. These findings suggest that species richness was highest during migration periods. Notably, several species were observed during both the spring and fall migratory periods, such as dark-eyed junco, greater yellowlegs, and short-billed dowitcher (*Limnodromus griseus*). This suggests a potential migratory trend within or near the TLWPA, with birds flying into the region during spring migration to begin their breeding period and later migrating out of the region during fall migration.

5.3 General Avian Migration Trends

5.3.1 Radar and Acoustic

The ARS and ARU were deployed in tandem in the TLWPA to potentially correlate their assessment in identifying target populations and species composition of avian migrants. However, these correlations do not represent confirmed observations of species and migratory movements due in part to the detection range of the ARU being significantly lower than that of the ARS. ARS can capture targets at distances 2,000 m to 3,000 m away. No correlation statistics were completed for radar and acoustic data. However, some noticeable observations were made and are discussed in this section.

Radar results captured high peak spring migratory activity during April, with the highest peaks occurring on April 15 and 18 during the 2024 monitoring period. This coincides with the acoustic results seen during the spring 2024 monitoring period, where high NFC detections were found from mid-April to May. This suggests that the species composition observed by the ARUs during this period may have contributed to the migratory patterns captured by the ARS. Conversely, ARS found the highest detection peak in late June for the summer period, whereas ARU found peaks from July to August. This may suggest that detection of avian activity during the summer is variable due to most species spending this time to recuperate from the breeding season and disperse to find new resource availability. Like spring migratory trends, ARS and ARU data closely aligned for the fall migration. ARS detected a peak from early to mid-September, and ARU found a peak in NFCs in September. It is assumed that the species composition present in the ARU during September when both detections were active may have contributed to the high BTs seen by the ARS.

Reasons for an inexact temporal alignment between ARS and ARU observations are likely due to several factors, including detection range and weather conditions. An ARS system has a much greater detection range than an acoustic monitor, which can allow it to observe more migrants as they fly over the Project. Additionally, certain weather conditions are more favorable for acoustic sampling than radar. For example, low level clouds, or light rain conditions can force migratory birds closer to the ground. Migrants closer to the ground are more readily heard in acoustic sampling. Furthermore, migrants navigating through conditions of reduced visibility may create more calls to aid in their migration. These same weather conditions can prove difficult for the ARS, which is unreliable in detecting birds against significant cloud cover.

6.0 SUMMARY

6.1 Radar

The ARS unit was able to capture several peak BT detection events during the 2024 monitoring period:

- Peak spring migrations occurred from April 5 to April 26 with most BTs detected on two days, April 15 and 18. It is assumed that spring migration occurred rapidly in several periods, due to either favourable weather conditions or the need for energy-saving and migration stopovers.
- Movement during the summer 2024 monitoring period occurred throughout June and peaked at the end of the month.
- Peak fall migrations occurred early to mid-September over 13 days. It is assumed that fall migration was slower than spring migration because it occurred in smaller sporadic movements, with the later movements attributed to late migrants moving out of the province due to weather conditions and internal migration cues potentially related to temperature.
- Wind speed appeared to have a greater influence on migration activity than wind direction.
- Most BT detections seen throughout the 2024 monitoring period occurred around periods of a full moon indicating that migratory activity is more prevalent in the area when nighttime visibility is high.

6.2 Acoustics

The 2023/January 2024 monitoring period detected 13 unique species and the 2024 monitoring period detected 15 unique species. No SAR and SOCC were identified during both periods. Patterns observed during the monitoring periods are as follows:

- Peak detections were observed at the end of September leading into October for the 2023/January 2024 monitoring period. These detections can likely be attributed to fall migratory activity and late migrants leaving the TLWPA.
- Peak detections were observed in April to May and from July to August for the 2024 monitoring period. These detections are likely to be migratory movements, except for the late July movements potentially attributed to post-breeding dispersal.

- Based on manually verified nocturnal flight calls detections made by Nighthawk, peak migration times included the following:
    - Mid-April to May: spring migration peak and early nesting activities
    - Late July to early August: post-breeding dispersal and early fall migrants
    - September: fall migration peak
    - October: late migrants

6.3 Notable Migration Times

Notable migration times were determined from reviewing a combination of radar and acoustic data from the ARS and ARU monitoring periods. These notable time periods aimed to be broad to capture general trends, but peak dates are mentioned to highlight potential timing for monitoring efforts aimed at reducing interactions.

- Spring
    - Early to late April (April 5 to 26), with April 15 and 18 being the highest peaks
    - May 19
- Fall
    - Early August (August 1 to August 10)
    - Mid to late September (September 12 to 30)
    - Early October (October 2 to 6)

7.0 LIMITATIONS

7.1 Radar Data

Sensitive equipment in harsh, remote environments is prone to malfunction and difficult to monitor and maintain in remote areas. Due to an internal malfunction that affected the battery bank and the system's ability to store power, the ARS experienced interruptions during their monitoring periods. Inclement weather events near the PA, particularly in July and August, also affected the ARS' outputs. Thus, radar data was collected somewhat intermittently throughout the ARS monitoring period.

Data collected by the ARS helps provide useful data for a greater understanding of when large migration events are expected to pass over the area of a proposed wind project, as well as the magnitude of such movements. Data collected from the radar can also be used to determine the heights at which avian species tend to travel during migration events, and the potential risk of interactions with turbine blades; however, while most targets detected by the radars are assumed to be migratory birds, some targets may also be insects, bats, or ground interference. The radars can also confuse precipitation with biological targets; therefore, days with large amounts of rain or snowfall tend to be omitted from data analysis. While in general avian flight activity is reduced during periods or rainfall, avian species may still fly during these periods but will not be accurately recorded by the radar (Gordo, 2007).

While the Simrad Halo 20 radar is useful for detecting individual biological targets, it cannot infer the size of the target or any information on the potential species identification. Acoustic and field

surveys are therefore necessary to supplement ARS to gain a greater understanding of species detection. Exclusion zones generated on RadR during radar processing are helpful to reduce as much ground interference and external factors as possible.

For the radars to determine if a detected target is a bird, that target must stay in the radar detection field for an extended period of approximately four seconds. Birds that only fly into the detection field momentarily will likely not be recorded by the radar. The duration that a target needs to be in the detection field to be considered a target can be reduced depending on the scope of the proposed project and the location of the radar; however, reducing the duration increases the likelihood of abiotic targets being detected and recorded.

7.2 Nighthawk

The Nighthawk model was designed for the detection and identification of avian nocturnal flight calls; however, not all birds migrate nocturnally. Finches, blackbirds, corvids, and swallows are examples of birds that primarily migrate during the day and may therefore go undetected by the model (Van Doren et al., 2023). It is assumed that these gaps will be filled using field surveys or other means of assessing the diurnal movement of birds through the PA.

It should be noted that while some species' nocturnal flight calls are distinctive, others can be very difficult to discern. In some instances, nocturnal flight calls cannot be identified with certainty by models or by the human ear. The Nighthawk model attempts to address this limitation by identifying on a broader level (e.g. to the group, family, or order level) when it cannot confidently identify a nocturnal flight call to species level.

Furthermore, Nighthawk often attempts (unsuccessfully) to classify daytime songs and calls as NFCs. This is a common source of error near sunset and sunrise, when many birds are still actively singing. To address this, the dataset was trimmed slightly to remove some of the hours when daytime bird songs and calls are most abundant (i.e., one hour before sunset and one hour after sunrise). This optimizes Nighthawk's accuracy by providing it with audio that primarily contains NFCs. Noise from non-target sources may also impact the functionality of the model. Calls made by spring peeper frogs, for example, sound very similar to the nocturnal flight call of the Swainson's thrush and can mislead the model. Anthropogenic and environmental noise can also affect the model's accuracy.

The developers of Nighthawk preprogrammed the model with a set list of species that can be detected (82 species). Since this list cannot be manually modified, species cannot be added or removed. Common nighthawk (*Chordeiles minor*) is an example of a species that was missing from the preprogrammed Nighthawk list and could not be added manually. Like the other limitations listed above, it is assumed that this gap will be addressed using field surveys to capture a full representation of avian species richness within the PA.

8.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of Exploits Valley Renewable Energy Corporation (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
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- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

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This Statement of Qualifications and Limitations forms part of the Report and any use of the Report is subject to the terms hereof.

Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Connor Nishikawa, Environmental Scientist and Polly Nguyen, Environmental Scientist, and was reviewed by Mark MacDonald, MSc., Project Manager and Senior Terrestrial Lead.

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APPENDIX A
DRAWINGS

EVREC Green Energy Hub

Project Locator

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area

Transportation

- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Waterbodies

Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-06	Project #: 24-10265
Scale: 1:200,000	Drawing #: 1
Drawn By: M. Partridge	
Checked By: N. Thomas	

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EVREC Green Energy Hub

Botwood Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Industrial Project Area
- Solar Project Area
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Industrial Facility Infrastructure Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

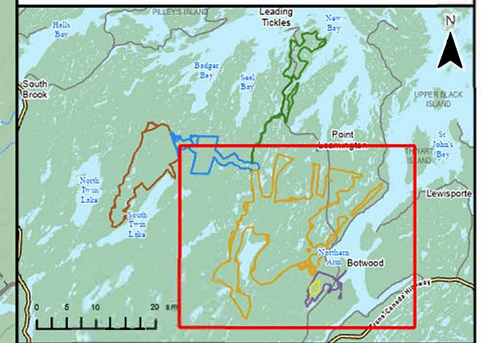
- Trans-Canada Highway
- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

Nanny Bag
Crow Valley
New Bay Radar
Rocks Pond
Point Leamington
Point of Bay
Botwood
Peterview
Alderburn
Lewis Lake
West Arm Brook
New Bay River
New Bay Pond
Northern Arm
Northern Arm Brook
Peters Pond
Peters River
Burnt Arm
Norris Arm
Rattling Brook
Exploits River
Frozen Ocean Lake
Highway 350
Trans-Canada-Highway

0 2 4 6 km



Coordinate System: NAD 1983 CSRS UTM Zone 21N
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Date: 2026-03-27	Project #: 24-10265
Scale: 1:117,000	Drawing #: 2A
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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EVREC Green Energy Hub

Twin Lakes Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

- Seabrights Lake Wind Project Area
- Twin Lakes Wind Project Area
- Project Road
- Turbine
- Avian Acoustic Monitor Locations (2023)
- Avian Acoustic Monitor Locations (2024)
- Avian Radar Locations (2024)

Transportation

- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies

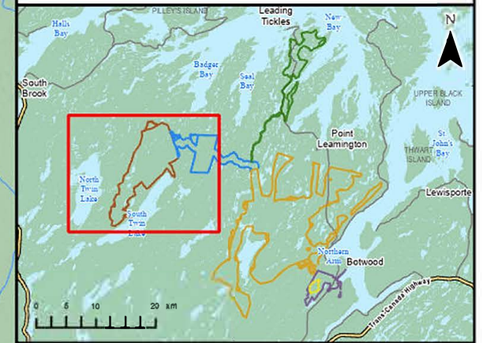
Marks Lake

Tommy's Arm River

North Twin Lake

South Twin Lake

0 1 2 3 km



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Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:75,000	Drawing #: 2B
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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EVREC Green Energy Hub

Leading Tickles Wind Project Area
Avian Radar & Acoustic Monitor Locations

EVREC

Project Area

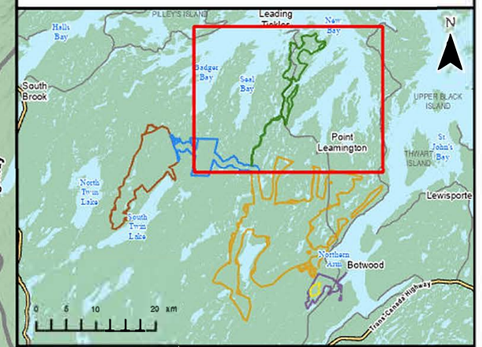
- Botwood Wind Project Area
- Leading Tickles Wind Project Area
- Seabrights Lake Wind Project Area
- Project Road
- Turbine
- Avian Radar Locations (2025)

Transportation

- Highway
- Road
- Unpaved Road

Water Features

- Mapped Watercourses
- Mapped Waterbodies



Coordinate System: NAD 1983 CSRS UTM Zone 21N
Sources: Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date: 2026-03-27	Project #: 24-10265
Scale: 1:94,000	Drawing #: 2C
Drawn By: M. Partridge	
Checked By: P. Nguyen	

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0 1.5 3 4.5 km

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APPENDIX B
TABLES

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-01-01	2024	1	1		-2.1		-15.8		-9		27		0						0		1		32		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-02	2024	1	2		-2.7		-17.1		-9.9		27.9		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-03	2024	1	3		-0.5		-2.9		-1.7		19.7		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-04	2024	1	4		-1.3		-3.7		-2.5		20.5		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-05	2024	1	5		-3.2		-7		-5.1		23.1		0						1.1		2					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-06	2024	1	6		-6		-14.1		-10.1		28.1		0						0		2		29		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-07	2024	1	7		-4.6		-15.9		-10.3		28.3		0						0		2		28		53	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-08	2024	1	8		-2.8		-16.7		-9.8		27.8		0						0.1		2		33		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-09	2024	1	9		-3.6		-11.2		-7.4		25.4		0						0		1		26		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-10	2024	1	10		-4.8		-20.5		-12.6		30.6		0						2.3		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-11	2024	1	11		4		-5		-0.5		18.5		0						0.9		4					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-12	2024	1	12		3.5		-3.5		0		18		0						0.1		2					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-13	2024	1	13		-3.3		-4.6		-4		22		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-14	2024	1	14		1.2		-3.9		-1.3		19.3		0						2.7		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-15	2024	1	15		2.6		-8.1		-2.8		20.8		0						0.9		0		27		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-16	2024	1	16		-2		-13.4		-7.7		25.7		0						1.1		1		26		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-17	2024	1	17		6.9		-8.2		-0.7		18.7		0						11.8		8		25		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-18	2024	1	18		-3.3		-7.5		-5.4		23.4		0						0.3		5		26		58	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-19	2024	1	19		-4.1		-7.4		-5.8		23.8		0						0		4		24		66	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-20	2024	1	20		-2.5		-11.7		-7.1		25.1		0						0.3		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-21	2024	1	21		-0.3		-11.7		-6		24		0						0.6		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-22	2024	1	22		-1.7		-10.2		-5.9		23.9		0						0.1		6		25		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-23	2024	1	23		0.5		-18.1		-8.8		26.8		0						0.2		6		26		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-24	2024	1	24		-7		-18.2		-12.6		30.6		0						0		6		29		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-25	2024	1	25		0.5		-22.3		-10.9		28.9		0						0		5		20		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-26	2024	1	26		-4.5		-25.1		-14.8		32.8		0						0		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-27	2024	1	27		-2.8		-6.1		-4.4		22.4		0						0		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-28	2024	1	28		0.4		-6.4		-3		21		0						0		5		3		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-01-29	2024	1	29		-6.4		-14.7		-10.5		28.5		0						2		5					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-30	2024	1	30		-11.2		-27		-19.1		37.1		0						0		8					
-56.07	48.97	BADGER (AUT)	8400301	2024-01-31	2024	1	31		-2		-27		-14.5		32.5		0						0		8					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-01	2024	2	1		-2.8		-21.4		-12.1		30.1		0						2.4		8					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-02	2024	2	2		-0.8		-7.5		-4.1		22.1		0						4		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-03	2024	2	3		-3		-5.6		-4.3		22.3		0						2.1		16		1		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-04	2024	2	4		0.3		-5.3		-2.5		20.5		0						2.8		18		5		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-05	2024	2	5		0.5		-1.7		-0.6		18.6		0						13.3		28		4		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-06	2024	2	6		-0.5		-3.8		-2.2		20.2		0						0.7		32		3		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-07	2024	2	7		-3.4		-13.3		-8.4		26.4		0						0.1		30					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-08	2024	2	8		-4.2		-15		-9.6		27.6		0						0.9		29					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-09	2024	2	9		-1.6		-18.1		-9.8		27.8		0						0		29					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-10	2024	2	10		-0.5		-19		-9.8		27.8		0						0.1		28					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-11	2024	2	11		3.3		-2.5		0.4		17.6		0						2		27					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-12	2024	2	12		3.4		-1.6		0.9		17.1		0						0		23					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-13	2024	2	13		-0.5		-6.3		-3.4		21.4		0						0		21					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-14	2024	2	14		-1.5		-5.5		-3.5		21.5		0						8.8		21		1		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-15	2024	2	15		0		-2.3		-1.1		19.1		0						10.3		34		33		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-16	2024	2	16		-0.2		-14.6		-7.4		25.4		0						0.2		40		32		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-17	2024	2	17		-1.3		-13.9		-7.6		25.6		0						0		38		24		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-18	2024	2	18		-1.2		-8.7		-5		23		0						1.1		38		21		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-19	2024	2	19		-1.7		-17.9		-9.8		27.8		0						0		36		26		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-20	2024	2	20		-5.9		-16.1		-11		29		0						0		36		26		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-21	2024	2	21		-5.4		-20.9		-13.2		31.2		0						0		33		27		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-22	2024	2	22		-2.4		-22.1		-12.2		30.2		0						12		33					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-23	2024	2	23		6		-5.4		0.3		17.7		0						3.5		44					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-24	2024	2	24		8.4		-0.5		3.9		14.1		0						10.9		43		17		53	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-25	2024	2	25		2.7		-15.7		-6.5		24.5		0						0		22		23		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-26	2024	2	26		1.1		-18.8		-8.9		26.9		0						0		21					
-56.07	48.97	BADGER (AUT)	8400301	2024-02-27	2024	2	27		3.8		-9.1		-2.6		20.6		0						0.1		21		25		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-28	2024	2	28		10.1		-2.7		3.7		14.3		0						0.5		21		18		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-02-29	2024	2	29		10.7		-7.4		1.6		16.4		0						3.8		10		20		59	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-01	2024	3	1		-7.4		-10.9		-9.1		27.1		0						0		4		28		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-02	2024	3	2		-1.3		-9.8		-5.6		23.6		0						0		3		27		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-03	2024	3	3		6.9		-7.3		-0.2		18.2		0						0		3		25		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-04	2024	3	4		0.1		-7.2		-3.5		21.5		0						0		1		34		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-05	2024	3	5		7.2		-8.8		-0.8		18.8		0						0		1					

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Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-03-06	2024	3	6		8.1		-3.6		2.2		15.8		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-07	2024	3	7		0.4		-5.8		-2.7		20.7		0						15.1		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-08	2024	3	8		-2		-5.3		-3.6		21.6		0						4.5		16		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-09	2024	3	9		-0.1		-5.7		-2.9		20.9		0						0		14		3		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-10	2024	3	10		3.7		-6.2		-1.3		19.3		0						0		12					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-11	2024	3	11		2.1		-2.9		-0.4		18.4		0						23.7		10		7		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-12	2024	3	12		2.5		0.2		1.4		16.6		0						15.2		17		6		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-13	2024	3	13		1.5		0		0.7		17.3		0						5.9		17		36		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-14	2024	3	14		2.8		-1.3		0.7		17.3		0						0.4		15					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-15	2024	3	15		2.8		-1.7		0.5		17.5		0						0		13					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-16	2024	3	16		4.1		-2.2		0.9		17.1		0						0.5		12					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-17	2024	3	17		5.3		-2.5		1.4		16.6		0						0.3		12					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-18	2024	3	18		0.3		-4.9		-2.3		20.3		0						7.9		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-19	2024	3	19		5.7		-5.1		0.3		17.7		0						6.4		17			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-03-20	2024	3	20		5.5		-2.7		1.4		16.6		0						2.5		18			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-03-21	2024	3	21		2.4		-4.2		-0.9		18.9		0						2.1		14		21		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-22	2024	3	22		1.6		-4		-1.2		19.2		0						0		15		21		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-23	2024	3	23		2.4		-3.6		-0.6		18.6		0						0.1		15		26		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-24	2024	3	24		7.5		-4.1		1.7		16.3		0						5.9		16		16		68	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-25	2024	3	25		0.9		-11.4		-5.3		23.3		0						0		10		30		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-26	2024	3	26		6.4		-12.5		-3.1		21.1		0						0		9					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-27	2024	3	27		5.9		-9.2		-1.6		19.6		0						0		9					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-28	2024	3	28		8.9		1.4		5.2		12.8		0						9.1		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-29	2024	3	29		5.8		0.7		3.2		14.8		0						21.2		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-03-30	2024	3	30		8.7		0.6		4.6		13.4		0						0.8		1		21		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-03-31	2024	3	31		6.9		-1.9		2.5		15.5		0						0.2		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-01	2024	4	1		6.3		-0.7		2.8		15.2		0						1.5		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-02	2024	4	2		4.1		-0.9		1.6		16.4		0						1.3		1		22		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-03	2024	4	3		2.5		-1.1		0.7		17.3		0						2.2		1		34		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-04	2024	4	4		2.7		-1.6		0.5		17.5		0						1.1		1		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-05	2024	4	5		1.5		-2.7		-0.6		18.6		0						0		1		5		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-06	2024	4	6		2.7		-1		0.9		17.1		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-07	2024	4	7		4.6		-2.8		0.9		17.1		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-08	2024	4	8		3.9		-3.2		0.4		17.6		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-09	2024	4	9		2.2		-3.4		-0.6		18.6		0						0.6		1		1		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-10	2024	4	10		3.9		-4.8		-0.4		18.4		0						0.5		1		33		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-11	2024	4	11		10.6		-8		1.3		16.7		0						0		1					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-12	2024	4	12		10.8		-0.3		5.2		12.8		0						0		1		22		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-13	2024	4	13		13.3		5.9		9.6		8.4		0						0.1		1		16		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-14	2024	4	14		14.7		2.3		8.5		9.5		0						0.3		0		18		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-15	2024	4	15		13.2		3.2		8.2		9.8		0						0.8		0		20		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-16	2024	4	16		14.2		5.3		9.7		8.3		0						9.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-17	2024	4	17		5.7		-0.5		2.6		15.4		0						4.3		0		3		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-18	2024	4	18		0.3		-1.7		-0.7		18.7		0						1.8		0		34		55	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-19	2024	4	19		5.1		-7.5		-1.2		19.2		0						0		1		36		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-20	2024	4	20		10.9		-8.7		1.1		16.9		0						0		0		18		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-21	2024	4	21		10		-5.1		2.5		15.5		0						5.2				26		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-22	2024	4	22		8.6		-5.7		1.4		16.6		0						0.3		0		23		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-23	2024	4	23		9.7		-4.2		2.7		15.3		0						0		0		26		52	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-24	2024	4	24		6		-5.8		0.1		17.9		0						8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-25	2024	4	25		11.8		-0.3		5.8		12.2		0						0.1		0		21		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-26	2024	4	26		4.1		-1.6		1.3		16.7		0						0		0		22		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-04-27	2024	4	27		8.5		-8.2		0.2		17.8		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-28	2024	4	28		13		-9.5		1.7		16.3		0						4.8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-29	2024	4	29		7.4		1		4.2		13.8		0						15		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-04-30	2024	4	30		7.9		3.1		5.5		12.5		0						2.3		0		2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-01	2024	5	1		12.7		2.8		7.8		10.2		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-02	2024	5	2		5.7		2.3		4		14		0						7.7				36		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-03	2024	5	3		4.7		0.6		2.6		15.4		0						2.6				1		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-04	2024	5	4		4		-0.6		1.7		16.3		0						0.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-05	2024	5	5		17.1		-2		7.5		10.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-06	2024	5	6		13.3		-2.7		5.3		12.7		0						0.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-07	2024	5	7		15.8		4.6		10.2		7.8		0						4.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-08	2024	5	8		11.1		1.5		6.3		11.7		0						8.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-09	2024	5	9		11		-0.8		5.1		12.9		0						0							

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-05-10	2024	5	10		6.1		0.4		3.3		14.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-11	2024	5	11		12.3		-0.2		6		12		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-12	2024	5	12		7.1		0.6		3.8		14.2		0						11.5				5		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-13	2024	5	13		15.8		-0.1		7.9		10.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-14	2024	5	14		13.8		-1.3		6.3		11.7		0						10.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-15	2024	5	15		6.4		3.1		4.7		13.3		0						10.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-16	2024	5	16		13.9		4.1		9		9		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-17	2024	5	17		18.6		2.8		10.7		7.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-18	2024	5	18		15.2		0.7		8		10		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-19	2024	5	19		15.1		0.5		7.8		10.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-20	2024	5	20		20.9		-1.7		9.6		8.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-21	2024	5	21		21.7		3.2		12.4		5.6		0						5.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-22	2024	5	22		14		2.9		8.5		9.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-23	2024	5	23		12.2		2.9		7.6		10.4		0						9.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-24	2024	5	24		12		4.2		8.1		9.9		0						13.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-25	2024	5	25		8		3.7		5.8		12.2		0						9				35		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-26	2024	5	26		6.6		1.1		3.9		14.1		0						0				2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-27	2024	5	27		17.2		0.3		8.7		9.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-05-28	2024	5	28		17.3		-1.6		7.9		10.1		0						1.2				22		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-29	2024	5	29		16.4		8.5		12.5		5.5		0						0.4				16		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-30	2024	5	30		23.8		2.7		13.3		4.7		0						0				25		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-05-31	2024	5	31		12.3		2.7		7.5		10.5		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-01	2024	6	1		6		4.2		5.1		12.9		0						23.1				2		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-02	2024	6	2		16.2		4.6		10.4		7.6		0						12							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-03	2024	6	3		20.9		10.9		15.9		2.1		0						0.6				8		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-04	2024	6	4		13.9		6.5		10.2		7.8		0						7.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-05	2024	6	5		15		7		11		7		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-06	2024	6	6		13		7.7		10.4		7.6		0						6.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-07	2024	6	7		15.6		7.7		11.6		6.4		0						8.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-08	2024	6	8		16.9		4		10.5		7.5		0						0.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-09	2024	6	9		18.4		4		11.2		6.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-10	2024	6	10		15.9		7		11.5		6.5		0						8.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-11	2024	6	11		20.4		9.7		15		3		0						2.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-12	2024	6	12		22.1		11.5		16.8		1.2		0						8							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-13	2024	6	13		20.9		12.8		16.8		1.2		0						6.1				25		48	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-14	2024	6	14		27.6		11.5		19.6		0		1.6						0				26		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-15	2024	6	15		22.4		9.8		16.1		1.9		0						7.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-16	2024	6	16		20.1		6.4		13.2		4.8		0						6.8				32		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-17	2024	6	17		24		3.3		13.7		4.3		0						0				25		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-18	2024	6	18		26.3		12.6		19.4		0		1.4						0				24		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-19	2024	6	19		32.4		10.6		21.5		0		3.5						0				24		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-20	2024	6	20		33		13.4		23.2		0		5.2						0				29		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-21	2024	6	21		23.4		4.1		13.8		4.2		0						0				26		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-22	2024	6	22		23.2		2.3		12.7		5.3		0						0				27		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-23	2024	6	23		27.9		3.6		15.7		2.3		0						1.2				23		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-24	2024	6	24		16.9		11		13.9		4.1		0						28.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-25	2024	6	25		17.7		9.9		13.8		4.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-26	2024	6	26		25.2		8.5		16.9		1.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-27	2024	6	27		23.7		14.1		18.9		0		0.9						1.4				18		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-28	2024	6	28		22.3		7.2		14.8		3.2		0						1.2				29		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-06-29	2024	6	29		22		7		14.5		3.5		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-06-30	2024	6	30		18.8		11.9		15.3		2.7		0						0				18		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-01	2024	7	1		24.7		10.8		17.8		0.2		0						0				32		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-02	2024	7	2		21.7		6.6		14.2		3.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-03	2024	7	3		29.9		5.4		17.6		0.4		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-04	2024	7	4		28.6		9.2		18.9		0		0.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-05	2024	7	5		29		10		19.5		0		1.5						0				26		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-06	2024	7	6		26.1		13.1		19.6		0		1.6						8.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-07	2024	7	7		24.6		11.1		17.9		0.1		0						9.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-08	2024	7	8		32		9.2		20.6		0		2.6						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-09	2024	7	9		29.4		12.5		21		0		3						0.1				19		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-10	2024	7	10		28.3		15.4		21.9		0		3.9						3.7				27		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-11	2024	7	11		27.1		13		20		0		2						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-12	2024	7	12		24.3		13		18.7		0		0.7						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-13	2024	7	13		30.8		14.4		22.6		0		4.6						0				30		35	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-07-14	2024	7	14		27.4		14.1		20.8		0		2.8						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-15	2024	7	15		24.9		14.3		19.6		0		1.6						4.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-16	2024	7	16		29.6		14.3		21.9		0		3.9						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-17	2024	7	17		26.7		18.1		22.4		0		4.4						5.5							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-18	2024	7	18		31.4		17.6		24.5		0		6.5						2.1				20		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-19	2024	7	19		28.5		12.8		20.7		0		2.7						0				23		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-20	2024	7	20		30.1		10.7		20.4		0		2.4						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-21	2024	7	21		27.2		9.5		18.4		0		0.4						0				19		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-22	2024	7	22		23.7		10.4		17.1		0.9		0						0				23		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-23	2024	7	23			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-07-24	2024	7	24			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-07-25	2024	7	25		28.5		4		16.2		1.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-26	2024	7	26		20.2		9.7		15		3		0						6				34		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-27	2024	7	27		23.4		6.4		14.9		3.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-07-28	2024	7	28		30.2		8.2		19.2		0		1.2						0				27		45	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-29	2024	7	29		32.1		17		24.5		0		6.5						0				23		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-30	2024	7	30		32.8		18.6		25.7		0		7.7						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-07-31	2024	7	31		30.4		17.7		24.1		0		6.1						3.3				25		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-01	2024	8	1		30.4		16.4		23.4		0		5.4						0.2				22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-02	2024	8	2		25.7		11.1		18.4		0		0.4						6.4				34		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-03	2024	8	3		31.2		11.4		21.3		0		3.3						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-04	2024	8	4		26.9		19.6		23.2		0		5.2						2.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-05	2024	8	5		28.8		11.6		20.2		0		2.2						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-06	2024	8	6		21.2		10.4		15.8		2.2		0						4.3				24		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-07	2024	8	7		23		7		15		3		0						0				27		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-08	2024	8	8		23.1		5.5		14.3		3.7		0						0				23		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-09	2024	8	9		26.1		4.1		15.1		2.9		0						0				31		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-10	2024	8	10		24.1		12.6		18.3		0		0.3						7.4				22		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-11	2024	8	11		28		15.1		21.6		0		3.6						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-12	2024	8	12		28.5		11.3		19.9		0		1.9						0				23		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-13	2024	8	13		14.9		8.7		11.8		6.2		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-14	2024	8	14		21.6		2.7		12.2		5.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-15	2024	8	15		24.8		2.7		13.7		4.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-16	2024	8	16		26.7		5.2		15.9		2.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-17	2024	8	17		27.2		9		18.1		0		0.1						0				21		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-18	2024	8	18		29.8		14.7		22.2		0		4.2						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-19	2024	8	19		25.8		12.7		19.3		0		1.3						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-20	2024	8	20		24.5		12.4		18.5		0		0.5						11.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-21	2024	8	21		14.8		11.4		13.1		4.9		0						6.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-22	2024	8	22		20.2		11.3		15.7		2.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-23	2024	8	23		19.6		12.6		16.1		1.9		0						6.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-24	2024	8	24		23.2		8.3		15.8		2.2		0						4.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-25	2024	8	25		29.1		9		19.1		0		1.1						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-26	2024	8	26		29.2		6.9		18		0		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-27	2024	8	27		27.9		13.7		20.8		0		2.8						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-08-28	2024	8	28		22.4		12.3		17.3		0.7		0						4.4				23		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-29	2024	8	29		13.8		6.7		10.3		7.7		0						2.1				30		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-30	2024	8	30		22.2		3.9		13.1		4.9		0						0				26		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-08-31	2024	8	31		26.6		4.2		15.4		2.6		0						0				26		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-01	2024	9	1		24.5		15.8		20.2		0		2.2						0				19		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-02	2024	9	2		24.9		12.5		18.7		0		0.7						13.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-03	2024	9	3		20.6		7		13.8		4.2		0						0				28		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-04	2024	9	4		20.8		1.1		11		7		0						0				29		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-05	2024	9	5		24.7		-0.5		12.1		5.9		0						0				22		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-06	2024	9	6		28.4		7.2		17.8		0.2		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-07	2024	9	7		25.5		9.1		17.3		0.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-08	2024	9	8		21.9		8.7		15.3		2.7		0						4.2				15		41	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-09	2024	9	9		22.9		8		15.4		2.6		0						10.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-10	2024	9	10		20.5		6.9		13.7		4.3		0						0				22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-11	2024	9	11		20.8		3.1		12		6		0						3.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-12	2024	9	12		19.7		-1.4		9.2		8.8		0						0				27		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-09-13	2024	9	13		23.1		-1.6		10.8		7.2		0						10.4							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-14	2024	9	14		11.8		6.6		9.2		8.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-15	2024	9	15		16.6		4.3		10.4		7.6		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-16	2024	9	16		25.3		4.4		14.9		3.1		0						0				25		33	

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Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-09-17	2024	9	17		24.4		8.5		16.4		1.6		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-18	2024	9	18		25.3		9.9		17.6		0.4		0						2.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-19	2024	9	19		15.5		6.3		10.9		7.1		0						6.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-20	2024	9	20		13.4		6.1		9.7		8.3		0						0.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-21	2024	9	21		13		5.5		9.3		8.7		0						0.9							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-22	2024	9	22		13.1		0.3		6.7		11.3		0						1.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-23	2024	9	23		15.2		1.5		8.3		9.7		0						0.2							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-24	2024	9	24		13.8		8.3		11		7		0						1.8							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-25	2024	9	25		12.6		6.8		9.7		8.3		0						1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-26	2024	9	26		14.7		0.5		7.6		10.4		0						0.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-27	2024	9	27		13.4		0.7		7		11		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-28	2024	9	28		15.2		4.6		9.9		8.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-29	2024	9	29		16.7		3.7		10.2		7.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-09-30	2024	9	30		16.7		4.6		10.6		7.4		0						3.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-01	2024	10	1			M		M		M		M		M						M				M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-10-02	2024	10	2		8.2		5.2		6.7		11.3		0						0.1				2		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-03	2024	10	3		13.5		-1.5		6		12		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-04	2024	10	4		18.8		-1.3		8.7		9.3		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-05	2024	10	5		15.7		0.7		8.2		9.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-06	2024	10	6		12.1		5.8		8.9		9.1		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-07	2024	10	7		10.7		3.4		7.1		10.9		0						0.3							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-08	2024	10	8		11.8		0.8		6.3		11.7		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-09	2024	10	9		11		3.6		7.3		10.7		0						36.7							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-10	2024	10	10		14.2		3.7		9		9		0						0.6							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-11	2024	10	11		13.3		-0.4		6.4		11.6		0						2.1				24		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-12	2024	10	12		11.7		4.8		8.2		9.8		0						0.5				22		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-13	2024	10	13		11.4		2.9		7.1		10.9		0						0				30		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-14	2024	10	14		14.1		-0.4		6.9		11.1		0						1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-15	2024	10	15		16.7		4.9		10.8		7.2		0						16.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-16	2024	10	16		12		0.4		6.2		11.8		0						1.3				22		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-17	2024	10	17		9.3		0.9		5.1		12.9		0						0				26		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-18	2024	10	18		8.2		-2.6		2.8		15.2		0						0				29		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-19	2024	10	19		15		-3.6		5.7		12.3		0						0				27		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-20	2024	10	20		18		0.4		9.2		8.8		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-21	2024	10	21		15.9		6.3		11.1		6.9		0						0				24		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-22	2024	10	22		9.9		-4.8		2.6		15.4		0						0				33		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-23	2024	10	23		15.2		-4.9		5.1		12.9		0						0				20		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-24	2024	10	24		18.9		8.2		13.5		4.5		0						14.4				24		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-25	2024	10	25		8.2		4		6.1		11.9		0						83.5				36		55	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-26	2024	10	26		10.1		2.6		6.4		11.6		0						7.4				33		34	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-27	2024	10	27		7.6		-2.6		2.5		15.5		0						1.5				24		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-10-28	2024	10	28		6.4		-6.2		0.1		17.9		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-29	2024	10	29		6.1		-8.6		-1.2		19.2		0						1.1							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-30	2024	10	30		5.7		-5.7		0		18		0						0							
-56.07	48.97	BADGER (AUT)	8400301	2024-10-31	2024	10	31		9.7		2.1		5.9		12.1		0						5.8				20		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-01	2024	11	1		10.2		2.1		6.1		11.9		0						12.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-02	2024	11	2		5.1		-2.7		1.2		16.8		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-03	2024	11	3		5.2		-3.5		0.8		17.2		0						0.4		0		27		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-04	2024	11	4		1.5		-3.7		-1.1		19.1		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-05	2024	11	5		6.8		-5.7		0.6		17.4		0						4.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-06	2024	11	6		7.9		0.7		4.3		13.7		0						9.8		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-07	2024	11	7		6		-1.3		2.4		15.6		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-08	2024	11	8		5.8		-1.1		2.4		15.6		0						3.2		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-09	2024	11	9		1.8		-0.9		0.4		17.6		0						0.9		0		2		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-10	2024	11	10		2.5		-2.7		-0.1		18.1		0						0.2		1		29		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-11	2024	11	11		9.2		-2		3.6		14.4		0						1		0		14		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-12	2024	11	12		12.2		3		7.6		10.4		0						4.5		0		1		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-13	2024	11	13		3		-0.4		1.3		16.7		0						5.2		0		2		49	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-14	2024	11	14		8.2		0.1		4.2		13.8		0						28.1				35		47	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-15	2024	11	15		12.3		8.2		10.3		7.7		0						6.4		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-16	2024	11	16		12.5		7.8		10.1		7.9		0						1.9		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-17	2024	11	17		8.6		6.4		7.5		10.5		0						7.5		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-18	2024	11	18		7.7		5.9		6.8		11.2		0						10.4		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-19	2024	11	19		7.5		5		6.3		11.7		0						5.1		0		2		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-20	2024	11	20		6.4		4.6		5.5		12.5		0						10.7		0		35		34	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp. (°C)	Max Temp. Flag	Min Temp. (°C)	Min Temp. Flag	Mean Temp. (°C)	Mean Temp. Flag	Heat Degree Days (°C)	Heat Degree Days Flag	Cool Degree Days (°C)	Cool Degree Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip -itation (mm)	Total Precip -itation Flag	Snow on Ground (cm)	Snow on Ground Flag	Direction of Max Gust (10s deg)	Directon of Max Gust Flag	Speed of Max Gust (km/h)	Speed of Max Gust Flag
-56.07	48.97	BADGER (AUT)	8400301	2024-11-21	2024	11	21		7.2		2.2		4.7		13.3		0						9.3		0		1		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-22	2024	11	22		3.5		1.5		2.5		15.5		0						0.6		0		2		43	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-23	2024	11	23		5.6		2.5		4		14		0						8.7		0		9		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-24	2024	11	24		8		4.7		6.3		11.7		0						12		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-25	2024	11	25		6.2		4.2		5.2		12.8		0						4.8		0		36		44	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-26	2024	11	26			M		M		M		M		M						M	0			M		M
-56.07	48.97	BADGER (AUT)	8400301	2024-11-27	2024	11	27		2.8		-0.8		1		17		0						2.7		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-28	2024	11	28		4.5		-0.9		1.8		16.2		0						1.3		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-11-29	2024	11	29		4.3		-0.7		1.8		16.2		0						8.1		0		9		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-11-30	2024	11	30		3.4		-6.7		-1.7		19.7		0						0.6		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-01	2024	12	1		3.2		-7.1		-1.9		19.9		0						0.5				24		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-02	2024	12	2		4		-10.4		-3.2		21.2		0						0		0		21		32	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-03	2024	12	3		1		-12.2		-5.6		23.6		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-04	2024	12	4		-1.9		-8.5		-5.2		23.2		0						0		0					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-05	2024	12	5		0.7		-9.1		-4.2		22.2		0						5.4		1		11		36	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-06	2024	12	6		6.2		-2		2.1		15.9		0						15.1		1		19		46	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-07	2024	12	7		-0.4		-12.8		-6.6		24.6		0						0		0		26		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-08	2024	12	8		-1.8		-12.8		-7.3		25.3		0						1.9		1		22		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-09	2024	12	9		3.1		-7.4		-2.2		20.2		0						7.1		11		25		38	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-10	2024	12	10		-2		-12.7		-7.4		25.4		0						0		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-11	2024	12	11		1.4		-8.2		-3.4		21.4		0						3.8		6					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-12	2024	12	12		13.8		1		7.4		10.6		0						8.6		1		18		51	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-13	2024	12	13		4.4		-4		0.2		17.8		0						0		0		25		37	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-14	2024	12	14		0.4		-5		-2.3		20.3		0						0		0		26		40	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-15	2024	12	15		0.1		-4.2		-2.1		20.1		0						0		0		29		33	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-16	2024	12	16		3.8		-8.7		-2.4		20.4		0						0		1		25		35	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-17	2024	12	17		7		-11.3		-2.1		20.1		0						2.2		1		18		39	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-18	2024	12	18		7		2.1		4.5		13.5		0						0		1		22		42	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-19	2024	12	19		3.1		-0.9		1.1		16.9		0						16.1		0		17		31	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-20	2024	12	20		-0.9		-11.9		-6.4		24.4		0						0		3					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-21	2024	12	21		2.2		-6.5		-2.2		20.2		0						32.9		9		22		58	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-22	2024	12	22		-0.6		-7.9		-4.2		22.2		0						0.1		11		17		80	
-56.07	48.97	BADGER (AUT)	8400301	2024-12-23	2024	12	23		-4.5		-11.3		-7.9		25.9		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-24	2024	12	24		-6.3		-21.3		-13.8		31.8		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-25	2024	12	25		-4.9		-21.4		-13.1		31.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-26	2024	12	26		0.4		-18.8		-9.2		27.2		0						0.1		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-27	2024	12	27		-2.1		-6.1		-4.1		22.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-28	2024	12	28		-2.2		-7.7		-5		23		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-29	2024	12	29		0		-3.2		-1.6		19.6		0						1.3		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-30	2024	12	30		1.8		-2		-0.1		18.1		0						0		11					
-56.07	48.97	BADGER (AUT)	8400301	2024-12-31	2024	12	31		1.7		-0.6		0.5		17.5		0						2.8		11					

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
199.4	201	0	11025	Passeriformes	0.97216314	Passerellidae	0.99555355	SFHS	0.9898739	whtspa	0.9972493	whtspa	0.997249305	2024-04-13	03:22.4	Y
2472.4	2473.8	0	11025	Charadriiformes	0.9760425	Scolopacidae	0.9947212			uplsan	0.9989248	uplsan	0.998924792	2024-04-15	41:14.4	Y
1524.8	1526.4	0	11025	Charadriiformes	0.98046815	Scolopacidae	0.9954359			uplsan	0.9994357	uplsan	0.999435723	2024-04-19	25:26.8	Y
2148	2149.4	0	11025	Passeriformes	0.96919227	Passerellidae	0.9951676			daejun	0.99683666	daejun	0.996836662	2024-04-20	35:52.0	Y
3346.2	3347.8	0	11025	Charadriiformes	0.98059064	Scolopacidae	0.99553126			uplsan	0.99912304	uplsan	0.999123037	2024-04-20	55:50.2	Y
1993	1994.8	0	11025	Passeriformes	0.97205555	Passerellidae	0.9954139	SFHS	0.9899234	whtspa	0.99843425	whtspa	0.998434246	2024-04-20	33:17.0	Y
1094	1095.4	0	11025	Passeriformes	0.87972987	Passerellidae	0.97502327			daejun	0.9831782	daejun	0.983178198	2024-04-21	18:16.0	Y
1119	1120.8	0	11025	Passeriformes	0.9703782	Passerellidae	0.9948689			daejun	0.99617094	daejun	0.996170938	2024-04-21	18:41.0	Y
2898	2899.4	0	11025	Passeriformes	0.9713397	Passerellidae	0.99535984			daejun	0.9966546	daejun	0.99665463	2024-04-22	48:22.0	Y
2582.6	2583.8	0	11025	Passeriformes	0.9377828	Turdidae	0.9051452			amerob	0.9920412	amerob	0.992041171	2024-04-22	43:04.6	Y
2617.8	2619.2	0	11025	Passeriformes	0.9667104	Turdidae	0.9496382	THSH	0.9333504	herthr	0.99996316	herthr	0.999963164	2024-04-23	43:39.8	Y
491.8	493.2	0	11025	Passeriformes	0.9629281	Turdidae	0.93583024			amerob	0.9768137	amerob	0.976813674	2024-04-24	08:15.8	Y
3379.2	3381	0	11025	Passeriformes	0.9722136	Turdidae	0.95984745			amerob	0.9999999	amerob	0.999999881	2024-04-24	56:23.2	Y
2148	2149.4	0	11025	Passeriformes	0.9621933	Passerellidae	0.9933553			daejun	0.9950956	daejun	0.995095611	2024-04-24	35:52.0	Y
3351.4	3352.8	0	11025	Passeriformes	0.95478487	Passerellidae	0.9887726	SFHS	0.9346526	whtspa	0.927405	whtspa	0.927405	2024-04-24	55:55.4	Y
2690.4	2692	0	11025	Charadriiformes	0.9767482	Scolopacidae	0.99483645			shbdow	0.9998827	shbdow	0.999882698	2024-04-26	44:52.4	Y
416.8	418.2	0	11025	Passeriformes	0.970572	Turdidae	0.9594258			amerob	0.9999995	amerob	0.999999523	2024-04-27	06:58.8	Y
1572.6	1574.2	0	11025	Passeriformes	0.9593958	Passerellidae	0.98781115			daejun	0.9916102	daejun	0.991610229	2024-04-27	26:14.6	Y
1579.8	1582.2	0	11025	Passeriformes	0.96172416	Passerellidae	0.99309444			daejun	0.99617344	daejun	0.996173441	2024-04-27	26:21.8	Y
1591.2	1596.2	0	11025	Passeriformes	0.9722199	Passerellidae	0.9955871			daejun	0.9970107	daejun	0.997010708	2024-04-27	26:33.2	Y
1623.8	1626.2	0	11025	Passeriformes	0.9627248	Passerellidae	0.99237627			daejun	0.9949486	daejun	0.994948626	2024-04-27	27:05.8	Y
3033.6	3035.4	0	11025	Passeriformes	0.971807	Passerellidae	0.99508023	DESP	0.9787763	savspa	0.9854571	savspa	0.985457122	2024-04-28	50:35.6	Y
939.4	941	0	11025	Passeriformes	0.9601398	Passerellidae	0.9894224	SFHS	0.9802136	whtspa	0.9903295	whtspa	0.990329504	2024-05-16	15:43.4	Y
1418.4	1419.8	0	11025	Passeriformes	0.9686928	Passerellidae	0.9857268	SFHS	0.9758959	whtspa	0.99338704	whtspa	0.993387043	2024-05-16	23:42.4	Y
1423	1424.8	0	11025	Passeriformes	0.9709998	Passerellidae	0.99529713	SFHS	0.98921764	whtspa	0.99840254	whtspa	0.998402536	2024-05-16	23:47.0	Y
1427	1428.8	0	11025	Passeriformes	0.9700686	Passerellidae	0.9946418	SFHS	0.9872442	whtspa	0.9972203	whtspa	0.997220278	2024-05-16	23:51.0	Y
36.8	38.4	0	11025	Passeriformes	0.9706616	Parulidae	0.9547089			bawwar	0.99998415	bawwar	0.999984145	2024-05-17	00:40.8	Y
59.4	61	0	11025	Passeriformes	0.9720489	Parulidae	0.9558502			bawwar	0.99998236	bawwar	0.999982357	2024-05-17	01:03.4	Y
673	674.2	0	11025	Passeriformes	0.9660068	Passerellidae	0.9941916			daejun	0.99578387	daejun	0.995783865	2024-05-17	11:17.0	Y
1633.4	1634.8	0	11025	Passeriformes	0.97033656	Passerellidae	0.99517184	HSSP	0.99738055	graspa	0.9981086	graspa	0.998108625	2024-05-18	27:21.4	Y
1727.2	1729	0	11025	Passeriformes	0.9703522	Parulidae	0.9542499			bawwar	0.99999845	bawwar	0.99999845	2024-05-19	28:57.2	Y
2207.2	2208.4	0	11025	Charadriiformes	0.9809167	Scolopacidae	0.99559456			solsan	0.9723474	solsan	0.972347379	2024-05-19	36:51.2	Y
1405	1406.4	0	11025	Charadriiformes	0.98083156	Scolopacidae	0.9953719			solsan	0.97245324	solsan	0.972453237	2024-05-19	23:29.0	Y
256	257.4	0	11025	Passeriformes	0.97062445	Turdidae	0.9564124	THSH	0.9410678	herthr	0.9999988	herthr	0.999998808	2024-05-19	04:21.0	Y
261.8	263.2	0	11025	Passeriformes	0.9699827	Turdidae	0.9549731	THSH	0.93810046	herthr	0.9999988	herthr	0.999998808	2024-05-19	04:26.8	Y
268.2	269.6	0	11025	Passeriformes	0.97185725	Turdidae	0.9591875	THSH	0.94626254	herthr	0.99999905	herthr	0.999999046	2024-05-19	04:33.2	Y
291.4	293	0	11025	Passeriformes	0.9686848	Turdidae	0.952453	THSH	0.93705434	herthr	0.9999989	herthr	0.999998927	2024-05-19	04:56.4	Y
305.4	307	0	11025	Passeriformes	0.9721947	Turdidae	0.9596833	THSH	0.947078	herthr	0.99999905	herthr	0.999999046	2024-05-19	05:10.4	Y
312.8	314.2	0	11025	Passeriformes	0.9270586	Turdidae	0.89791024	THSH	0.86724746	herthr	0.99359	herthr	0.993589997	2024-05-19	05:17.8	Y
347.2	348.6	0	11025	Passeriformes	0.9714949	Turdidae	0.9588218	THSH	0.9457563	herthr	0.99999833	herthr	0.999998331	2024-05-19	05:52.2	Y
678.4	679.8	0	11025	Passeriformes	0.97024196	Turdidae	0.9556388	THSH	0.9426025	herthr	0.9999895	herthr	0.99998951	2024-05-19	11:23.4	Y
683.8	685.4	0	11025	Passeriformes	0.9721748	Turdidae	0.9594527	THSH	0.9467554	herthr	0.9999988	herthr	0.999998808	2024-05-19	11:28.8	Y
706	707.8	0	11025	Passeriformes	0.97191525	Turdidae	0.95914924	THSH	0.94618076	herthr	0.9999988	herthr	0.999998808	2024-05-19	11:51.0	Y
933	934.4	0	11025	Passeriformes	0.9712126	Turdidae	0.9573346	THSH	0.94374007	herthr	0.9999988	herthr	0.999998808	2024-05-19	15:38.0	Y
1112.6	1114	0	11025	Passeriformes	0.9710732	Turdidae	0.95641106	THSH	0.9422619	herthr	0.9999987	herthr	0.999998689	2024-05-19	18:37.6	Y
1549.8	1551.8	0	11025	Passeriformes	0.96159065	Turdidae	0.9331175	THSH	0.91224635	herthr	0.9999969	herthr	0.999996901	2024-05-19	25:54.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
1630.8	1632.2	0	11025	Passeriformes	0.97112274	Turdidae	0.95836556	THSH	0.94515896	herthr	0.9999989	herthr	0.999998927	2024-05-19	27:15.8	Y
1727.8	1729.2	0	11025	Passeriformes	0.9714531	Turdidae	0.9584875	THSH	0.94510525	herthr	0.9999988	herthr	0.999998808	2024-05-19	28:52.8	Y
2859	2860.8	0	11025	Passeriformes	0.9722234	Parulidae	0.95644915			bawwar	0.9999999	bawwar	0.999999881	2024-05-19	47:45.0	Y
1552.6	1554.2	0	11025	Passeriformes	0.97215176	Parulidae	0.9563724			amered	0.8980512	amered	0.898051202	2024-05-20	26:00.6	Y
1187.6	1189.4	0	11025	Passeriformes	0.9721513	Parulidae	0.95547247			bawwar	0.99999964	bawwar	0.999999642	2024-05-20	19:53.6	Y
3187.6	3189.4	0	11025	Passeriformes	0.9578946	Parulidae	0.9386757	BZWA	0.9583087	comyel	0.9985279	comyel	0.998527884	2024-05-20	53:13.6	Y
3096	3097.8	0	11025	Charadriiformes	0.9754734	Scolopacidae	0.9934269			sposan	0.99924576	sposan	0.999245763	2024-05-21	51:49.0	Y
696	697.6	0	11025	Passeriformes	0.9721726	Passerellidae	0.9955478	DESP	0.9918826	savspa	0.9980604	savspa	0.998060405	2024-05-21	11:44.0	Y
1236.4	1238.2	0	11025	Passeriformes	0.9719081	Parulidae	0.9558519			bawwar	0.99999976	bawwar	0.999999762	2024-05-22	20:46.4	Y
1241.6	1243.4	0	11025	Passeriformes	0.9722377	Parulidae	0.9564904			bawwar	0.9999999	bawwar	0.999999881	2024-05-22	20:51.6	Y
1059.4	1061.2	0	11025	Passeriformes	0.96466744	Parulidae	0.94123495			bawwar	0.9999572	bawwar	0.999957204	2024-05-22	17:52.4	Y
1676.8	1678.6	0	11025	Passeriformes	0.97168744	Parulidae	0.9549603			bawwar	0.9993505	bawwar	0.999350488	2024-05-22	28:09.8	Y
1871.8	1873.4	0	11025	Passeriformes	0.9665394	Parulidae	0.95205724			bawwar	0.99981624	bawwar	0.999816239	2024-05-22	31:24.8	Y
1219.8	1221.4	0	11025	Passeriformes	0.97153556	Passerellidae	0.99504846	DESP	0.9889466	savspa	0.9976973	savspa	0.997697294	2024-05-22	20:32.8	Y
1688	1689.6	0	11025	Charadriiformes	0.9782736	Scolopacidae	0.9945426			sposan	0.99911326	sposan	0.999113262	2024-05-23	28:17.0	Y
343.2	345	0	11025	Passeriformes	0.9721788	Passerellidae	0.9955052	DESP	0.991836	savspa	0.99822706	savspa	0.99822706	2024-07-19	05:46.2	Y
479.6	481	0	11025	Charadriiformes	0.9749581	Scolopacidae	0.9923819			leasan	0.9999994	leasan	0.999999404	2024-07-20	08:01.6	Y
3229.8	3231.4	0	11025	Charadriiformes	0.9770503	Scolopacidae	0.9933961			leasan	0.9999988	leasan	0.999998808	2024-07-20	53:51.8	Y
3246	3247.8	0	11025	Charadriiformes	0.9812633	Scolopacidae	0.9955712			leasan	0.9999999	leasan	0.999999881	2024-07-20	54:08.0	Y
3250.6	3251.8	0	11025	Charadriiformes	0.88785833	Scolopacidae	0.9704475			leasan	0.9907466	leasan	0.990746617	2024-07-20	54:12.6	Y
3254.6	3256.4	0	11025	Charadriiformes	0.98111904	Scolopacidae	0.9953902			leasan	0.9999999	leasan	0.999999881	2024-07-20	54:16.6	Y
3057.6	3059.4	0	11025	Charadriiformes	0.98149174	Scolopacidae	0.99572927			solsan	0.97614676	solsan	0.976146758	2024-07-20	50:59.6	Y
3079.2	3081	0	11025	Charadriiformes	0.98148996	Scolopacidae	0.99572796			solsan	0.9760566	solsan	0.976056576	2024-07-20	51:21.2	Y
1236.2	1237.4	0	11025	Passeriformes	0.9669799	Turdidae	0.95293903	THSH	0.9384878	swathr	0.864844	swathr	0.864844024	2024-07-20	20:38.2	Y
903.6	905.2	0	11025	Passeriformes	0.95328516	Turdidae	0.9384887	THSH	0.9212302	swathr	0.85477006	swathr	0.854770064	2024-07-21	15:05.6	Y
905.4	906.8	0	11025	Passeriformes	0.948074	Turdidae	0.9099148	THSH	0.8742982	swathr	0.8124492	swathr	0.812449217	2024-07-21	15:07.4	Y
1030.8	1032.4	0	11025	Charadriiformes	0.98075324	Scolopacidae	0.995269			sposan	0.99461526	sposan	0.994615257	2024-07-23	17:12.8	Y
1930.6	1932	0	11025	Charadriiformes	0.9798146	Scolopacidae	0.99521154			leasan	0.9999999	leasan	0.999999881	2024-07-25	32:12.6	Y
252.8	254.2	0	11025	Charadriiformes	0.9679198	Scolopacidae	0.9899492			leasan	0.9999987	leasan	0.999998689	2024-07-26	04:14.8	Y
477.4	479	0	11025	Charadriiformes	0.9538977	Scolopacidae	0.9789058			leasan	0.9999957	leasan	0.999995708	2024-07-26	07:59.4	Y
551.2	552.6	0	11025	Charadriiformes	0.9591371	Scolopacidae	0.9896381			leasan	0.99999845	leasan	0.99999845	2024-07-26	09:13.2	Y
2721	2722.6	0	11025	Passeriformes	0.9720548	Parulidae	0.9559579			bawwar	0.9999995	bawwar	0.999999523	2024-07-29	45:23.0	Y
1515.4	1517.2	0	11025	Passeriformes	0.97220427	Parulidae	0.9560797			amered	0.90258795	amered	0.90258795	2024-08-01	25:17.4	Y
1544	1545.8	0	11025	Passeriformes	0.9714102	Parulidae	0.9501616			amered	0.8971688	amered	0.897168815	2024-08-01	25:46.0	Y
2068.8	2070.2	0	11025	Passeriformes	0.96711993	Parulidae	0.95175004			bawwar	0.99678457	bawwar	0.996784568	2024-08-02	34:30.8	Y
2895.8	2897.6	0	11025	Charadriiformes	0.96677667	Scolopacidae	0.9923282			shbdow	0.99985194	shbdow	0.999851942	2024-08-02	48:17.8	Y
1005	1006.6	0	11025	Passeriformes	0.9689331	Passerellidae	0.99399203	HSSP	0.9972932	graspa	0.9981651	graspa	0.998165071	2024-08-02	16:47.0	Y
1541.4	1543.2	0	11025	Passeriformes	0.9634801	Passerellidae	0.9936212	HSSP	0.9947142	graspa	0.9958759	graspa	0.995875895	2024-08-03	25:43.4	Y
1734	1735.4	0	11025	Passeriformes	0.95354307	Passerellidae	0.9937588	HSSP	0.997442	graspa	0.99781585	graspa	0.997815847	2024-08-03	28:56.0	Y
2954.8	2956.4	0	11025	Passeriformes	0.96515757	Parulidae	0.95184326			bawwar	0.99988353	bawwar	0.999883533	2024-08-05	49:16.8	Y
187.6	189	0	11025	Charadriiformes	0.9786072	Scolopacidae	0.9947925			sposan	0.99536777	sposan	0.995367765	2024-08-05	03:09.6	Y
3110	3111.6	0	11025	Charadriiformes	0.9814834	Scolopacidae	0.9957262			solsan	0.97555965	solsan	0.975559652	2024-08-05	51:52.0	Y
2603.2	2605	0	11025	Passeriformes	0.97223693	Parulidae	0.9564785			bawwar	0.9999999	bawwar	0.999999881	2024-08-05	43:26.2	Y
528.2	530	0	11025	Passeriformes	0.9710551	Passerellidae	0.99520254	SFHS	0.98853135	whtspa	0.997459	whtspa	0.997458994	2024-08-06	08:50.2	Y
1428.2	1429.6	0	11025	Passeriformes	0.96821207	Passerellidae	0.99391586	SFHS	0.98082983	whtspa	0.9632091	whtspa	0.963209093	2024-08-06	23:50.2	Y
1680.8	1682.4	0	11025	Passeriformes	0.9709279	Passerellidae	0.99484986	SFHS	0.9883796	whtspa	0.99590427	whtspa	0.995904267	2024-08-06	28:02.8	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2116.8	2118.2	0	11025	Passeriformes	0.9699393	Passerellidae	0.9950086	SFHS	0.9736665	whtspa	0.98665863	whtspa	0.986658633	2024-08-06	35:18.8	Y
2386	2387.4	0	11025	Passeriformes	0.9371328	Passerellidae	0.990974	SFHS	0.9345618	whtspa	0.934313	whtspa	0.934312999	2024-08-06	39:48.0	Y
3256	3257.6	0	11025	Passeriformes	0.96952873	Passerellidae	0.9949543	SFHS	0.9878093	whtspa	0.99753284	whtspa	0.997532845	2024-08-06	54:18.0	Y
3277.8	3279.6	0	11025	Passeriformes	0.9702749	Passerellidae	0.9950641	SFHS	0.94560397	whtspa	0.92871994	whtspa	0.928719938	2024-08-06	54:39.8	Y
3283.8	3285	0	11025	Passeriformes	0.9702969	Passerellidae	0.994785	SFHS	0.948301	whtspa	0.9755626	whtspa	0.975562572	2024-08-06	54:45.8	Y
1071.4	1073.2	0	11025	Passeriformes	0.97195184	Passerellidae	0.99534	SFHS	0.9873285	whtspa	0.9971354	whtspa	0.997135401	2024-08-07	17:53.4	Y
1707.2	1709	0	11025	Passeriformes	0.9713339	Passerellidae	0.99515	SFHS	0.98825186	whtspa	0.9975878	whtspa	0.9975878	2024-08-07	28:29.2	Y
1805.2	1806.8	0	11025	Passeriformes	0.9535283	Passerellidae	0.99167633	SFHS	0.9775194	whtspa	0.9953864	whtspa	0.995386422	2024-08-07	30:07.2	Y
3032	3033.6	0	11025	Passeriformes	0.9722331	Parulidae	0.95645416			bawwar	0.99999976	bawwar	0.999999762	2024-08-07	50:34.0	Y
1419	1420.6	0	11025	Passeriformes	0.9674942	Passerellidae	0.9944563			daejun	0.9961887	daejun	0.9961887	2024-08-08	23:41.0	Y
1459.2	1463.8	0	11025	Passeriformes	0.97192556	Passerellidae	0.9954749			daejun	0.99689853	daejun	0.996898532	2024-08-08	24:21.2	Y
1811.6	1813	0	11025	Passeriformes	0.9718969	Passerellidae	0.9954436			daejun	0.9967397	daejun	0.996739686	2024-08-08	30:13.6	Y
1854.4	1856.4	0	11025	Passeriformes	0.9716572	Passerellidae	0.9952461			daejun	0.99565154	daejun	0.995651543	2024-08-08	30:56.4	Y
3148.2	3149.6	0	11025	Passeriformes	0.97199607	Passerellidae	0.9954638			daejun	0.99373066	daejun	0.993730664	2024-08-08	52:30.2	Y
3166.2	3168.6	0	11025	Passeriformes	0.9636489	Passerellidae	0.9924205			daejun	0.9928508	daejun	0.99285078	2024-08-08	52:48.2	Y
1327.6	1329.4	0	11025	Passeriformes	0.9717828	Passerellidae	0.99526715	SFHS	0.9893169	whtspa	0.9980191	whtspa	0.998019099	2024-08-08	22:09.6	Y
3111.8	3113.2	0	11025	Passeriformes	0.97053707	Passerellidae	0.99493575	SFHS	0.98584795	whtspa	0.9792923	whtspa	0.979292274	2024-08-08	51:53.8	Y

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
01 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Apr 2024	0	0	0	0	0	0	0	0	4	0	0	4
06 Apr 2024	0	0	0	0	0	0	0	0	41	0	0	41
07 Apr 2024	0	0	0	0	0	0	0	1	13	0	0	14
08 Apr 2024	0	0	0	0	0	0	0	0	36	0	0	36
09 Apr 2024	0	0	0	0	0	0	0	0	43	0	0	43
10 Apr 2024	0	0	0	0	0	0	0	0	56	2	0	58
11 Apr 2024	0	0	0	0	0	0	0	0	132	0	0	132
12 Apr 2024	0	0	0	0	0	0	0	0	32	0	0	32
13 Apr 2024	0	0	0	0	0	0	0	0	31	0	0	31
14 Apr 2024	0	0	0	0	0	0	0	1	37	0	0	38
15 Apr 2024	0	0	0	0	0	0	0	274	1036	221	0	1531
16 Apr 2024	0	0	0	0	0	0	0	0	51	0	0	51
17 Apr 2024	0	0	0	0	0	0	0	0	79	17	0	96
18 Apr 2024	0	0	0	0	0	0	0	108	626	20	0	754
19 Apr 2024	0	0	0	0	0	0	0	0	172	0	0	172
20 Apr 2024	0	0	0	0	0	0	0	0	70	0	0	70
21 Apr 2024	0	0	0	0	0	0	0	0	45	0	0	45
22 Apr 2024	0	0	0	0	0	0	0	18	72	3	0	93
23 Apr 2024	0	0	0	0	0	0	0	0	61	0	0	61
24 Apr 2024	0	0	0	0	0	0	0	0	26	0	0	26
25 Apr 2024	0	0	0	0	0	0	0	1	48	1	0	50
26 Apr 2024	0	0	0	0	0	0	0	0	16	0	0	16
27 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Apr 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 May 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
07 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 May 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jun 2024	0	0	0	0	0	0	0	0	608	472	478	1558
09 Jun 2024	0	0	0	0	0	0	0	1	629	746	646	2022
10 Jun 2024	0	0	0	0	0	0	0	1	204	135	106	446
11 Jun 2024	0	0	0	0	0	0	0	1	402	387	220	1010

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
12 Jun 2024	0	0	0	0	0	0	0	0	616	800	207	1623
13 Jun 2024	0	0	0	0	0	0	0	1	298	91	26	416
14 Jun 2024	0	0	0	0	0	0	0	0	235	57	12	304
15 Jun 2024	0	0	0	0	0	0	0	0	213	73	25	311
16 Jun 2024	0	0	0	0	0	0	0	1	390	164	84	639
17 Jun 2024	0	0	0	0	0	0	0	0	309	104	34	447
18 Jun 2024	0	0	0	0	0	0	0	0	316	71	13	400
19 Jun 2024	0	0	0	0	0	0	0	0	484	253	254	991
20 Jun 2024	0	0	0	0	0	0	0	0	323	70	17	410
21 Jun 2024	0	0	0	0	0	0	0	0	390	264	92	746
22 Jun 2024	0	0	0	0	0	0	0	0	588	268	140	996
23 Jun 2024	0	0	0	0	0	0	0	0	314	75	34	423
24 Jun 2024	0	0	0	0	0	0	0	0	297	142	107	546
25 Jun 2024	0	0	0	0	0	0	0	0	1262	1134	429	2825
26 Jun 2024	0	0	0	0	0	0	0	0	1017	562	298	1877
27 Jun 2024	0	0	0	0	0	2	0	3	338	79	41	463
28 Jun 2024	0	0	0	0	0	0	0	0	367	143	95	605
29 Jun 2024	0	0	0	0	0	0	0	0	497	213	61	771
30 Jun 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
18 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
23 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Sep 2024	0	0	0	0	0	0	0	1	484	0	0	485
13 Sep 2024	0	0	0	0	0	0	9	41	724	45	0	819
14 Sep 2024	0	0	0	0	0	0	0	0	875	15	0	890
15 Sep 2024	0	0	0	0	0	0	0	0	861	10	0	871
16 Sep 2024	0	0	0	0	0	0	0	10	819	24	0	853
17 Sep 2024	0	0	0	0	0	0	0	0	768	0	0	768
18 Sep 2024	0	0	0	0	0	0	0	0	1016	0	0	1016
19 Sep 2024	0	0	0	0	0	0	0	0	736	0	0	736
20 Sep 2024	0	0	0	0	0	0	0	0	719	0	0	719
21 Sep 2024	0	0	0	0	0	0	0	0	766	0	0	766
22 Sep 2024	0	0	0	0	0	0	0	2	823	10	0	835
23 Sep 2024	0	0	0	0	0	0	0	0	742	0	0	742
24 Sep 2024	0	0	0	0	0	0	0	0	532	0	0	532
25 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
28 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Oct 2024	0	0	0	0	0	0	0	0	11	0	0	11
04 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0

Date	Nominal Bird Target Range(m)(bin)											Total By Date
	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	
03 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Nov 2024	0	0	0	0	0	0	0	0	6	0	0	6
06 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
Bin Total	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**465**	**22706**	**6671**	**3419**	**33272**

Table 3: Species Detectable by Nighthawk ***Project # 24-10266***

Common Name	Scientific Name
American Redstart	*Setophaga ruticilla*
American Bittern	*Botaurus lentiginosus*
American Pipit	*Anthus rubescens*
American Robin	*Turdus migratorius*
American Tree Sparrow	*Spizelloides arborea*
Bicknell's Thrush	*Catharus bicknelli*
Black Oystercatcher	*Haematopus bachmani*
Black Skimmer	*Rynchops niger*
Black-and-white Warbler	*Mniotilta varia*
Black-bellied Plover	*Pluvialis squatarola*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Black-crowned Night-Heron	*Nycticorax nycticorax*
Black-throated Blue Warbler	*Setophaga caerulescens*
Bobolink	*Dolichonyx oryzivorus*
Brewer's Sparrow	*Spizella breweri*
Canada Warbler	*Cardellina canadensis*
Cape May Warbler	*Setophaga tigrina*
Cerulean Warbler	*Setophaga cerulea*
Chestnut-sided Warbler	*Setophaga pensylvanica*
Chipping Sparrow	*Spizella passerina*
Clay-colored Sparrow	*Spizella pallida*
Common Tern	*Sterna hirundo*
Common Yellowthroat	*Geothlypis trichas*
Dark-eyed Junco	*Junco hyemalis*
Dickcissel	*Spiza americana*
Eastern Meadowlark	*Sturnella magna*
Forster's Tern	*Sterna forsteri*
Golden-crowned Kinglet	*Regulus satrapa*
Golden-winged Warbler	*Vermivora chrysoptera*
Grasshopper Sparrow	*Ammodramus savannarum*
Gray-cheeked Thrush	*Catharus minimus*
Great Egret	*Ardea alba*
Greater Yellowlegs	*Tringa melanoleuca*
Green Heron	*Butorides virescens*
Harris's Sparrow	*Zonotrichia querula*
Henslow's Sparrow	*Centronyx henslowii*
Hermit Thrush	*Catharus guttatus*
Hermit Warbler	*Setophaga occidentalis*
Hooded Warbler	*Setophaga citrina*
Indigo Bunting	*Passerina cyanea*
Kentucky Warbler	*Geothlypis formosa*
Killdeer	*Charadrius vociferus*
Kirtland's Warbler	*Setophaga kirtlandii*
Lapland Longspur	*Calcarius lapponicus*
Lark Sparrow	*Chondestes grammacus*
Least Bittern	*Ixobrychus exilis*
Least Sandpiper	*Calidris minutilla*
Lesser Yellowlegs	*Tringa flavipes*
Lincoln's Sparrow	*Melospiza lincolnii*
MacGillivray's Warbler	*Geothlypis tolmiei*
Mourning Warbler	*Geothlypis philadelphia*

Common Name	Scientific Name
Nashville Warbler	*Leiothlypis ruficapilla*
Northern Parula	*Setophaga americana*
Northern Waterthrush	*Parkesia noveboracensis*
Orchard Oriole	*Icterus spurius*
Ovenbird	*Seiurus aurocapilla*
Painted Bunting	*Passerina ciris*
Palm Warbler	*Setophaga palmarum*
Red-breasted Nuthatch	*Sitta canadensis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Savannah Sparrow	*Passerculus sandwichensis*
Scarlet Tanager	*Piranga olivacea*
Seaside Sparrow	*Ammospiza maritima*
Semipalmated Plover	*Charadrius semipalmatus*
Short-billed Dowitcher	*Limnodromus griseus*
Solitary Sandpiper	*Tringa solitaria*
Spotted Sandpiper	*Actitis macularius*
Sprague's Pipit	*Anthus spragueii*
Summer Tanager	*Piranga rubra*
Swainson's Thrush	*Catharus ustulatus*
Upland Sandpiper	*Bartramia longicauda*
Veery	*Catharus fuscescens*
Vesper Sparrow	*Pooecetes gramineus*
White-crowned Sparrow	*Zonotrichia leucophrys*
White-throated Sparrow	*Zonotrichia albicollis*
Wilson's Snipe	*Gallinago delicata*
Wilson's Warbler	*Cardellina pusilla*
Wood Thrush	*Hylocichla mustelina*
Worm-eating Warbler	*Helmitheros vermivorum*
Yellow-billed Cuckoo	*Coccyzus americanus*
Yellow-rumped Warbler	*Setophaga coronata*
Yellow-throated Warbler	*Setophaga dominica*

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
69	70.8	0	11025	Passeriformes	0.97201216	Passerellidae	0.9953631	DESP	0.99144894	savspa	0.9977823	savspa	0.99778229	2023-09-22	01:11.0	Y
871	872.2	0	11025	Passeriformes	0.971592	Parulidae	0.9554673			bawwar	0.99999416	bawwar	0.999994159	2023-09-23	14:33.0	Y
2064.8	2066.4	0	11025	Passeriformes	0.9673447	Passerellidae	0.9930132			daejun	0.996223	daejun	0.996222973	2023-09-24	34:27.8	Y
2898.4	2900.6	0	11025	Passeriformes	0.9667838	Passerellidae	0.9945128			daejun	0.99669087	daejun	0.996690869	2023-09-24	48:21.4	Y
3575.8	3577	0	11025	Passeriformes	0.8584355	Passerellidae	0.94399154	SFHS	0.84994715	whtspa	0.91708636	whtspa	0.917086363	2023-09-24	59:37.8	Y
3588.6	3590.4	0	11025	Passeriformes	0.97219014	Passerellidae	0.9955349	SFHS	0.99006593	whtspa	0.9981085	whtspa	0.998108506	2023-09-24	59:50.6	Y
2320.8	2322.2	0	11025	Charadriiformes	0.97989905	Scolopacidae	0.9950937			shbdow	0.9639021	shbdow	0.963902116	2023-09-24	38:42.8	Y
801	802.6	0	11025	Passeriformes	0.97116244	Passerellidae	0.994678	SFHS	0.9832298	whtspa	0.99504894	whtspa	0.99504894	2023-09-24	13:23.0	Y
1682.8	1684.6	0	11025	Passeriformes	0.9720804	Passerellidae	0.995468	SFHS	0.989929	whtspa	0.998298	whtspa	0.998297989	2023-09-24	28:04.8	Y
1877.8	1879.6	0	11025	Passeriformes	0.97220165	Passerellidae	0.99546367	SFHS	0.9897009	whtspa	0.9983901	whtspa	0.998390079	2023-09-24	31:19.8	Y
2636.2	2638	0	11025	Passeriformes	0.9720525	Passerellidae	0.9954803	SFHS	0.98986524	whtspa	0.9980514	whtspa	0.998051405	2023-09-24	43:58.2	Y
3461.6	3463	0	11025	Passeriformes	0.97046024	Passerellidae	0.9952669			daejun	0.99642974	daejun	0.996429741	2023-09-25	57:44.6	Y
599.2	601	0	11025	Passeriformes	0.97171664	Turdidae	0.95850396	THSH	0.9455182	swathr	0.8595884	swathr	0.859588385	2023-09-25	10:01.2	Y
2743.6	2745	0	11025	Passeriformes	0.971651	Parulidae	0.954557			wlswar	0.9347303	wlswar	0.934730291	2023-09-25	45:45.6	Y
2987.2	2990.8	0	11025	Passeriformes	0.9722315	Passerellidae	0.9955889			daejun	0.9970108	daejun	0.997010827	2023-09-26	49:51.2	Y
2991.8	2993.6	0	11025	Passeriformes	0.97093177	Passerellidae	0.9951527			daejun	0.9964217	daejun	0.996421695	2023-09-26	49:55.8	Y
960.6	962.4	0	11025	Passeriformes	0.97167766	Passerellidae	0.9953106	SFHS	0.9891739	whtspa	0.99833554	whtspa	0.99833554	2023-09-26	16:00.6	Y
324	325.8	0	11025	Passeriformes	0.9722012	Passerellidae	0.9955656	DESP	0.9919293	savspa	0.998461	savspa	0.998461008	2023-09-26	05:26.0	Y
2420.6	2422.4	0	11025	Passeriformes	0.9142308	Turdidae	0.887331	THSH	0.8155756	herthr	0.9999944	herthr	0.999994397	2023-09-26	40:22.6	Y
2556.8	2558.6	0	11025	Passeriformes	0.9720033	Passerellidae	0.99543506	DESP	0.9916602	savspa	0.99787915	savspa	0.997879148	2023-09-26	42:38.8	Y
3376.8	3378.4	0	11025	Passeriformes	0.96986157	Turdidae	0.95760953	THSH	0.94410646	swathr	0.86755216	swathr	0.867552161	2023-09-26	56:18.8	Y
821	822.6	0	11025	Passeriformes	0.9642016	Passerellidae	0.98494476	HSSP	0.99572396	graspa	0.9865508	graspa	0.986550808	2023-09-27	13:45.0	Y
879.4	881.2	0	11025	Passeriformes	0.97218037	Passerellidae	0.99553454	DESP	0.9918727	savspa	0.9972097	savspa	0.997209728	2023-09-27	14:43.4	Y
3430	3431.4	0	11025	Passeriformes	0.9697327	Turdidae	0.95499474	THSH	0.94174844	swathr	0.8641383	swathr	0.864138305	2023-09-28	57:12.0	Y
3112.8	3114.6	0	11025	Passeriformes	0.97221494	Passerellidae	0.9955759	DESP	0.99196666	savspa	0.9984268	savspa	0.998426795	2023-09-28	51:54.8	Y
1267.2	1268.6	0	11025	Passeriformes	0.97221506	Passerellidae	0.9955403	SFHS	0.9899985	whtspa	0.99090004	whtspa	0.99090004	2023-09-28	21:09.2	Y
3130	3131.6	0	11025	Charadriiformes	0.96623904	Scolopacidae	0.991559			shbdow	0.9975121	shbdow	0.997512102	2023-09-28	52:12.0	Y
2380.6	2383.4	0	11025	Passeriformes	0.97210354	Passerellidae	0.9955474			daejun	0.99698883	daejun	0.996988833	2023-09-29	39:44.6	Y
2909	2911.2	0	11025	Passeriformes	0.9676789	Passerellidae	0.99444914			daejun	0.99652785	daejun	0.996527851	2023-09-29	48:33.0	Y
2998.4	3000	0	11025	Passeriformes	0.95850885	Passerellidae	0.99277365			daejun	0.9955444	daejun	0.995544374	2023-09-29	50:02.4	Y
3270.8	3272.4	0	11025	Passeriformes	0.97193843	Passerellidae	0.995501			daejun	0.996968	daejun	0.996967971	2023-09-29	54:34.8	Y
3284.6	3286.2	0	11025	Passeriformes	0.9679188	Passerellidae	0.9919807			daejun	0.99551266	daejun	0.995512664	2023-09-29	54:48.6	Y
3352.6	3354.2	0	11025	Passeriformes	0.9712824	Parulidae	0.95403737	SBUF	0.91757125	ovenbi1	0.9513232	ovenbi1	0.951323211	2023-09-29	55:54.6	Y
945.6	947.2	0	11025	Passeriformes	0.9713698	Parulidae	0.94642204	SBUF	0.85240674	palwar	0.9999654	palwar	0.999965429	2023-09-29	15:47.6	Y
3243.6	3245.4	0	11025	Passeriformes	0.97199845	Passerellidae	0.99531	DESP	0.9910171	savspa	0.9981667	savspa	0.99816668	2023-09-29	54:05.6	Y
2860.8	2862.6	0	11025	Passeriformes	0.9642014	Turdidae	0.95011866	THSH	0.93232167	herthr	0.99999845	herthr	0.99999845	2023-09-30	47:43.8	Y
2656.4	2658.6	0	11025	Passeriformes	0.9716716	Passerellidae	0.9954169			daejun	0.99691296	daejun	0.996912956	2023-09-30	44:19.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2681.2	2682.6	0	11025	Passeriformes	0.934855	Passerellidae	0.9646431			daejun	0.9466749	daejun	0.946674883	2023-09-30	44:44.2	Y
2701.4	2704.6	0	11025	Passeriformes	0.9702101	Passerellidae	0.99528235			daejun	0.99687177	daejun	0.996871769	2023-09-30	45:04.4	Y
2705.4	2707	0	11025	Passeriformes	0.9264989	Passerellidae	0.98496026			daejun	0.993421	daejun	0.993421018	2023-09-30	45:08.4	Y
2712	2713.6	0	11025	Passeriformes	0.97210926	Passerellidae	0.9955439			daejun	0.9969964	daejun	0.996996403	2023-09-30	45:15.0	Y
2715.4	2716.8	0	11025	Passeriformes	0.9716951	Passerellidae	0.9955676			daejun	0.9966563	daejun	0.996656299	2023-09-30	45:18.4	Y
2743.2	2746.6	0	11025	Passeriformes	0.9670603	Passerellidae	0.9944102			daejun	0.99667203	daejun	0.996672034	2023-09-30	45:46.2	Y
2860.6	2862	0	11025	Passeriformes	0.92560863	Passerellidae	0.97370625			daejun	0.98619837	daejun	0.986198366	2023-09-30	47:43.6	Y
2898	2899.8	0	11025	Passeriformes	0.97156817	Passerellidae	0.99546695			daejun	0.9969349	daejun	0.996934891	2023-09-30	48:21.0	Y
2903	2905.2	0	11025	Passeriformes	0.91800696	Passerellidae	0.9836035			daejun	0.99247944	daejun	0.992479444	2023-09-30	48:26.0	Y
2905.4	2910	0	11025	Passeriformes	0.9721497	Passerellidae	0.9955682			daejun	0.9969958	daejun	0.996995807	2023-09-30	48:28.4	Y
2910.4	2913.8	0	11025	Passeriformes	0.97218823	Passerellidae	0.9955747			daejun	0.99699956	daejun	0.996999562	2023-09-30	48:33.4	Y
2952	2953.6	0	11025	Passeriformes	0.9696176	Passerellidae	0.9948003			daejun	0.99671507	daejun	0.996715069	2023-09-30	49:15.0	Y
2954.8	2958.6	0	11025	Passeriformes	0.97212344	Passerellidae	0.99556315			daejun	0.9969999	daejun	0.996999919	2023-09-30	49:17.8	Y
2958.8	2961	0	11025	Passeriformes	0.964169	Passerellidae	0.9936287			daejun	0.99600655	daejun	0.996006548	2023-09-30	49:21.8	Y
2961.8	2965.2	0	11025	Passeriformes	0.9722239	Passerellidae	0.99558675			daejun	0.9970085	daejun	0.997008502	2023-09-30	49:24.8	Y
1611.2	1613	0	11025	Passeriformes	0.97186905	Passerellidae	0.99536973	DESP	0.99148965	savspa	0.99794203	savspa	0.99794203	2023-09-30	26:54.2	Y
1152.6	1154	0	11025	Passeriformes	0.9626315	Passerellidae	0.99178493	DESP	0.9821228	savspa	0.9868563	savspa	0.986856282	2023-09-30	19:14.6	Y
1581.4	1583.2	0	11025	Passeriformes	0.97184306	Passerellidae	0.99544996	SFHS	0.98975134	whtspa	0.99846774	whtspa	0.998467743	2023-10-01	26:24.4	Y
1634.8	1636.6	0	11025	Passeriformes	0.972114	Passerellidae	0.9954959	SFHS	0.9896897	whtspa	0.9982822	whtspa	0.998282194	2023-10-01	27:17.8	Y
1650.8	1652.4	0	11025	Passeriformes	0.971702	Passerellidae	0.99525684	SFHS	0.98646575	whtspa	0.97583133	whtspa	0.97583133	2023-10-01	27:33.8	Y
2286.4	2288	0	11025	Charadriiformes	0.97830826	Scolopacidae	0.99455017			greyel	0.999393	greyel	0.999392986	2023-10-02	38:08.4	Y
2317.4	2319	0	11025	Charadriiformes	0.9787225	Scolopacidae	0.9946044			greyel	0.99893266	greyel	0.99893266	2023-10-02	38:39.4	Y
1465.4	1466.8	0	11025	Passeriformes	0.9647548	Turdidae	0.9428005	THSH	0.91677326	herthr	0.9999926	herthr	0.999992609	2023-10-02	24:28.4	Y
1560.4	1561.8	0	11025	Passeriformes	0.9582108	Turdidae	0.93286526	THSH	0.9089451	herthr	0.9999963	herthr	0.999996305	2023-10-02	26:03.4	Y
1581.6	1583.4	0	11025	Passeriformes	0.969612	Turdidae	0.95630574	THSH	0.94253397	herthr	0.99999857	herthr	0.999998569	2023-10-02	26:24.6	Y
1596.2	1597.8	0	11025	Passeriformes	0.95825714	Turdidae	0.93983614	THSH	0.9102664	herthr	0.99999726	herthr	0.999997258	2023-10-02	26:39.2	Y
1599.6	1601.4	0	11025	Passeriformes	0.970108	Turdidae	0.95562214	THSH	0.9406074	herthr	0.99999845	herthr	0.99999845	2023-10-02	26:42.6	Y
1608	1609.8	0	11025	Passeriformes	0.9700788	Turdidae	0.95637345	THSH	0.942365	herthr	0.9999989	herthr	0.999998927	2023-10-02	26:51.0	Y
1943.6	1945.2	0	11025	Passeriformes	0.96210676	Turdidae	0.9400056	THSH	0.91802937	herthr	0.9999937	herthr	0.999993682	2023-10-02	32:26.6	Y
3160.2	3161.6	0	11025	Passeriformes	0.9711798	Passerellidae	0.9944993	DESP	0.9884956	savspa	0.89144206	savspa	0.89144206	2023-10-02	52:43.2	Y
3501.6	3503	0	11025	Charadriiformes	0.9708754	Scolopacidae	0.99097824			shbdow	0.98978245	shbdow	0.989782453	2023-10-02	58:23.6	Y
2418.8	2420.2	0	11025	Charadriiformes	0.9796569	Scolopacidae	0.9951308			shbdow	0.99791807	shbdow	0.997918069	2023-10-05	40:20.8	Y
2304.8	2306	0	11025	Passeriformes	0.9706331	Turdidae	0.95559233	THSH	0.940735	herthr	0.9999982	herthr	0.999998212	2023-10-05	38:28.8	Y
2345.2	2346.8	0	11025	Passeriformes	0.96873367	Turdidae	0.9561159	THSH	0.94087625	herthr	0.9999988	herthr	0.999998808	2023-10-05	39:09.2	Y
2349.2	2350.6	0	11025	Passeriformes	0.9435061	Turdidae	0.9091355	THSH	0.8718439	herthr	0.9999051	herthr	0.999905109	2023-10-05	39:13.2	Y
2354.6	2356.2	0	11025	Passeriformes	0.9708735	Turdidae	0.9531987	THSH	0.9381522	herthr	0.9999968	herthr	0.999996781	2023-10-05	39:18.6	Y
2356.4	2358	0	11025	Passeriformes	0.9715206	Turdidae	0.95475215	THSH	0.939305	herthr	0.9999949	herthr	0.999994874	2023-10-05	39:20.4	Y

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted Category	Prob	Date	Time	Annotation
2360.6	2362.2	0	11025	Passeriformes	0.9700365	Turdidae	0.95429313	THSH	0.9386065	herthr	0.9999988	herthr	0.999998808	2023-10-05	39:24.6	Y
2363.8	2365.4	0	11025	Passeriformes	0.9667683	Turdidae	0.9510364	THSH	0.93318915	herthr	0.99999845	herthr	0.99999845	2023-10-05	39:27.8	Y
3281.8	3283.6	0	11025	Passeriformes	0.97083956	Parulidae	0.9463991	SBUF	0.9318253	palwar	0.9999994	palwar	0.999999404	2023-10-06	54:43.8	Y
1149.4	1150.8	0	11025	Passeriformes	0.9713477	Passerellidae	0.99381095	DESP	0.9587265	savspa	0.98973936	savspa	0.989739358	2023-10-06	19:11.4	Y
1601	1602.6	0	11025	Passeriformes	0.9710777	Passerellidae	0.9943409	CUPS	0.9653688	chispa	0.8531814	chispa	0.853181422	2023-10-06	26:43.0	Y
2645.2	2646.8	0	11025	Passeriformes	0.96982735	Passerellidae	0.99501616	CUPS	0.98733306	chispa	0.94994015	chispa	0.949940145	2023-10-06	44:07.2	Y
2664	2665.8	0	11025	Passeriformes	0.9717039	Passerellidae	0.9951487	CUPS	0.9881551	chispa	0.95480084	chispa	0.954800844	2023-10-06	44:26.0	Y
560.2	561.6	0	11025	Passeriformes	0.96348995	Turdidae	0.9472109	THSH	0.92342067	herthr	0.999998	herthr	0.999997973	2023-10-06	09:22.2	Y
3526.4	3527.8	0	11025	Passeriformes	0.96998054	Turdidae	0.9466605	THSH	0.9255345	herthr	0.9999988	herthr	0.999998808	2023-10-06	58:48.4	Y
299	300.8	0	11025	Passeriformes	0.97211415	Passerellidae	0.9953086	DESP	0.9913804	savspa	0.9978769	savspa	0.997876883	2023-10-07	05:01.0	Y
2934.4	2935.8	0	11025	Passeriformes	0.93754655	Turdidae	0.9160064	THSH	0.87844217	herthr	0.99999285	herthr	0.999992847	2023-10-07	48:54.4	Y
1099	1100.8	0	11025	Passeriformes	0.9714219	Passerellidae	0.9949839	DESP	0.990995	savspa	0.99772376	savspa	0.997723758	2023-10-10	18:21.0	Y
1102.4	1104.2	0	11025	Passeriformes	0.97214735	Passerellidae	0.99554706	DESP	0.9919115	savspa	0.9984491	savspa	0.998449087	2023-10-10	18:24.4	Y
1968.2	1969.8	0	11025	Passeriformes	0.9699925	Passerellidae	0.994476	SFHS	0.9871221	whtspa	0.997113	whtspa	0.997112989	2023-10-11	32:50.2	Y
2561	2562.6	0	11025	Passeriformes	0.9677283	Turdidae	0.9520241	THSH	0.93610907	herthr	0.99999857	herthr	0.999998569	2023-10-13	42:44.0	Y
2082.2	2083.6	0	11025	Passeriformes	0.96889997	Passerellidae	0.9940645	SFHS	0.97926384	whtspa	0.9922361	whtspa	0.992236078	2023-10-13	34:45.2	Y
2107.4	2109.2	0	11025	Passeriformes	0.9541781	Passerellidae	0.98521703	SFHS	0.9396942	whtspa	0.9796282	whtspa	0.979628205	2023-10-13	35:10.4	Y
86.4	88	0	11025	Passeriformes	0.96553427	Passerellidae	0.9921022	HSSP	0.9968664	graspa	0.9979455	graspa	0.997945487	2023-10-15	01:28.4	Y
943.2	945	0	11025	Passeriformes	0.971815	Passerellidae	0.9953067	DESP	0.9904653	savspa	0.9939324	savspa	0.993932426	2023-10-16	15:45.2	Y
1413.2	1415	0	11025	Charadriiformes	0.9775343	Scolopacidae	0.99456066			shbdow	0.99986374	shbdow	0.999863744	2023-10-20	23:35.2	Y

APPENDIX N.1
EVREC Green Energy Hub Historic Resources Mitigation Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

EXPLOITS VALLEY RENEWABLE ENERGY CORPORATION

EVREC Green Energy Hub Historic Resources Mitigation Plan

May 2026

1. EVREC Green Energy Hub Historic Resources Mitigation Plan

Historic resources such as archaeological sites are non-renewable resources that are often vulnerable to disturbance and loss through ground-disturbing activities associated with construction. Historic resources include structures, features, and artifacts of cultural significance, and they carry cultural, educational, and heritage value. Ground-disturbing activities that can threaten historic resources begin early in the construction and even planning phases of projects, and include trenching, clearing, grubbing, leveling, road construction, etc. Archaeological sites and other historic resources are protected by law (Historic Resources Act [RSNL1990 CHAPTER H-4]).

Sites with historic resources present have been identified within and near the Botwood & Area EVREC Green Energy Project Area, and additional areas of potential have been identified through archival research and archaeological potential modelling. These include both archaeological sites and ethnographic sites (recent sites that contain tangible evidence of land use). Site-specific mitigation measures shall be developed when work is planned within areas with high potential for historic resources.

To date, two (2) archaeological sites have been identified within the project area: one (1) in the Leading Tickles Access Road Area, and one (1) in the Leading Tickles Wind Project Area.

Additionally, eleven (11) ethnographic sites were identified within the Project Area in 2025: five (5) in the Industrial Project Area, four (4) in the Botwood Wind Project Area, one (1) in the Twin Lakes Wind Project Area, and one (1) in the Seabrights Lake Wind Project Area.

One (1) additional archaeological site is known within 50m of the Project Area, and one (1) archaeological site with human remains whose site extent is unknown falls within 100m of the Project Area. No known paleontological sites occur within or near the Project Area.

These known sites will either be protected during the planning and construction phases or will be recovered prior to the construction phase. The table below contains a summary of known site information and proposed mitigation measures.

As per provincial requirements, Historic Resources Impact Assessments shall be conducted during the planning stages prior to construction wherever historic resources may be impacted. For low potential zones, a desktop review shall be adequate. For higher potential zones, an archaeological field assessment shall be required.

Desktop review for determining archaeological potential and the necessity for a field study of specific project zones shall be completed by a qualified archaeologist, and may include, but not be limited to, the following sources of information:

- Coverage and results of previous archaeological field studies
- Coverage and results of previous desktop studies
- Archival sources such as those documenting Indigenous presence and land use, Settler activities, and early-mid 20th century logging
- Historic air photos and/or satellite imagery

- Results of any community consultations
- Archaeological potential modelling

The following additional project-wide measures shall be implemented to adequately mitigate potential impacts to historic resources:

a) As the preferred method of mitigation, project designs shall be modified wherever possible to avoid known archaeological sites by a minimum buffer of 50m. Actual buffer size may vary, with the approval of the Provincial Archaeology Office, according to space constraints, terrain, anticipated impacts, site significance, etc.. Where warranted, site buffers shall be marked with flagging indicating a “no work zone” or with temporary fencing.
b) Where a known site cannot be adequately avoided, it shall be recorded and/or recovered (i.e. through detailed excavation) according to the standards outlined in the Historic Resources Act and other relevant legislation, and to the satisfaction of the Provincial Archaeology Office.
c) Project personnel (including contractors and subcontractors) shall be provided with a copy of the Historic Resources Accidental Finds Protocol, informing them of their responsibilities with respect to such resources. A copy of the Protocol shall be available at every work site.
d) Crews working in areas with high potential for historic resources shall be given a briefing informing them of the areas of high potential and of procedures to follow in the event of accidental finds.
e) For each work crew, one person shall be designated to lead the implementation of the Historic Resources Accidental Finds Protocol and report any identified or suspected historic resources to the Provincial Archaeology Office (Jamie Brake, Provincial Archaeologist, (709) 729-2462, JamieBrake@gov.nl.ca).
f) Regular monitoring shall be conducted by the project archaeologist or designate to ensure that mitigation and protection measures are being adequately implemented.
g) Known sites adjacent to the project areas shall be visited regularly (e.g. annually, or as warranted by project activities) while field conditions are adequate (i.e. ground is not snow-covered) to ensure they have not been impacted by project activities.
h) If paleontological resources are encountered or suspected, procedures shall follow the Historic Resources Accidental Finds Protocol.

Table 1: Historic Resources in the Botwood & Area EVREC Green Energy Project Area

Site Number	Site Description	Project Location	Expected Project Activities/Impacts	Proposed Mitigation
DiAu-10	Pre-contact Indigenous habitation site, 19th/20th century Settler homestead, 20th century cemetery	Leading Tickles Wind Project Area	Road construction, site access	Avoidance
DiAu-8	Lithics	Leading Tickles Access Road (within 50m of project area)	Road construction	Avoidance
DiAv-10	Hunting/trapping camp, trail	Leading Tickles Access Road	Road construction	Recorded (complete)
DgAu-08	Human burial (likely Settler)	Heavy haul road to Port of Botwood (within 100m of Project Area)	Road construction	Component removed from proponent's plans
02E/01 Ethno 3	Traps/trapline	Botwood Wind Project Area	Road construction	Recorded (complete)
02E/03 Ethno 1	Recent partial log cabin	Industrial Project Area (accommodations water supply line)	Site access, construction	Recorded (complete)
02E/03 Ethno 2	Sled (wooding/trapping/winter use)	Botwood Wind Project Area	Road construction	Recorded (complete)
02E/03 Ethno 3	20th century cabin ruin	Industrial Project Area (Solar Project Area)	Construction	Recorded (complete)
02E/03 Ethno 4	20th century cabin ruin	Industrial Project Area (Solar Project Area)	Site access	Recorded (complete)
02E/03 Ethno 5	20th century cabin ruin	Industrial Project Area (Solar Project Area)	Site access	Recorded (complete)
02E/03 Ethno 6	20th/21st century hunting platform	Industrial Project Area (Solar Project Area)	Construction	Recorded (complete)
02E/03 Ethno 7	Trap/trapline	Botwood Wind Project Area	Site access	Recorded (complete)
02E/04 Ethno 1	Sled parts (wooding/trapping)	Botwood Wind Project Area	Road construction	Recorded (complete)
02E/05 Ethno 1	School bus repurposed as cabin	Twin Lakes Wind Project Area	Road construction	Recorded (complete)
02E/05 Ethno 2	Cabins	Seabrights Lake Wind Project Area	Road construction, site access	Recorded (complete)

1.1 Historic and Paleontological Resources Accidental Finds Protocol

Historic resources include structures, features, and artifacts of cultural significance, and they carry cultural, educational, and heritage value. Examples include stone or metal tools, ceramics and pottery, clay pipes, old root cellars, trappers' tilts, and logging camps, stone walls, and lines or circles of stones. Paleontological resources include the fossilized remains or impressions of plants and animals. Both Historic and Paleontological resources are protected by law, and it is important that they are handled appropriately so that they can contribute to our knowledge of the cultural and natural history of Newfoundland.

If historic resources are encountered or suspected, immediately STOP WORK and do the following:

1. Immediately stop all work in the area.
2. Secure and leave any heavy equipment where it is – heavy equipment can easily accidentally damage fragile artifacts and obliterate features.
3. Delineate an area of approximately 50m around the find as a "no work zone", and remove all personnel not required to protect the area.
4. Without removing the object, record it by taking pictures and GPS coordinates.
5. Contact the Provincial Archaeology Office: Jamie Brake, Provincial Archaeologist, 709-729-2462, JamieBrake@gov.nl.ca.
6. Contact the Project Archaeologist, if available.
7. Complete the form below, and await further guidance from the Provincial Archaeology Office and/or the Project Archaeologist.
8. Do not return to work in the area until you have been informed that it is safe to do so by the Provincial Archaeology Office or the Project Archaeologist.

The Provincial Archaeology Office will assess the find and the area to determine its significance and determine if mitigation is required. Any mitigation measures necessary shall be developed in consultation with the Provincial Archaeology Office.

Historic and Paleontological Resources Accidental Find Reporting Form

Your name:

Your contact information:

Date and time of the find:

Precise location of the find (use GPS coordinates if possible, and provide directions if required):

Description of the find:

Description of the activity that resulted in the find:

Sketch a map of the exact location of the find so it can be relocated by the archaeologist:

APPENDIX O.1
An Economic Impact Assessment

Prepared by: Jupia Consultants Inc.

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

Do

EXPLOITS VALLEY GREEN HYDROGEN PROJECT:

An economic impact assessment

Prepared by:
Jupia Consultants Inc.

October 2025

TABLE OF CONTENTS

Executive Summary 2

1. Introduction to the Exploits Valley Green Hydrogen project 9

1.1 Purpose of this report 9

1.2 Exploits Valley Green Hydrogen Project: Summary 9

2. The Exploits Valley region needs an economic boost 11

2.1 Exploits Valley region: Geographic definition 11

2.2 The private sector economy has struggled in recent years 12

2.3 The region is facing population and demographic challenges 13

2.4 Impact of economic stagnation on the workforce 15

2.5 The region needs new private sector industries offering stable, high wage jobs 16

3. The Exploits Valley Green Hydrogen Project – A game changer 17

3.1 The economic impact model 17

3.2 The Exploits Valley Green Hydrogen project: CAPEX impacts 19

3.2.1 Infrastructure development: In-province impacts (CAPEX) 19

3.2.2 Infrastructure development: National impacts (CAPEX) 20

3.2.3 Average annual CAPEX impacts 21

3.2.4 Detailed assessment of supply chain benefits 22

3.2.5 Detailed assessment of NL household spending impacts 24

3.3 The Exploits Valley Green Hydrogen project: Ongoing OPEX impacts 26

3.3.1 Annual OPEX economic impacts 26

3.3.2 Taxation and royalty impacts 28

3.3.3 Household spending impacts 30

3.4 Combined CAPEX and OPEX economic impacts 31

3.5 The potential economic impacts associated with the spending of tax/royalty revenue 32

4. The strategic impact of the Exploits Valley Green Hydrogen project 34

4.1 The economic benefits in context 34

4.2 Maximizing economic benefits 36

5. Conclusion: The Exploits Valley Green Hydrogen project and the future 37

Appendix A: The economic impact model and sources 38

Appendix C: About Jupia Consultants Inc. 40

EXECUTIVE SUMMARY

Exploits Valley Renewable Energy Corporation (EVREC) is the proponent of the Exploits Valley Green Hydrogen project which could be a game changer in north-central Newfoundland bringing substantial economic benefits during the construction phase of the project and sustaining hundreds of jobs and associated economic benefits on an annual basis over at least a three-decade period. The company's objective is to produce cost-effective green hydrogen/ammonia from the 3+ GW wind farm. The initial goal is to produce 1.04 million tonnes/year of green ammonia. Initially, the goal is to export to European markets, but other use cases are possible in the future.

The Exploits Valley region could use an economic boost

Section 2 discusses the state of the regional economy and population in Exploits Valley region[1]. The region's economy has struggled in recent years, particularly the private sector economy. Over the 10-year period between 2011 and 2022, the number of manufacturing jobs dropped by 22 percent, finance and insurance employment declined by 41 percent and transportation-related jobs were down 19 percent. In contrast, health care was the fastest growing sector – adding 650 more jobs over the decade.

This has contributed to the region now having one of the oldest populations in the country. The median age in the region targeted for the Exploits Valley Green Hydrogen project is among the oldest in the country. In just 20 years, the region has gone from a neutral natural population growth rate (as many births each year as deaths) to only 33 births per 100 deaths as of 2024.

The impact on the workforce has been significant as only about half of the adult population is employed at some point during the year and over 35 percent of the workforce is over 55 and heading towards retirement. A reliance on seasonal jobs and the public sector means the Exploits Valley region could use a boost in private sector investment. The Exploits Valley Green Hydrogen project will be a gamechanger.

The Exploits Valley Green Hydrogen project economic impact summary

Section 3 provides the detailed economic impact model. The model considers direct and indirect as well as induced economic impacts within the province and across the country. Outside of the oil and gas sector, the Exploits Valley Green Hydrogen project represents one of the largest private sector investments in the province's history. The project will involve deploying over $14 billion into the wind farm, hydrogen and ammonia development facilities and other related infrastructure. The company will amortize that large scale investment over the 37-years.

[1] For the purposes of this report, the Exploits Valley region includes the towns of Grand Falls-Windsor, Bishop's Falls and Botwood along with several other smaller communities (see Section 2.1).

EXECUTIVE SUMMARY (CONT.)

Most of the capital investment will go towards international imports including wind turbines and other components and equipment that is manufactured elsewhere in the world. Even with the large-scale imports, the CAPEX phase of the project is expected to substantially boost the provincial and national economies. Just Newfoundland and Labrador will see a contribution to provincial GDP of an estimated $2.34 billion over the six-year period 2025-2030. It will require an average of 3,000 workers per year in Newfoundland and Labrador for the six-year period and will result in total employment income of $1.99 billion (from direct, indirect and induced economic impacts).

The CAPEX investment will result in over $1.4 billion in household spending in local communities across the province during the construction phase. Governments will benefit from an estimated $686 million in new tax revenue. The Newfoundland and Labrador government alone can expect $368 million in tax revenue before considering the ongoing taxes and royalties from operations.

Table 1 shows the in-province and national impacts from the CAPEX phase. The country overall will see a $3.43 billion increase in GDP from the CAPEX along with $2.8 billion in employment income and 26,700 full time equivalent person years of employment.

Table 1: Estimated CAPEX economic impacts – Exploits Valley Green Hydrogen project ($000s)
Total impact during the construction phase

	NL	Rest of Canada	Country-wide
GDP contribution (during CAPEX)	$2,342,900	$1,084,500	$3,427,400
Employment income	$1,985,500	$819,200	$2,804,700
FTE person years of employment	18,200	8,500	26,700
Household spending	$1,431,500	$599,900	$2,031,400
Taxes			
Taxes on income	$494,300	$166,000	$660,300
Indirect taxes	$191,700	$91,300	$283,000
Total taxes	$686,000	$257,200	$943,200
Taxes by level of government			
Municipal	$72,800	$48,000	$120,800
Provincial	$367,900	$108,200	$476,100
Federal	$245,300	$101,000	$346,300

The project proponent envisions the wind energy and hydrogen production activity to last more than three decades and provide a stable source of high paying jobs and tax revenue for governments. Table 2 shows the annual economic impacts from operations per year starting in 2029.

EXECUTIVE SUMMARY (CONT.)

On an annual basis, the operations of the wind farm, hydrogen/ammonia operations and other activities will boost provincial GDP by more than $187 million, employment income by $98 million and current household spending by over $70 million. In the province, there will be 1,101 full time equivalent (FTE) jobs supported each year – most of those in the Exploits Valley region. There will be an expected 822 direct jobs and the rest will come from supply chain and induced economic activity. The average salary of the direct jobs will over $97,000 per year (in $2025).

Table 2: Average annual OPEX economic impacts by activity area, $000s
In-province and national impacts
$2025

	In-province	National
GDP contribution	$187,430	$228,670
Total employment (FTE)	1,101	1,442
Total employment income	$97,620	$120,070
Household spending	$70,380	$86,450

Per year for a 37-year period.

These economic benefits from operations will be sustained for at least 37 years, the lifespan of the project. Over the 37-year timeframe, in $2025 dollars, the Exploits Valley Green Hydrogen project is expected to boost provincial GDP by a total of $6.9 billion from operations, support 40,755 person years of full-time equivalent employment and boost employment income in Newfoundland and Labrador by an estimated $3.6 billion. Total household spending over the period will be an estimated $2.6 billion. These impacts do not include the economic activity associated with the spending of tax and royalty revenue on public services across the province.

The Exploits Valley Green Hydrogen project: Taxes and royalties

The taxes arising from operations come from a variety of sources including personal income tax payments, HST on goods and services and property taxes, among other levies. As developed in Section 3.2.2, the economic impact model estimates the annual operations associated with the Exploits Valley Green Hydrogen project will boost government coffers by an estimated $43.7 million per year of which $3.3 million will go to municipal governments, $22.3 million to the Newfoundland and Labrador provincial government and $18.1 million to the federal government.

In addition, there will be corporate income tax payments. The federal portion of the taxes paid over the 37-year timeframe is net of Clean Hydrogen Investment Tax Credit (CHITC) tax credits. On an average annual basis, the project proponent estimates there will be $171 million in provincial corporate income tax payments. After the tax incentives, the average annual amount of federal corporate income taxes will be $57 million.

EXECUTIVE SUMMARY (CONT.)

The estimated water royalty payments over the life of the project were provided by the project proponent and are estimated to $183.5 million per year. Other municipal taxes are expected to be approximately $8.5 million per year (municipal royalty and other municipal taxes). The annual wind tax and water tax, using the Wind-Hydrogen Fiscal Framework, will be an expected $11.6 million and $0.7 million respectively. Based on the modelling done by the project proponent and this report's author, the total taxes and royalties arising from this project could total $17.7 billion or $477 million per year. The provincial government portion would be $14.4 billion or an average of $390 million per year.

Table 3: Annual and cumulative taxes arising from the Exploits Valley Green Hydrogen project operations, $Millions
$2025

	Avg. annual	Cumulative
Taxes from operations	$43.7	$1,616.9
Municipal	$3.3	$122.1
Provincial	$22.3	$824.4
Federal	$18.1	$669.7
Corporate income tax expense	$228.1	$8,440.0
Provincial portion	$171.1	$6,330.0
Federal portion	$57.0	$2,110.0
Municipal royalty	$5.4	$198.6
Water royalty	$183.5	$6,789.0
Municipal taxes	$3.1	$113.7
Land charge	$1.2	$44.1
Wind tax	$11.6	$428.2
Water tax	$0.7	$27.1

Combined CAPEX & OPEX economic impacts – NL only

Section 3.4 shows that combining both CAPEX and OPEX economic activity, the entire project is expected to:

- Boost provincial GDP by $9.3 billion over the life of the project (in $2025), excluding the GDP impacts arising from spending the tax/royalty revenue;
- Contribute $5.6 billion employment income (in-province only);
- Support 18,200 person years of employment during construction and over 40,700 over the 37-year operating period;
- Boost household spending in NL by over $4.0 billion; and
- Municipal governments in the province can expect $507 million in tax revenue over the project timeline (CAPEX and OPEX phases), the provincial government will receive an estimated $14.8 billion and the federal government another $3.0 billion just from the in-province activity.

EXECUTIVE SUMMARY (CONT.)

Table 4: Combined and cumulative economic impacts, Exploits Valley Green Hydrogen project, $Millions ($2025)
In-province impacts only

	CAPEX	OPEX	Combined
Provincial GDP contribution	$2,340	$6,930	$9,270
Employment income	$1,990	$3,610	$5,600
FTE employment	18,200	40,755	58,955
Household spending	$1,430	$2,600	$4,030
Taxes from construction and operations		$690	$1,620
Municipal	$70	$120	$190
Provincial	$370	$820	$1,190
Federal	$250	$670	$920
Corporate income tax expense		$8,440	$8,440
Provincial portion		$6,330	$6,330
Federal portion		$2,110	$2,110
Municipal royalty		$200	$200
Water royalty		$6,790	$6,790
Municipal taxes		$110	$110
Land charge		$40	$40
Wind tax		$430	$430
Water tax		$30	$30

Source: Derived by Jupia Consultants Inc. See Appendix A.

Putting tax and royalty revenue to work

Section 3.5 looks at the potential impacts if the tax/royalty revenue was spent on the delivery of public services, specifically one-third on health care, one-third on education and one-third on public administration in the province. Based on typical economic multipliers, spending $390 million tax/royalty revenue would boost provincial GDP by an estimated $405 million (direct, indirect and induced effects combined), lead to $292 million in new employment income, support 3,900 jobs and over $201 million in additional household spending.

Further, the spending of $390 million on public services would induce another $50.5 million in tax revenue for the provincial government and $9.9 million for municipal governments.

EXECUTIVE SUMMARY (CONT.)

Table 5: The potential annual economic impacts from *spending* the taxes/royalties arising from the Exploits Valley Green Hydrogen project, $000s
$2025

	Education	Health care	Public administration	Total public spending
% breakdown by spending area	*33%*	*33%*	*33%*	*100%*
Provincial GDP contribution	$154,900	$129,100	$121,500	$405,500
Employment income	$120,200	$97,200	$75,000	$292,400
FTE employment	1,430	1,440	1,020	3,890
Household spending	$86,700	$70,100	$54,100	$210,900
Taxes				
Taxes on income	$35,200	$28,300	$21,900	$85,400
Indirect taxes	$3,200	$2,900	$2,900	$9,000
Total taxes	$38,400	$31,300	$24,900	$94,600
Taxes by level of government		-	-	-
Municipal	$4,000	$3,200	$2,600	$9,800
Provincial	$20,600	$16,700	$13,300	$50,600
Federal	$13,800	$11,200	$8,900	$33,900

Direct, indirect and induced effects. Source: Developed by Jupia Consultants Inc. See Appendix A.

The strategic role of the Exploits Valley Green Hydrogen project

It is important to highlight just how important this project will be to the regional and provincial economies during construction and operations. Section 4 provides more details.

Economic benefit:	In context:
Will substantially boost provincial infrastructure investment	EVREC is expecting to deploy over $14 billion (CDN$) worth of capital on this project over a six-year timeframe (most will be spent between 2026-2029), or an average of approximately $2.4 billion per year. To put this in context, the EVREC project would boost annual private sector capital expenditures by 40 percent from the $6 billion per year baseline.
Adds a top private sector employer in the Exploits Valley region	After the construction phase, this project is expected to bring 1,100 full time equivalent annual jobs in the province, most in the Exploits Valley region at an average salary twice the level of the average full-time job in in the region.

EXECUTIVE SUMMARY (CONT.)

Economic benefit:	In context:
Supports hundreds of small companies in the region	Adding tens of millions of dollars in household spending per year in the Exploits Valley region will provide a substantial ongoing boost to the local economy.
Helps attract highly skilled talent and meet local workforce needs	These high wage, highly skilled jobs will be attractive to trades workers and professionals looking to advance their careers. Many of these 800+ direct jobs are highly skilled workers who will bring with them families that will help support workforce needs in other sectors of the economy.
Drives substantial new tax revenue in the province	The Exploits Valley Green Hydrogen project is expected to generate an average of $390 million in new provincial government tax and royalty revenue each year. Municipal government, mostly in the Exploits Valley region, can expect an average of $11.7 million in tax revenue each year during the life of the project.
Creates another major export industry for NL	The Exploits Valley Green Hydrogen project will create another major export sector for Newfoundland and Labrador. Green hydrogen will become a top five export sector by value for the provincial economy.
Positions the area as a Canadian green energy leader	The Exploits Valley Green Hydrogen project will position the region as a Canadian leader in green energy production.
Could lead to more industrial activity down the road	Once the energy infrastructure is in place, there is potential to develop future use cases for that energy that would create more economic activity in the province such as the processing of critical minerals, iron ore, data centres, etc.

Maximizing economic benefits in the province

The proponent will work hard to use local labour and develop a local supply chain for the project but there are several ways government, educational institutions and other related stakeholders can help to ensure the maximum economic benefits stay in the province. These include:

- Ensuring NL workers are deployed on this project both in CAPEX and OPEX phases.
- Ensuring there is a sufficient talent pipeline to meet CAPEX and OPEX demand.
- Working to match local and Canadian companies to supply chain opportunities including such areas as temporary housing.
- Looking to fill longer-term gaps in the local business community in the Exploits Valley region.

Section 4.2 provides more information on this topic.

1. INTRODUCTION TO THE EXPLOITS VALLEY GREEN HYDROGEN PROJECT

The regional economy in north-central Newfoundland has struggled in recent years and is facing a number of headwinds including an aging workforce. The Exploits Valley Green Hydrogen project could be a game changer bringing substantial economic benefits during the construction phase of the project and sustaining hundreds of jobs and associated economic benefits on an annual basis over at least a three-decade period.

1.1 Purpose of this report

The purpose of this report is to estimate the economic contribution of the proposed Exploits Valley Green Hydrogen project to the regional, Newfoundland and Labrador and national economies. The report looks at the direct, indirect and induced gross domestic product (GDP), income, jobs, taxes, household spending, and other impacts for both the capital expenditure phase of the project and the ongoing operations. Capital expenditures herein are referred to as CAPEX and operational expenditures as OPEX.

The multipliers developed by Statistics Canada are only published at the provincial and national levels and, therefore, the economic impacts are shown for Newfoundland and Labrador and the country overall. The level of CAPEX economic impact that accrues in the Exploits Valley region will depend on how many workers live in the area and how many suppliers are local. Section 4 looks at how the various government and community partners can work with the project proponent to maximize the economic benefits in the Exploits Valley region and across the province.

1.2 Exploits Valley Green Hydrogen Project: Summary

Exploits Valley Renewable Energy Corporation (EVREC) is a subsidiary of Abraxas Power Corp., a global green energy developer with experience in related projects including raising funds and “creating value for stakeholders and communities where we reside”.

The geographic area for the green hydrogen project represents approximately 300 square kilometers in the Exploits Valley in central Newfoundland. The company is planning to leverage historical brownfield forestry sites logged for industrial purposes since the 1800s.

The wind energy project site is split into three main areas:

- Approximately 150 square kilometres of land surrounding the town of Botwood, to the north and west.
- Approximately 100 square kilometres of land in the Twin Lakes region, primarily falling to the north and west of the South Twin Lake.
- Approximately 50 square kilometres of land on the peninsula of Leading Tickles, either side of the Botwood Highway.

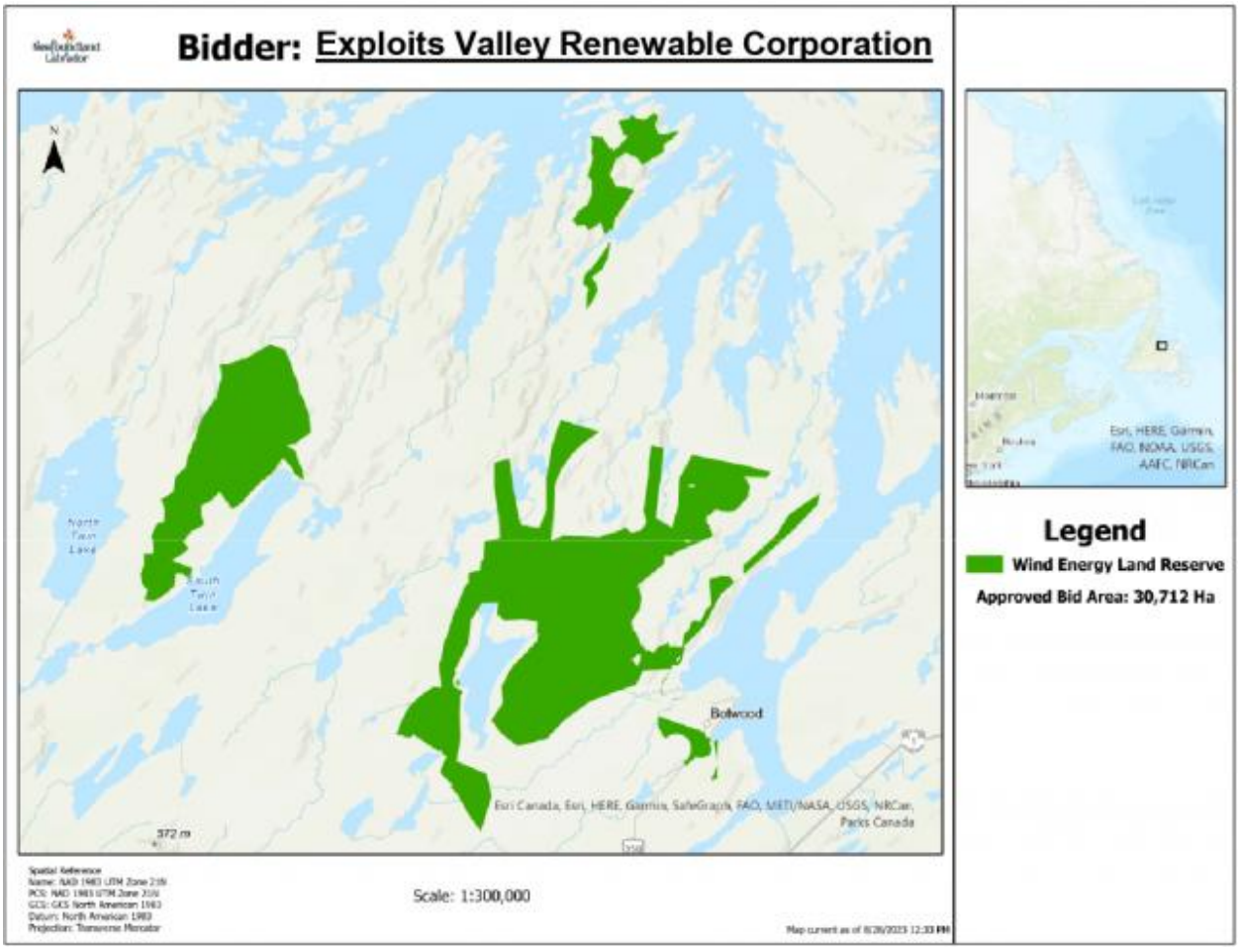
The company's objective is to produce cost-effective green hydrogen/ammonia from the 3+ GW wind farm. The initial goal is to produce 915,000 tonnes/year of green ammonia.

Initially, the goal is to export to European markets, but other use cases are possible in the future.

Although designed to be completely off-grid with no reliance on the transmission system, there is the capability to offer system services and grid forming benefits that can improve the province's electrical grid's performance, stability, and efficiency.

EVREC is in the middle of its permitting, engineering and survey process. Assuming the project gets the necessary approvals and financing, the company is planning to break ground in 2026 and exports to begin by 2029.

Figure 1: Map of EVREC Crown land allocation



Source: Government of Newfoundland and Labrador.

2. THE EXPLOITS VALLEY REGION NEEDS AN ECONOMIC BOOST

2.1 Exploits Valley region: Geographic definition

The Exploits Valley Green Hydrogen project will bring substantial benefits to Newfoundland and Labrador, specifically the Exploits Valley region. For the purposes of this report, the Exploits Valley region includes portions of Census Divisions 6 and 8 including the communities shown in Table 6.

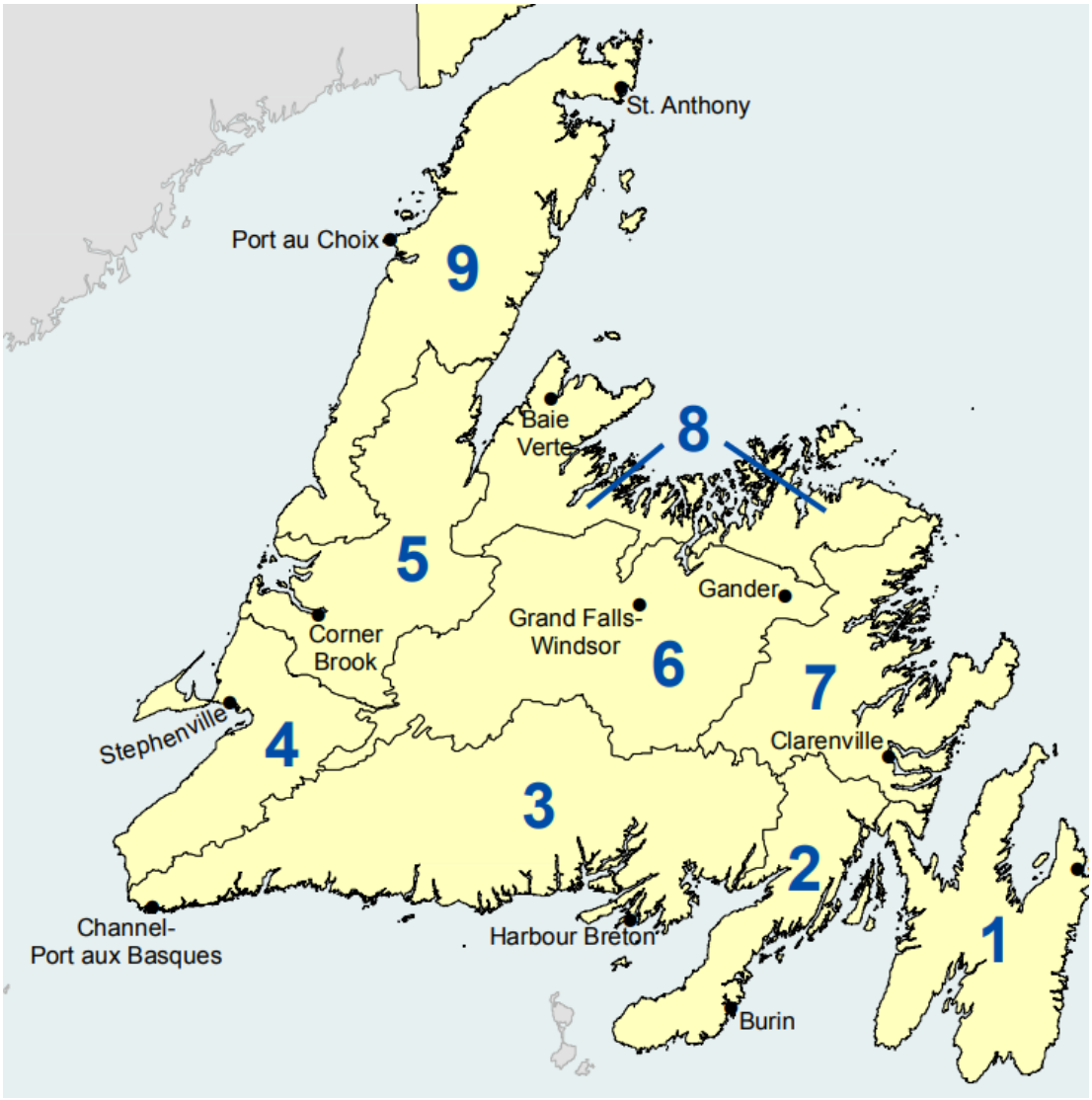
This area includes the largest town in central Newfoundland, Grand Falls-Windsor and two other towns with around 3,000 residents. The other communities are smaller. However, the population commutes within the region for work, shopping and services, and is a good representation of the regional economy.

Table 6: Communities included in the Exploits Valley region (for the purposes of this report)

	Pop. (2021)
Grand Falls-Windsor (Town)	13,853
Bishop's Falls (Town)	3,082
Botwood (Town)	2,778
Glenwood (Town)	739
Norris Arm (Town)	708
Badger (Town)	682
Appleton (Town)	620
Division No. 6, Subd. D	596
Point Leamington (Town)	574
Division No. 8, Subd. E	496
Northern Arm (Town)	371
Leading Tickles (Town)	296
Point of Bay (Town)	137
Total population of the region	24,932

In cases where the regional data is unavailable, the report uses information covering both Census Divisions 6 and 8 as shown in Figure 2 below. This region is labelled herein 'north-central Newfoundland'.

Figure 2: Census Division Map, Newfoundland

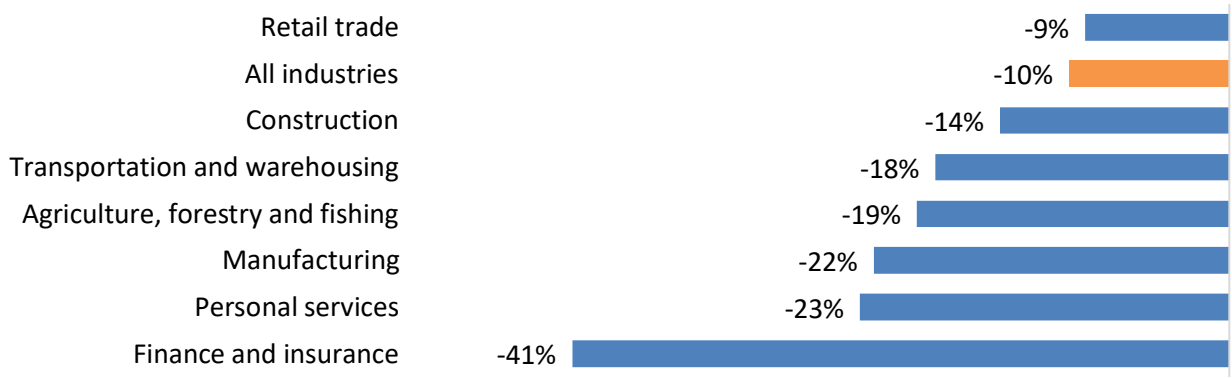


Source: Newfoundland and Labrador Statistics Agency (NLSA).

2.2 The private sector economy has struggled in recent years

The regional economy has struggled in recent years with the decline in the forest products sector and other industries. As shown in Figure 3, in the 10-year period 2011 to 2021, total employment in the region declined by 10 percent and several core industries have seen even greater declines. Manufacturing employment was down 22 percent, finance and insurance down 41 percent and transportation and warehousing down 18 percent. The decline in the population under 18 has translated into a 16 percent decline in employment in the education sector. Healthcare added 650 jobs between 2011 and 2021 and was the fastest growing sector by far in terms of absolute job growth.

Figure 3: Change in employment 2011-2021, selected industries, north-central Newfoundland



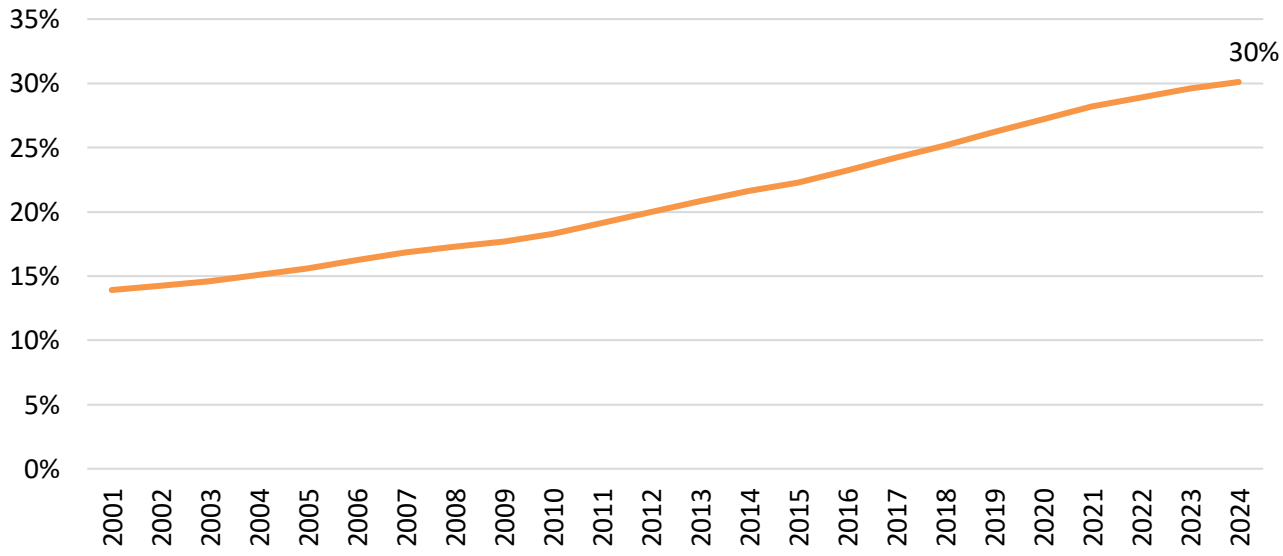
*Census Division 6 and 8 combined. Source: Statistics Canada.

According to Statistics Canada, across the entire Exploits Valley region there are only six employers with 200 or more workers, and they include three home health care providers, one hospital, a grocery store and a restaurant. If this project goes ahead, EVREC will be the largest private sector employer in the region.

2.3 The region is facing population and demographic challenges

The population living in north-central Newfoundland declined by only eight percent between 2001 and 2024. However, the population aged 65 and older has doubled over the same timeframe. In 2001, 14 percent of the population was 65 or older and as of 2024 the share was 30 percent. The region is now one of the oldest in Canada. The population living in Division 6 has a median age of 49.8. Division 8 has a median age of 57.

Figure 4: Share of the population aged 65 and older, north-central Newfoundland*

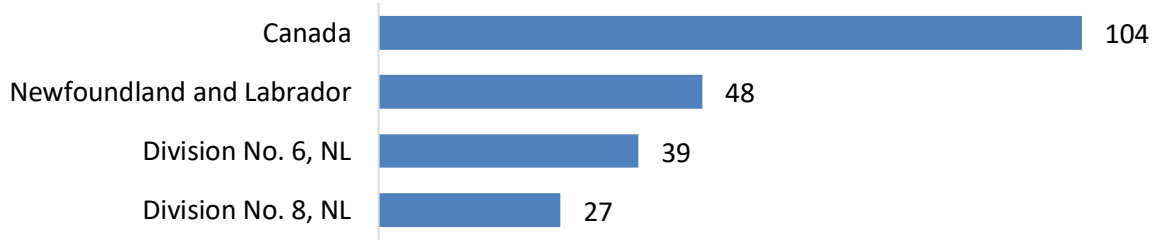


*Census Divisions 6 and 8. Source: Statistics Canada.

Another way to look at population challenges in the region is to compare the young (under 15) to the older population (aged 65+). In 2001, there were 118 under the age of 15 for every 100 aged 65 and older. By 2024, that ratio had dropped to only 38 young people for every 100 aged 65 and older.

Among the more than 270 Census Divisions across Canada, Division 8 in north-central Newfoundland has the third lowest natural population growth rate with only 27 births for every 100 deaths. Only Queens County, Nova Scotia and La Haute-Gaspésie in Quebec had a lower natural population growth rate. Division 6 has a slightly higher natural population growth rate, but at only 39 births for every 100 deaths, the area is still well below the replacement rate.

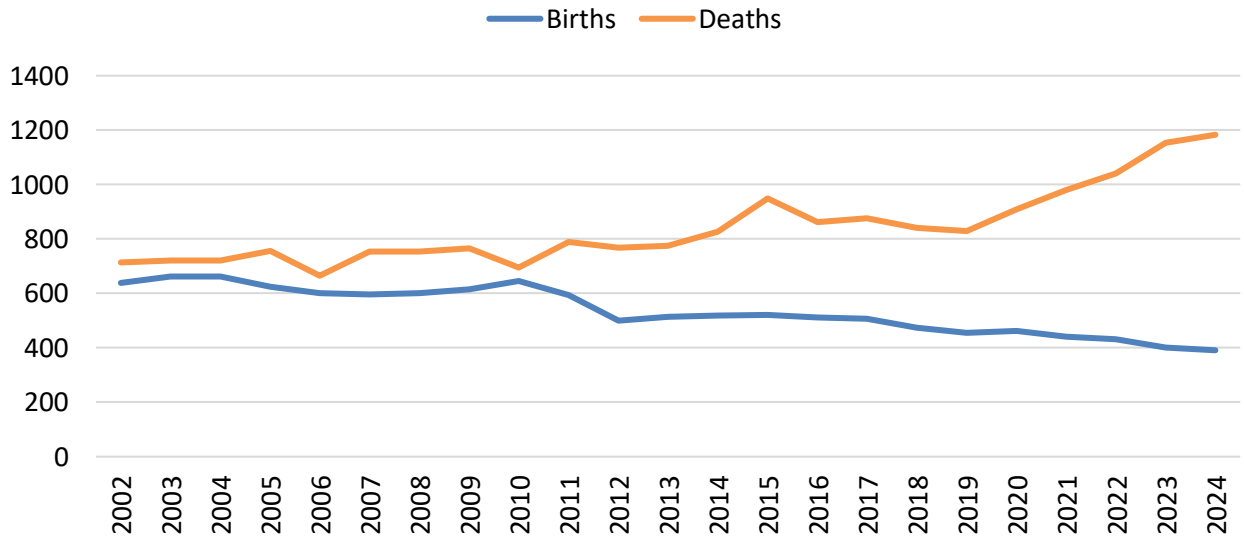
Figure 5: Natural population growth rate (births for every 100 deaths), 2024



Source: Statistics Canada Table: 17-10-0140-01.

Figure 6 shows the profound shift in natural population growth in the north-central Newfoundland region for the past 20 years. In just two decades, the region has gone from having about the same births and deaths each year to among the largest gaps between births and deaths in the country. In 2024, there were 1,183 deaths and only 391 births in the region.

Figure 6: Births and deaths by year, north-central Newfoundland



*Census Divisions 6 and 8 combined Source: Statistics Canada Table: 17-10-0140-01.

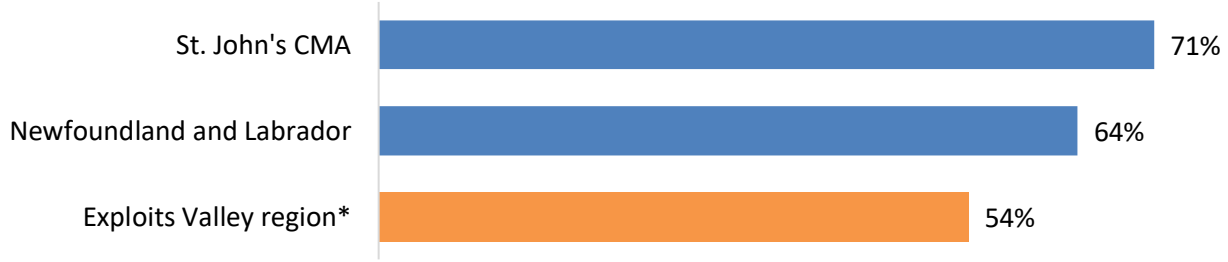
Another big challenge over the past 20 years has been the region's inability to curtail outward migration of young people or attract new people to live in the area. The net migration rate has been negative (more moving out to other parts of the province and the country than in) in all but two years between 2000 and 2020. The good news is that in the past four years net interprovincial migration has been positive.

EVREC will have a positive impact on the demographic situation in the region as it should attract hundreds of young families to the region to support both the capital construction phase and the ongoing operations.

2.4 Impact of economic stagnation on the workforce

The workforce in the Exploits Valley region is aging out. Of the 20,000+ adults aged 15 and older living in the region, only 11,000 were employed at some point during 2019. This means that only just over half of the adult population worked during the year, considerably lower than the province overall (64%) and the St. John's CMA (71%). To put this in perspective, if the Exploits Valley region had a similar 'employment' rate as St. John's, there would have been over 3,500 more employed workers in 2022.

Figure 7: Share of taxfilers reporting employment income in 2022, selected jurisdictions



*As defined in Section 2.1 Source: CRA.

A further challenge for the Exploits Valley region is the large share of its workforce about to hit retirement. There are an estimated 4,500 participating in the workforce aged 55 and older. This means that approximately 35 percent of the workforce will likely retire in the next decade or so. There are not nearly enough young people in the area to take their place as they retire. It will be critically important to attract new workers and families to the region in the coming years just to replace those leaving the workforce.

Another challenge with the regional economy is its reliance on seasonal industries. In 2022, nearly 40 percent of all workers collected Employment Insurance income at some point during the year. There are many implications from the reliance on seasonal industries. In addition to lowering the income potential of the local population relative to areas with more people working year-round, it is making it harder to recruit staff even as the unemployment 'rate' in the area is between 20-25 percent.

2.5 The region needs new private sector industries offering stable, high wage jobs

The region has become more reliant on government income in recent years. As discussed above, there has been rapid growth in health care jobs. There has also been a rapid increase in the amount of government transfer income to individuals. This income includes the Canada Pension Plan, Old Age Security, Employment Insurance, and other government transfers. The 2021 Census reported that residents in the Exploits Valley region received approximately $271 million in 2020 directly from the government[2]. This represents 30 percent of all income received by individuals during the year. To put this in perspective, the average person in the Exploits Valley receives 68 percent more income from government than the average person across Canada. Residents living in the St. John's Census Metropolitan Area (CMA), by contrast, received on average less income from government compared to the country overall.

Figure 8: Share of total personal income from government transfers, 2020

Source: Statistics Canada 2021 Census.

It is clear the Exploits Valley region will need to attract thousands of people in the coming years to meet the demand for local jobs. Further, growth in the private sector will be an important way to rejuvenate the regional economy for the next generation.

As is developed below, the Exploits Valley Green Hydrogen project will create hundreds of high paying, year-round jobs. People will move to the region for these jobs, and many will bring spouses and children who can eventually fill other needed roles in the local workforce.

[2] Most of this income is from the federal government but there are provincial sources including workers compensation, social assistance, etc.

3. THE EXPLOITS VALLEY GREEN HYDROGEN PROJECT – A GAME CHANGER

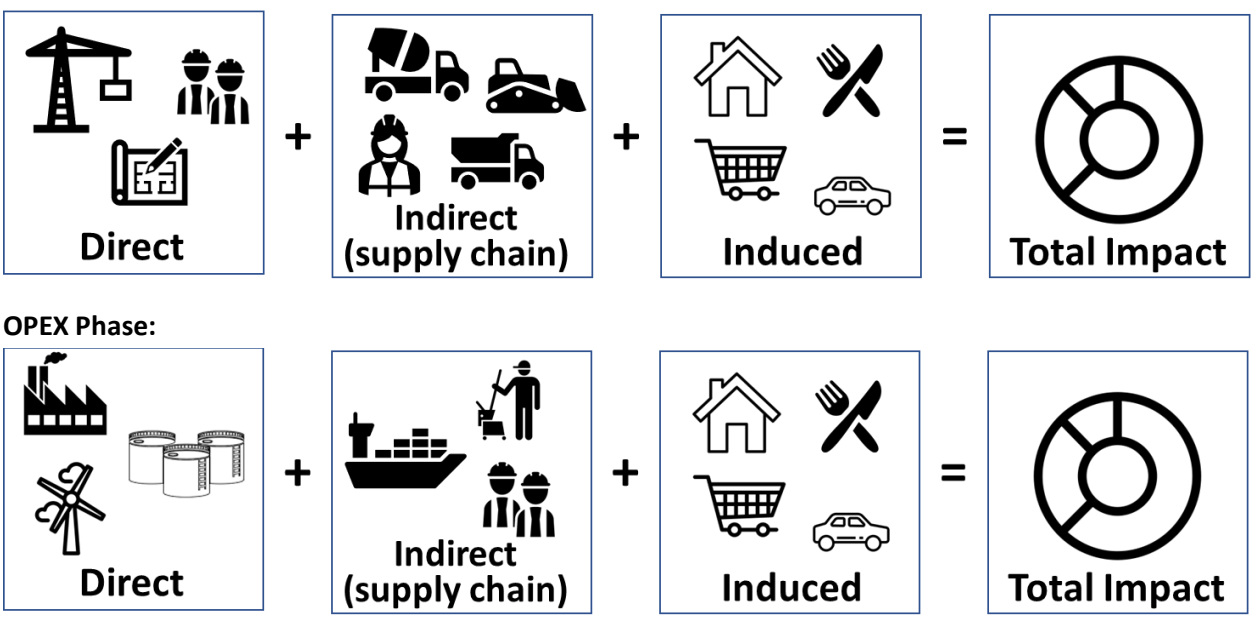
This section looks at the economic impact of both the capital expenditures (CAPEX) and ongoing operating costs (OPEX) associated with The Exploits Valley Green Hydrogen project.

3.1 The economic impact model

The economic impact model used to estimate how the Exploits Valley Green Hydrogen project will impact the Newfoundland and Labrador economy, as well as the national economy, is based on Statistics Canada's Input-Output (I-O) tables which provide a detailed profile of how expenditures in specific sectors flow through the provincial and national economy as well as through international trade. The economic impact model evaluates the direct, indirect and induced economic impact, using the following parameters:

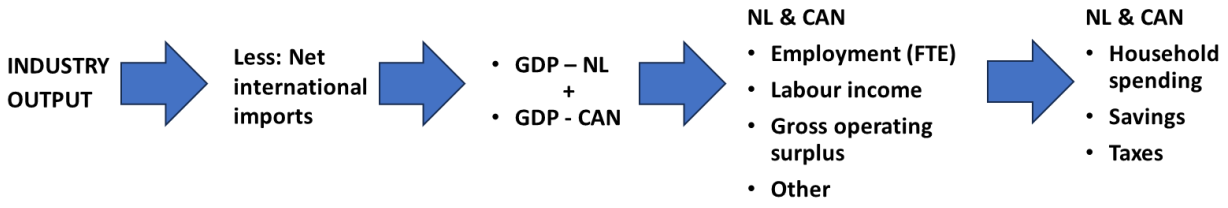
- *Direct impact* measures the value-added to the economy attributed directly from the wages earned and the revenues generated from the workforce spending in Newfoundland and Labrador and Canada.
- *Indirect impact* measures the value-added generated within the regional economy through firm and organizational demand for intermediate inputs or other support services (e.g., the supply chain).
- *Induced impacts* are derived when workers in the aforementioned industries spend their earnings. These purchases lead to more employment, higher wages and increased income and tax revenues, and can be felt across a wide range of industries.

Figure 9: Economic multipliers associated with The Exploits Valley Green Hydrogen project



The I-O tables trace the impact of economic activity (output shock) on the provincial and national economies (including imports and exports). In addition to the GDP and employment impacts, the economic impact model estimates the amount of tax revenue supported by the industry as well as consumer spending impacts.

Figure 10: Economic impacts by geography: The Exploits Valley Green Hydrogen project



The industries used in the model included (industry classification in brackets):

- Electric power engineering construction [BS23C300] – used for CAPEX*.
- Non-residential building construction [BS23B000] – used for CAPEX.
- Electric power generation, transmission and distribution [BS221100] – used for operational impacts associated with energy generation and transmission.
- Basic chemical manufacturing [BS325100] – used for operational impacts associated with the hydrogen plant.

**The expenditure profile for wind turbine construction is different than other forms of electric power engineering construction such as hydroelectricity or natural gas-fired production. Jupia Consultants worked with the Industry Accounts Division at Statistics Canada to reprofile the multipliers for the wind energy sector. Specifically, any economic impact associated with the manufacture of the wind turbines and related systems was removed from the model.*

International imports

The model assumes approximately 70 percent of the capital investment will be spent on international imports. This is based on input from the project proponent. These imports include the cost of wind turbines, electrical equipment and components, electric wire and cable and some fabricated metal products. It also includes the cost of specific imported equipment for the hydrogen electrolyzer and the ammonia plant. There is very little GDP and other economic impacts in Canada associated with the purchases of these imports. However, all the costs associated with land preparation, construction and installation are included in the model. Any wholesale margins as well as the cost of transportation and installation are also included.

3.2 The Exploits Valley Green Hydrogen project: CAPEX impacts

Based on methodology described in Section 3.1, the economic impacts from the capital investment spending associated with the Exploits Valley Green Hydrogen project are developed in this section.

Provided by the proponent, the total capital expenditures were set at $10.6 billion USD or $14.3 billion CDN[3]. These expenditures include development costs, the building of the wind energy infrastructure as well as the hydrogen and ammonia plants. It also includes costs associated with grid integration and power storage and other project-related capital expenditures. As discussed above, a large share of this spending is on equipment and technology produced elsewhere in the world.

The project proponent provided a detailed breakdown of spending by expenditure area in the province, across the country and through international imports. The proponent also provided an estimate of the person hours of activity associated with each major spending area. This core input data was used, and multipliers applied to estimate the impacts below.

3.2.1 Infrastructure development: In-province impacts (CAPEX)

Table 7 shows the estimated CAPEX economic impacts associated with the five components of the project including deployment of the wind power project and energy storage and the development of the hydrogen, ammonia and solar plant. This is a capital-intensive activity as it requires site preparation and the construction of related infrastructure (bases, transmission infrastructure, etc.).

With the multiplier effects, the economic impacts from this spending are expected to be significant in Newfoundland and Labrador and the rest of Canada. Including direct, indirect and induced effects, the five CAPEX components are expected to boost provincial GDP by $2.34 billion over the construction phase. This GDP will include $1.99 billion in employment income supporting 18,200 full time equivalent person years of employment in the province. Most of these jobs will be in the Exploits Valley region.

The vast majority of this income will turn into household spending on goods and services. The economic impact model estimates that over $1.43 billion of the income generated from employment will stay in the province as household spending[4]. A more detailed analysis of this household spending is covered in Section 3.2.5.

The economic activity associated with the CAPEX phase is also expected to boost municipal, provincial and federal government tax revenues. In the province, municipalities are expected to generate $72.8 million in revenue and the provincial government another $367.9 million. The federal government is forecasted to receive $245 million not including impacts arising in other provinces.

[3] Based on an exchange rate of $1.00 CDN = $0.74 USD.

[4] The model assumes that some of the workforce will come in from outside the province. However, the model predicts that around 70 percent of all employment income generated by the CAPEX phase will stay in the province and be spent on goods, services, taxes, etc.

Table 7: Estimated CAPEX economic impacts, infrastructure development: In-province impacts ($000s)
Total impact over construction phase

	000s
Total CAPEX	$14,337,700
Provincial GDP contribution	$2,342,900
Employment income	$1,985,500
FTE person years of employment	18,200
Household spending	$1,431,500
Taxes	
Taxes on income	$494,300
Indirect taxes	$191,700
Total taxes	$686,000
Taxes by level of government	
Municipal	$72,800
Provincial	$367,900
Federal	$245,300

Source: Developed by Jupia Consultants Inc. See Appendix A.

3.2.2 Infrastructure development: National impacts (CAPEX)

There are considerable economic impacts that will accrue elsewhere in Canada from the project's capital spending in Newfoundland and Labrador. This is due to a number of factors including labour imports, suppliers based elsewhere and other induced impacts outside the province. Again, the impacts shown below are based on primary input data provided by the project proponent and multipliers developed by Statistics Canada and modified where appropriate by Jupia Consultants.

In the rest of the country, the CAPEX associated with the five components of the project including deployment of the wind power project and energy storage and the development of the hydrogen, ammonia and solar plant is expected to boost GDP by $1.08 billion. This impact will occur over the life of the construction phase and includes direct, indirect and induced impacts.

This GDP will include $819 million in employment income supporting an estimated 8,500 full time equivalent person years of employment across the country. The vast majority of this income will turn into household spending on goods and services. The economic impact model estimates that $600 million of the income generated from employment will become household spending. A more detailed analysis of this household spending is covered in Section 3.3.3.

Country-wide (including Newfoundland and Labrador), the CAPEX phase is expected to boost GDP by $3.43 billion, employment income by $2.8 billion and household income by $2.03 billion.

The economic activity associated with the CAPEX phase is also expected to boost municipal, provincial and federal government tax revenues across the country. Municipalities outside Newfoundland and Labrador are expected to generate $48 million in revenue and provincial governments another $108 million. The federal government is forecasted to receive $346 million including impacts arising in Newfoundland and other provinces.

The model predicts the bulk of economic impact benefits the province, but there certainly are national impacts as well.

Table 8: Estimated CAPEX economic impacts - Infrastructure development: National impacts ($000s)
Total impact over construction phase

	NL	Rest of Canada	Country-wide
GDP contribution	$2,342,900	$1,084,500	$3,427,400
Employment income	$1,985,500	$819,200	$2,804,700
FTE person years of employment	18,200	8,500	26,700
Household spending	$1,431,500	$599,900	$2,031,400
Taxes			
Taxes on income	$494,300	$166,000	$660,300
Indirect taxes	$191,700	$91,300	$283,000
Total taxes	$686,000	$257,200	$943,200
Taxes by level of government			
Municipal	$72,800	$48,000	$120,800
Provincial	$367,900	$108,200	$476,100
Federal	$245,300	$101,000	$346,300

Source: Developed by Jupia Consultants Inc. See Appendix A.

3.2.3 Average annual CAPEX impacts

The CAPEX phase of the project is spread over a six-year timeframe (2025-2030). The average annual CAPEX economic impacts over the six-year period are shown in Table 9. The in-province GDP impact will average $391 million per year, employment income will be more than $330 million and FTE employment will be an estimated 3,000 per year.

Household spending in the Exploits Valley region and across the province will be an estimated $239 million each year during the six-year construction phase. Governments will receive an estimated $114 million per year including $61 million for the provincial government in Newfoundland and Labrador and $12.1 million for municipal governments.

Table 9: Average annual economic impacts from the construction phase of the project ($000s)

	In-province	National
GDP contribution	$390,500	$571,200
Employment income	$330,900	$467,500
FTE person years of employment	3,000	4,500
Household spending	$238,600	$338,600
Taxes		
Taxes on income	$82,400	$110,100
Indirect taxes	$32,000	$47,200
Total taxes	$114,300	$157,200
Taxes by level of government		
Municipal	$12,100	$20,100
Provincial	$61,300	$79,400
Federal	$40,900	$57,700

Over a four-year timeframe. Source: Developed by Jupia Consultants Inc. See Appendix A.

3.2.4 Detailed assessment of supply chain benefits

In general, for every dollar of spending in Newfoundland and Labrador, there is a boost in output in the rest of Canada. This is particularly true for smaller jurisdictions such as Newfoundland and Labrador because it is a small province (by population) and relies on supply chains across the country. Statistics Canada reports the interprovincial output multipliers for the four key industries used in this report are:

- Non-residential building construction: $0.62
- Electric power engineering construction: $0.42
- Electric power generation, transmission and distribution: $0.40
- Basic chemical manufacturing: $0.40

This includes both indirect (supply chain) and induced effects. It means that for every $1.00 spent in non-residential building construction in Newfoundland and Labrador, output rises in the rest of the country by 62 cents. This results in considerable economic benefits outside of the province as detailed above.

To illustrate the interprovincial economic benefits, the CAPEX associated with the Exploits Valley Green Hydrogen project was analyzed at a detailed level for each province. This section is based on the profile of spending in related sectors in Newfoundland and Labrador and not necessarily equivalent to the Exploits Valley Green Hydrogen project's actual supply chain spending profile. It is meant to show a typical supply chain impact in the rest of Canada from a project such as this.

Based on this assumption, a project such as the Exploits Valley Green Hydrogen project could impact many industries across the country. The wholesale trade sector receives a substantial boost as project proponents and suppliers are purchasing goods used in the CAPEX phase of the project[5]. The model estimates the wholesale trade sector will generate $441 million worth of increased output in Canada outside Newfoundland and Labrador. The model predicts there will be increased output in the fabricated metal product manufacturing sector of $79 million across the country (not including international imports). The truck transportation sector will see a significant rise in output across the country ($61 million).

Service industries will also benefit from this project. A typical project such as this would boost legal, accounting and architectural, engineering and related services sector spending elsewhere in Canada by $38 million.

For a project this size and scale, the insurance industry can expect more than a $47 million increase in output elsewhere in the country and the IT services and other professional, scientific and technical services will benefit from nearly $45 million in new sector output.

Table 10: Modelled indirect and induced spending in the rest of Canada, selected industries
The Exploits Valley Green Hydrogen project infrastructure construction ($Million)*

Wholesale trade margins	$440.7
Retail trade margins	55.0
Fabricated metal product manufacturing	79.4
Other finance, insurance and real estate services	69.2
Truck transportation	60.9
Information services	43.9
Banking services	53.7
Accommodation and food services	36.4
Legal, accounting and architectural, engineering and related services	37.6
Electric power generation, transmission and distribution	20.3
Petroleum and coal product manufacturing	46.3
Insurance carriers	47.4
Cement and concrete product manufacturing	6.3
Administrative and support services	41.7
IT services and other professional, scientific and technical services	44.7
Other transportation	29.6
Electrical equipment and component manufacturing	39.0
Other	479.5
Total	$1,631.3

**does not include international imports.*

[5] Please note this represents increased industry output and not the final GDP contribution by sector.

Source: Jupia Consultants Inc. based on data supplied by Statistics Canada.

On a provincial basis, Ontario industries are the largest beneficiary with an expected $592 million in increased industry output followed by Quebec at $335 million. Nova Scotia is a significant beneficiary – particularly adjusted for the size of the economy. Firms and industries in that province can expect $214 million worth of increased industry output. Alberta and New Brunswick firms and industries can expect $188 million and $136 million, respectively.

Table 11: Modelled indirect and induced spending in the rest of Canada, selected industries The Exploits Valley Green Hydrogen project related infrastructure construction ($Million)*

Province:	Output boost:	Top sectors:
Ontario	$592.2	Wholesale trade, finance, insurance, IT services, truck transportation
Quebec	$334.6	Wholesale trade, fabricated metal, truck transportation, refined oil
Nova Scotia	$213.8	Wholesale trade, fabricated metal, retail trade
Alberta	$187.6	Wholesale trade, refined oil, professional services, IT
New Brunswick	$135.6	Wholesale trade, fabricated metal, truck transportation
British Columbia	$94.7	Wholesale trade, retail trade, IT services
Manitoba	$29.6	Wholesale trade, truck transportation
Prince Edward Island	$28.1	Wholesale trade, fabricated metal
Saskatchewan	$12.8	Wholesale trade

Source: Jupia Consultants Inc. based on data supplied by Statistics Canada.

3.2.5 Detailed assessment of NL household spending impacts

An important impact of the Exploits Valley Green Hydrogen project will be the boost to household spending. About 72 percent of all employment income in the province becomes current consumption, meaning it is spent annually on things like food, shelter, transportation and recreation. The rest goes to income taxes, savings and other non-current consumption. Table 12 shows how the $1.43 billion in labour income induced by the CAPEX phase of the Exploits Valley Green Hydrogen project becomes household spending in Newfoundland and Labrador. This is based on typical household spending in the province. The amount spent in the Exploits Valley region will depend on a variety of factors such as how many local people are working on related projects, how many migrant workers from elsewhere in the province are purchasing goods and services in the local area, etc.

In total, the CAPEX phase of the Exploits Valley Green Hydrogen project is expected to boost current consumption by $1.43 billion over the sox-year timeframe. This will include nearly $230 million on food, $351 million on shelter, $304 million on transportation, $59 million on health and personal care, and $70 million on recreation.

How the ongoing operations associated with the Exploits Valley Green Hydrogen project will boost ongoing household spending in Newfoundland and Labrador is developed in Section 3.3.3 below.

Table 12: Household spending in NL induced by the Exploits Valley Green Hydrogen project CAPEX

Household spending category:	$M	Household spending category:	$M
Total current consumption in NL	$1,431.6	Health care	$41.2
Food expenditures	$229.8	Medicines & pharmaceutical products	$13.6
Food purchased from stores	$181.1	Eye-care goods and services	$2.7
Food purchased from restaurants	$48.7	Dental services	$4.3
Shelter	$351.2	Personal care	$18.4
Water, fuel and electricity	$80.1	Private health and dental plan premiums	$15.3
Insurance premiums	$5.5	Recreation	$70.3
Household operations	$122.6	Entertainment	$19.1
Communications	$69.6	Purchase of recreational vehicles	$15.2
Pet expenses	$16.1	Financial services	$9.8
Household furnishings/equipment	$48.7	Retirement and pension fund payments	$64.1
Clothing and accessories	$71.7	Gifts of money & charitable contributions	$28.7
Transportation	$303.7		
Purchase of automobiles/vans/trucks	$124.0		
Automobile/van/truck operations	$139.5		
Vehicle insurance premiums	$42.5		
Gas and other fuels	$64.1		

Source: Derived by Jupia Consultants Inc. See Appendix A.

3.3 The Exploits Valley Green Hydrogen project: Ongoing OPEX impacts

3.3.1 Annual OPEX economic impacts

After the construction phase, the Exploits Valley Green Hydrogen project will generate substantial ongoing economic benefits in the local area, the province and the country overall. These impacts involve the operations associated with wind energy production and transmission, the operations of the hydrogen and ammonia plant and other related operational expenditures. In addition, there will be economic activity in the supply chain (e.g., port activities, etc.) and through induced impacts.

To derive the economic benefits from operating costs, direct inputs were provided by the project proponent. These included operational costs by activity and person hours distributed by in-province, rest of Canada and international activity. The various economic multipliers were applied to spending in Newfoundland and Labrador and the rest of the country to derive the total impacts. Dollar values are shown in $2025 dollars. The annualized costs are shown for a 37-year timeframe. Costs of decommissioning are not included in this analysis.

Annual OPEX impacts by activity area: In-province

Table 13 shows the annual operating cost-related economic impacts related to the various activities associated with the Exploits Valley Green Hydrogen project. The annual operating expenditures are expected to boost provincial GDP by $187 million per year.

The employment income from direct spending is expected to be $79.7 million per year and this will support an estimated 882 full time equivalent (FTE) jobs – mostly in the Exploits Valley Green Hydrogen region. With indirect and induced effects, annual employment income rises to $97.6 million per year and total employment to more than 1,101 FTEs. These will be high wage jobs with an average employment income of over $97,000 per year (direct jobs).

The annual household spending in Newfoundland and Labrador induced by the Exploits Valley Green Hydrogen project is expected to exceed $70 million. See Section 3.3.3 for a more detailed assessment of household spending impacts.

These economic benefits from operations will be sustained for at least 37 years, the lifespan of the project. After that, the project proponent could reinvest for a future generation. Over the 37-year timeframe, in $2025 dollars, the Exploits Valley Green Hydrogen project is expected to boost provincial GDP by a total of $6.5 billion from operations (in addition to the capital spending detailed in Section 3.2), support 40,755 person years of full-time equivalent employment and boost employment income in Newfoundland and Labrador by an estimated $3.6 billion. Total household spending over the period will be an estimated $2.6 billion.

These impacts do not include the economic activity associated with the spending of tax and royalty revenue on public services across the province. This impact is developed in Section 3.5.

Table 13: Average annual OPEX economic impacts by activity area, $000s
In-province impacts only
$2025

	Direct impacts	Total impacts
Provincial GDP contribution ($000s)		$187,432
Employment (FTE)	822	1,101
Employment income ($000s)	$79,734	$97,621
Average employment income ($2025)	$97,000	$88,627
Household spending ($000s)	$57,488	$70,384

Per year for a 37-year period.
Excluding tax impacts. See Section 3.3.2.
Source: Developed by Jupia Consultants Inc. See Appendix A.

Table 14: Cumulative OPEX economic impacts by activity area over the 37-year timeframe, $000s
In-province impacts only
$2025

Provincial GDP contribution ($2025)	$6.9 billion
Person years of FTE employment	40,755
Total employment income ($2025)	$3.6 billion
Total household spending ($2025)	$2.6 billion

Excluding tax impacts. See Section 3.3.2.
Source: Developed by Jupia Consultants Inc. See Appendix A.

Annual OPEX impacts by activity area: National

As with the CAPEX phase, there will be operational spending economic impacts in the rest of Canada. Using multipliers developed for each of the activity areas, the summary national impacts from the Exploits Valley Green Hydrogen project are shown in Table 15. The national GDP contribution will be an estimated 22 percent higher than the in-province impact only. Employment will rise by 31 percent from 1,101 FTEs supported in the province to 1,442 across the country. Employment income outside the province arising from operations will be an estimated $22.5 million per year for a total of $120.1 million across the country.

Table 15: Average annual OPEX economic impacts by activity area, $000s
In-province and national impacts
$2025

	In-province	National
GDP contribution ($000s)	$187,430	$228,670
Total employment (FTE)	1,101	1,442
Total employment income ($000s)	$97,620	$120,070
Household spending ($000)	$70,380	$86,450

Per year for a 37-year period.
Excluding tax impacts. See Section 3.3.2.
Source: Developed by Jupia Consultants Inc. See Appendix A.

3.3.2 Taxation and royalty impacts

There will be a wide variety of taxes and royalties arising from the Exploits Valley Green Hydrogen project. There will be tax revenues induced from the operational spending including personal income tax, HST, property tax and other taxes and levies related to employment income in the province. In addition, there will be significant taxes and royalties generated as a result of the provincial government's Wind-Hydrogen Fiscal Framework.

The Wind-Hydrogen Fiscal Framework developed by the provincial government in Newfoundland and Labrador has five principles:

1. Provide a predictable and transparent fiscal system to inform investment decisions and resource development for wind-hydrogen projects.
2. An approach that provides a sharing of financial returns between investors and the province to achieve a balance between a) recognition of project investment and risk; and b) benefits the province for use of its resources – land, wind and water.
3. The framework design utilizes the following concepts: fees/payments occurring early in the project authorizations/permitting. Fee payments scale to size of project.

4. Water Royalty payments occurring later in the project during operations phase, after a project has recovered initial investment costs.
5. Taxes applicable to all wind projects producing electricity for the purposes of producing hydrogen.

The fiscal framework is based on three components, fees associated with use of Crown land, a tax on wind electricity, and water related revenues including a water use fee and a water royalty. The Crown Land Reserve Fee is an annual charge equal to 3.5 percent of the market value of reserved lands. The Crown Land Lease Fee represents an annual charge of seven percent of the market value of the lands. Wind Electricity Tax is an annual charge of $4,000 per megawatt on installed capacity and payments begin when the turbines are "in-service". It is applicable to all wind-hydrogen projects (≥ 5 megawatts) producing electricity for the purposes of producing hydrogen.

The Water Use Fee is an annual charge of $500 per 1000m3 of water licensed and used, and an annual charge of $50 per 1000m3 for water licensed and not used. The fees are adjusted annually by the Canadian Consumer Price Index.

The Water Royalty is a mechanism to share profits beyond an agreed upon rate of return to the project. It is applicable to hydrogen projects. Payments begin with cost recovery and rates are linked to revenue over cost index calculation (10 per cent to 25 per cent). The provincial government will have the ability to enter into agreements to modify terms in the same manner as offshore oil projects.

The estimated tax and royalty payments shown in Table 16 were developed using two sources including estimates from the project proponent (related to the elements of the Wind-Hydrogen Fiscal Framework) and tax multipliers developed by Jupia Consultants related to the annual operating expenditures.

Taxes from operations

The taxes arising from operations come from a variety of sources including personal income tax payments, HST on goods and services and property taxes, among other taxes and levies. The economic impact model estimates the annual operations associated with the Exploits Valley Green Hydrogen project will boost government coffers by $4.7 million per year of which $3.3 will go to municipal governments, $22.3 million to the Newfoundland and Labrador provincial government and $18.1 million to the federal government.

In addition, there will be corporate income tax payments. The estimated federal portion of the taxes paid over the 37-year timeframe is net of the Clean Hydrogen Investment Tax Credit (CHITC) which will reimburse green hydrogen developers an amount equivalent to 40 percent of the cost of purchasing and installing "eligible equipment". The CHITC also includes a 15 percent tax credit on equipment that converts clean hydrogen into ammonia. On an average annual basis, the project proponent estimates there will be $171.1 million in provincial corporate income tax payments. After the tax incentives, the average annual amount of federal corporate income taxes will be $57 million.

The estimated water royalty payments over the life of the project were provided by the proponent and are estimated to be $183.5 million per year. Other municipal taxes are expected to be approximately $3 million per year. The annual Wind tax and Water tax, using the Wind-Hydrogen Fiscal Framework, will be an expected $11.7 million and $0.7 million, respectively.

Table 16 also includes the cumulative amount of expected taxes and royalties to be paid over the 37-year timeframe. The total numbers will be significant. Based on the modelling done by the project proponent and this report's author, the total taxes and royalties arising from this project could total $17.7 billion or $477 million per year (for all levels of government combined).

Table 16: Annual and cumulative taxes arising from the Exploits Valley Green Hydrogen project operations, $Millions
$2025

	Avg. annual	Cumulative
Taxes from operations	$43.7	$1,616.9
Municipal	$3.3	$122.1
Provincial	$22.3	$824.4
Federal	$18.1	$669.7
Corporate income tax expense	$228.1	$8,440.0
Provincial portion	$171.1	$6,330.0
Federal portion	$57.0	$2,110.0
Municipal royalty	$5.4	$198.6
Water royalty	$183.5	$6,789.0
Municipal taxes	$3.1	$113.7
Land charge	$1.2	$44.1
Wind tax	$11.6	$428.2
Water tax	$0.7	$27.1

Source: Developed by Jupia Consultants Inc. See Appendix A.

3.3.3 Household spending impacts

Just like the CAPEX impacts discussed above, the annual operations of the Exploits Valley Green Hydrogen project will provide a solid boost to household spending in the province, mostly in the Exploits Valley region. Table 18 shows how the $97.6 million in annual labour income induced by the project becomes household spending in Newfoundland and Labrador. This is based on the typical household spending in the province.

In total, the Exploits Valley Green Hydrogen project annual operations is expected to boost current consumption by $70.4 million. This will include $11.3 million on food, $17.3 million on shelter, $14.9 million on transportation, $2.9 million on health and personal care, and $3.5 million on recreation.

This excludes the estimated $211 million of induced household spending that would occur across Newfoundland and Labrador should the provincial government spend its tax/royalty revenue on public services.

Table 18: Annual household spending in NL induced by the Exploits Valley Green Hydrogen project OPEX ($2025)

Household spending category:	$Millions	Household spending category:	$Millions
Total current consumption in NL	$70.4	Health care	$2.0
Food expenditures	$11.3	Medicines & pharmaceutical products	$0.7
Food purchased from stores	$8.9	Eye-care goods and services	$0.1
Food purchased from restaurants	$2.4	Dental services	$0.2
Shelter	$17.3	Personal care	$0.9
Water, fuel and electricity	$3.9	Private health and dental plan premiums	$0.8
Insurance premiums	$0.3	Recreation	$3.5
Household operations	$6.0	Entertainment	$0.9
Communications	$3.4	Purchase of recreational vehicles	$0.7
Pet expenses	$0.8	Financial services	$0.5
Household furnishings/equipment	$2.4	Retirement and pension fund payments	$3.1
Clothing and accessories	$3.5	Gifts of money & charitable contributions	$1.4
Transportation	$14.9		
Purchase of automobiles/vans/trucks	$6.1		
Automobile/van/truck operations	$6.9		
Vehicle insurance premiums	$2.1		
Gas and other fuels	$3.1		

Source: Derived by Jupia Consultants Inc. See Appendix A.

3.4 Combined CAPEX and OPEX economic impacts

The Exploits Valley Green Hydrogen project represents a large-scale infrastructure investment of over $14 billion. The installation of wind turbines, investment in electricity transmission infrastructure, the building of the hydrogen plant and ammonia facilities along with other capital investment is expected to boost provincial GDP by $2.3 billion over a six-year period. The annual operations of the facilities and energy infrastructure will boost provincial GDP by a total of $6.9 billion over a 37-year operational period ($2025). Combined, the Exploits Valley Green Hydrogen project will boost the provincial economy by $9.3 billion. Importantly, this does not include the impacts associated with government spending tax and royalty revenue in the province.

This economic activity from CAPEX and OPEX will boost employment income by an estimated $5.6 billion and support 58,955 full time equivalent person years of employment over capital investment and operations phases.

Municipal governments in the province can expect $507 million in tax revenue over the capital investment and operations phases (including the municipal royalty and other municipal taxes), the provincial government will receive an estimated $14.8 billion and the federal government another $3.0 billion from the in-province activity alone.

Table 19: Combined and cumulative economic impacts, Exploits Valley Green Hydrogen project, $Millions ($2025)
In-province impacts only

	CAPEX	OPEX	Combined
Provincial GDP contribution	$2,340	$6,930	$9,270
Employment income	$1,990	$3,610	$5,600
FTE employment	18,200	40,755	58,955
Household spending	$1,430	$2,600	$4,030
Taxes from construction and operations		$690	$1,620
Municipal	$70	$120	$190
Provincial	$370	$820	$1,190
Federal	$250	$670	$920
Corporate income tax expense		$8,440	$8,440
Provincial portion		$6,330	$6,330
Federal portion		$2,110	$2,110
Municipal royalty		$200	$200
Water royalty		$6,790	$6,790
Municipal taxes		$110	$110
Land charge		$40	$40
Wind tax		$430	$430
Water tax		$30	$30

From 2024-2065. Source: Derived by Jupia Consultants Inc. See Appendix A.

3.5 The potential economic impacts associated with the spending of tax/royalty revenue

The economic impact model does not include the potential economic activity associated with the spending of government tax revenue. This revenue could be used to fund public capital investment (roads, schools, hospitals, etc.) or government operations (teachers' salaries) or even to pay down debt.

Table 17 looks at the potential impacts if the tax/royalty revenue was spent one-third on health care, one-third on education and one-third on public administration in the province.

Spending $390 million supports a considerable amount of economic activity in the province. Based on this simple model, it would boost provincial GDP by an estimated $405 million (direct, indirect and induced effects combined), lead to $292 million in new employment income, support nearly 3,900 jobs and over $201 million in additional household spending.

Further, the spending of $390 million on public services would induce another $50.5 million in tax revenue for the provincial government and $9.9 million for municipal governments.

Table 17: The annual economic impacts from spending the taxes/royalties arising from the Exploits Valley Green Hydrogen project, $000s
$2025

	Education	Health care	Public administration	Total public spending
% breakdown by spending area	*33%*	*33%*	*33%*	*100%*
Provincial GDP contribution	$154,900	$129,100	$121,500	$405,500
Employment income	$120,200	$97,200	$75,000	$292,400
FTE employment	1,430	1,440	1,020	3,890
Household spending	$86,700	$70,100	$54,100	$210,900
Taxes				
Taxes on income	$35,200	$28,300	$21,900	$85,400
Indirect taxes	$3,200	$2,900	$2,900	$9,000
Total taxes	$38,400	$31,300	$24,900	$94,600
Taxes by level of government				
Municipal	$4,000	$3,200	$2,600	$9,800
Provincial	$20,600	$16,700	$13,300	$50,600
Federal	$13,800	$11,200	$8,900	$33,900

Direct, indirect and induced effects. Source: Developed by Jupia Consultants Inc. See Appendix A.

4. THE STRATEGIC IMPACT OF THE EXPLOITS VALLEY GREEN HYDROGEN PROJECT

4.1 The economic benefits in context

The Exploits Valley Green Hydrogen project will have a sizable impact on the Newfoundland and Labrador economy both from the capital spending phase and from the ongoing operations. This section highlights just how important this project will be to the regional and provincial economy in a number of areas.

Economic benefit:	In context:
Will substantially boost provincial infrastructure investment	EVREC is expecting to deploy over $14 billion (CDN$) worth of capital on this project over a six-year timeframe (most will be spent between 2026-2029), or an average of approximately $2.4 billion per year. To put this in context, according to Statistics Canada, the entire private sector in Newfoundland and Labrador spends an average of just under $6 billion per year on non-residential investment. Therefore, the EVREC project should boost annual private sector capital expenditures by 40 percent from the $6 billion per year baseline. Another way to look at the impact is to compare the annual capital expenditures to past periods of investment in the provincial utilities sector. Over the past 10 years, the utilities sector in Newfoundland and Labrador invested $1.64 billion per year on capital expenditures. This included almost the entire investment in the Lower Churchill Falls hydroelectricity project. During the 2025-2030 timeframe, the Exploits Valley Green Hydrogen project is expected to generate an annual average of $2.4 billion in capital spending.
Adds a top private sector employer in the Exploits Valley region	This surge in capital investment will leave behind over 1,100 full time equivalent annual jobs in the province, most in the Exploits Valley region. The direct jobs are expected to be 822 with another 279 in the supply chain and from induced effects. As discussed earlier in this report, there are very few large employers in the region. This project will be the anchor private sector employer for the next generation. Further, the average salary associated with these jobs will be twice the level of the average full-time job in the region. Based on 2021 Census data, the $97.6 million in expected employment income in the province is an amount equivalent to nearly 17 percent of all employment income earned in the Exploits Valley region each year. Not all the workers will live in the area, but this still represents a substantial boost to employment income. **This doesn't include the potential impact of government spending of the tax/royalty revenue.**

Economic benefit:	In context:
Supports hundreds of small companies in the region	According to Statistics Canada, there are over 800 private sector employers in the Exploits Valley region. This includes 137 retail firms, 108 personal services firms and 29 restaurants. Adding tens of millions of dollars in household spending per year in the region will provide a substantial ongoing boost to the local economy[6]. Assuming most of the household spending is generated in the region, this represents a boost of between 4% and 6% of total annual household spending on current consumption[7]. It is likely this substantial new household spending will increase the need for more entrepreneurs.
Helps attract highly skilled talent and meet local workforce needs	As discussed in Section 2 above, these high wage, highly skilled jobs will be attractive to trades workers and professionals looking to advance their careers. Many of these highly skilled workers will bring with them families that will help support workforce needs in other sectors of the economy.
Drives substantial new tax revenue in the province	Newfoundland and Labrador needs new sources of sustained, private sector revenue. The provincial budget is heavily reliant on oil and gas revenues as offshore royalties alone accounts for nearly 20 percent of own-source revenue each year (not including corporate income tax and induced taxes from the sector). The Exploits Valley Green Hydrogen project is expected to generate an average of $390 million in new tax and royalty dollars each year for the provincial government over the 37-year operating period (in $2025 dollars). Municipal government, mostly in the Exploits Valley region, can expect an average of over $11.7 million in tax revenue each year during the life of the project (from households, businesses and the municipal royalty).
Creates another major export industry for Newfoundland and Labrador	The Exploits Valley Green Hydrogen project will create another major export sector for Newfoundland and Labrador. Based on international export data by sector tracked by Statistics Canada, green hydrogen will become a top five export sector by value for the provincial economy behind oil and gas, iron ore, refined iron and seafood production.
Positions the area as a Canadian green energy leader	The Exploits Valley Green Hydrogen project will position north-central Newfoundland as a Canadian leader in green energy production.
Could lead to more industrial activity down the road	Once the energy infrastructure is in place, there is potential to develop future use cases for that energy that would create more economic activity in the province such as the processing of critical minerals, iron ore, data centres, etc.

[6] The impact model forecasts $70.4 million in household spending per year but that is a provincial-wide figure. It is likely the spending in the Exploits Valley region will be at least $50 million assuming most employees live in the region.

[7] 6% would represent 100% of current consumption occurring in the Exploits Valley, while 4% would represent 65% staying in the region.

4.2 Maximizing economic benefits

It is important for the proponent, government, education and community stakeholders to work on maximizing the economic benefits from the Exploits Valley Green Hydrogen project. North-central Newfoundland is a small economy with limited population and many of the economic benefits from both the CAPEX and OPEX phases of the project could leave the region as the project proponent and its suppliers may have to bring in workers and purchase a higher level of goods and services outside the region and province relative to the expenditures predicted by the economic impact model.

The area is already facing a tightening labour market. According to the job postings tracking firm Lightcast, there were nearly 1,600 unique job postings in Divisions 6 and 8 between January 2024 and May 2025.

A deliberate strategy to ensure the maximum number of Newfoundlanders and Labradorians can work jobs related to both the CAPEX and OPEX should be developed. Further, a detailed supply chain development strategy will ensure that Newfoundland and Labrador companies can maximize the benefits of this project to the local economy.

5. CONCLUSION: THE EXPLOITS VALLEY GREEN HYDROGEN PROJECT AND THE FUTURE

It is not often a project of this size comes along in places like the Exploits Valley region. Because the region is ideal for wind energy and downstream hydrogen/ammonia production, the economic case is solid.

The Exploits Valley Green Hydrogen project represents a new anchor industry for the area, similar to other large projects in the past. It will provide substantial economic benefits to the province in the near term and a stable source of high paying jobs for the long term.

It will be important for the project proponent and its partners to ensure the maximum level of economic benefits remains in the province and the ongoing economic benefits accrue to the communities in the Exploits Valley region.

APPENDIX A: THE ECONOMIC IMPACT MODEL AND SOURCES

The data sources used in the preparation of this report include:

Statistic:	Source/Description:
Direct, indirect and induced GDP, employment and income estimates	Uses Statistics Canada Input-Output multiplier and impact estimates at the M industry level. Provincial Input-Output Multipliers, 2020. Catalogue no. 15F0046XDB. Industry Accounts Division. Statistics Canada. Includes multipliers for: output, gross domestic product (GDP) at market prices, taxes on products, labour income, wages and salaries, employers' social contributions, labour income of unincorporated sector, taxes on production and employment. The specific NAICS industries used are described in Section 2 above.
Tax multipliers	Using a model developed by Jupia Consultants Inc. based on a variety of sources including: • Induced HST revenue: Based on the ratio of HST collected to total provincial personal income in 2022 (Source: provincial budget documents and Statistic Canada). • Induced personal income taxes paid: Derived using several sources including Statistics Canada personal tax-related tables and its Survey of Household Spending (SHS) for 2021. • Property taxes paid (from employment income): Derived using Statistics Canada's Survey of Household Spending (SHS) for 2021. • Indirect taxes: Derived using Statistics Canada multipliers for the various sectors used in the model as described in Section 2.1. These indirect taxes are levied on the business activity and include such tax areas as: business property taxes, fuel taxes, vehicle license fees, land transfer taxes, and any sales taxes arising out of the corporate activity. Corporate income tax estimates by year and amount were provided by EVREC. The Crownland reserve fee (3.5%), Crownland lease fee (7%) and wind electricity tax data, and water royalty estimates were provided by the proponent.
Household spending impacts	Derived using Statistics Canada's Survey of Household Spending (SHS) for 2021.
Industry GDP statistics	Gross domestic product (GDP) at basic prices, by industry. Source: Statistics Canada Table: 36-10-0402-01.
Various labour market characteristics	Statistics Canada 2021 Census and annual wage reports.

Municipal and provincial total own-source revenue as well as spending by category	GNL Main Estimates published by the Department of Finance.
Business counts	Source: Statistics Canada business counts, June 2023.
Export data	Source: Trade Data Online.
Occupational wage data	Statistics Canada 2021 Census.
Average household spending	Source: Statistics Canada Table: 11-10-0222-01.
Capital investment by sector	Capital and repair expenditures, non-residential tangible assets, by industry and geography. Source: Statistics Canada Table: 34-10-0035-01.
Employment by sector	Source: Statistics Canada 2021 Census and the annual Labour Force Survey.

APPENDIX C: ABOUT JUPIA CONSULTANTS INC.

New Brunswick, Canada-based Jupia Consultants Inc. is a full-service research and planning support consultancy specializing in the area of economic development. For over two decades the firm has been working with companies, communities, industry associations, economic development agencies and government departments across Canada.

This report was prepared by David Campbell. David is the President of Jupia Consultants Inc. and has more than 25 years' experience as a consultant working with industry, not-for-profit organizations and governments across Canada. His focus areas include economic development strategy, economic impact analysis, population growth, cluster development and investment attraction. David was formerly Chief Economist with the Government of New Brunswick. In that role, he led the development of economic policy and economic development strategy for the provincial government.

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For more information visit www.jupia.ca.

APPENDIX P.1
Traffic Impact Study

Prepared by: Englobe Corp.

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

Traffic Impact Study

EVREC

Marine Contractors
Final Report

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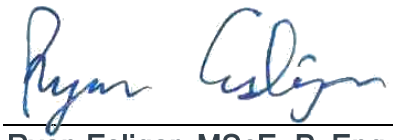

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Summary

Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing to develop and operate a Green Energy Facility that will be located on previously developed land near Botwood in Central Newfoundland, Canada. The facility will include a 3.5 gigawatt (GW) onshore wind energy project consisting of three wind farms with up to 530 turbines, a 150-megawatt solar farm, and a 2.6 GW hydrogen/ammonia production facility. Construction of the facility is proposed to start in 2026, and production will begin in 2028.

All required infrastructure will be located on the Green Energy Facility land and access to the infrastructure will be facilitated via a combination of new road construction and upgrades to existing roads within the site. Therefore, the majority of traffic impacts resulting from the development are anticipated to occur during the construction phase when equipment and materials are brought to the site. These impacts will occur primarily in the Botwood area between the Port of Botwood (located east of Route 350) and the main entrance to the Green Energy Facility (located west of Route 350). This includes the port, a Heavy Haul Road that will be constructed to bring materials from the Port to the main facility, and the proposed crossing of the Heavy Haul Road on Route 350 (Botwood Highway).

Data Collection

Traffic volumes were collected in August 2025 at the location of the proposed intersection of the Heavy Haul Road and the existing Route 350. At this time the existing conditions of the roadway, shoulder, and roadside infrastructure were reviewed. In March 2026 traffic volumes were collected, and sight distances were measured on Water St at the proposed intersection with the Heavy Haul Road.

Existing Conditions

The asphalt on Route 350 (Botwood Highway) is in good condition, with minimal rutting and few cracks along the inspected segment. This section of Route 350 was resurfaced in 2019 with 50mm of surface course asphalt over the existing roadway surface. The total two-way Average Daily Traffic (ADT) value for this Highway segment was 3,777 vehicles. The current percentage of heavy traffic on this segment is 3.6%. The Botwood Highway currently experiences a Level of Service (LOS) A based of the existing volumes and the 2022 Highway Capacity Manual.

Traffic Analysis

Construction of the EVREC site will start in 2026 and construction will ramp up to its peak in 2028. The future background traffic volumes were estimated by applying a 2.0% annual linear growth rate to the 2025 volumes. As a result of the EVREC site labour force shift timings, it is anticipated that the AM peak hour of Route 350 will shift from 10:30 – 11:30 am to 6:30 – 7:30 am to coincide with morning arrivals on site. It was estimated that the proposed site would generate 121 trips (112 in / 9 out) during the AM Peak period and 224 trips (112 in / 112 out) during the PM Peak period at full buildout. These traffic volumes were added to the background volumes to estimate the 2027 traffic conditions with peak labour force.

The projected traffic volumes for the intersection of Route 350 and the Heavy Haul Road were used to complete an updated LOS analysis for the intersection. It was concluded that the intersection would

operate efficiently at an overall LOS A with free flow on Route 350 and stop control on the side approaches.

Traffic Management Plan

The projects traffic volumes indicate that the highest delays are expected to occur during the PM peak hour (3:30 – 4:30 pm) when labour shift change coincides with the existing afternoon peak hour. It is recommended that overweight and oversized loads crossing Route 350 be scheduled outside of the AM and PM peak hours (6:30 – 7:30 and 3:30 – 4:30).

A signal warrant was completed for the intersection, and it found that the intersection does not require a traffic signal.

Pavement Deterioration

A pavement condition assessment and drainage infrastructure review was completed and confirmed the drainage of Route 350 is satisfactory. The pavement has minor existing rutting and cracking.

Equivalent Single Axle Loads (ESAL's) were calculated for the oversized/overweight vehicles that are expected to cross Route 350 on the Heavy Haul Road during the construction phase of the project. It was estimated that the total number of crossings will result in approximately 180,000 ESAL's which represents 20% of the highways design load.

Construction Permitting

The Newfoundland and Labrador Department of Transportation and Infrastructure confirmed a Highway Access Permit is required. The proposed access locations meet the sight distance and access spacing requirements.

Conclusions and Recommendations

The main conclusions and recommendations of the report are summarized as follows:

- The use of the Heavy Haul Road is expected to help minimize traffic impacts on the existing road network in the area. The majority of impacts will be limited to the intersection of the Heavy Haul Road and Route 350.
- There are no significant LOS reductions expected on Route 350 as a result of the proposed intersection with the Heavy Haul Road.
- It is recommended that pavement surface at the intersection be monitored during construction and re-paved if deterioration does occur.
- It is recommended that oversized/overweight crossings of Route 350 be scheduled outside the AM and PM peak hours (6:30 – 7:30 am and 3:30 – 4:30 pm) when possible.
- If oversized/overweight loads must cross Route 350 during peak periods (when available gaps between traffic on Route 350 are lower) flaggers may be needed to temporarily stop traffic on Route 350.
- It is recommended that heavy vehicle crossing signs be added on Route 350 and Water St in advance of the Heavy Haul Road intersections, to warn drivers of the presence of the crossing.
- It is recommended that intersection lighting be added at the intersections with the Heavy Haul Road to illuminate the intersections at night. Intersection lighting is present at other nearby intersections on Route 350 and Water St.
- It is recommended that the Water Street crossing should be regraded when the Heavy haul road is built to increase sight distance on the westbound approach on the Heavy Haul Road.
- It is recommended that utility providers be consulted to confirm clearance requirements to the existing utility infrastructure along Route 350 near the access points.
- A highway access permit will be required for the crossing on Route 350.

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Table of Contents

1 Introduction 1
1.1 Background 1
1.2 Study Task 3
1.3 Study Methodology 3

2 Data Collection 4
2.1 Traffic Count 4
2.2 Highway Infrastructure 5

3 Existing Conditions 6
3.1 Infrastructure Review 6
3.1.1 Route 350 6
3.1.2 Water St 7
3.1.3 Heavy Haul Road 8
3.1.4 Port of Botwood 10
3.1.5 Utilities 10
3.2 Infrastructure Condition 12
3.2.1 Route 350 12

4 Traffic Analysis 14
4.1 Existing Traffic Volumes 14
4.1.1 Route 350 14
4.1.2 Water Street 15
4.2 Future Construction Volumes 16
4.2.1 Personnel 16
4.2.2 Equipment Transportation 17
4.2.3 Projected Intersection Volumes 20
4.3 Future Operations Volumes 22
4.3.1 Personnel 22
4.3.2 Projected Operations Volumes 22

5 Traffic Management Plan 24
5.1 Future Intersection LOS 24
5.2 Intersection Considerations 25
5.3 Water St and Heavy Haul Road Sight Distance 25

6 Pavement Deterioration 27
6.1 Heavy Vehicles 27
6.1.1 Design Vehicle 27
6.2 Equivalent Single Axle Load 28

7 Construction Permitting 29

8 Conclusions and Recommendations 30

TABLES

Table 1. Existing Route 350 Peak Hour Volumes 14
Table 2. Existing Route 350 Hourly Volumes and Gaps 15
Table 3. Existing Water St Peak Hour Volumes 15
Table 4. Existing Water Street Hourly Volumes and Gaps 16
Table 5 Turbine Related Truck Crossings at Route 350 and Water St 18
Table 6. Wind Turbine Related Trips from Port to EVREC Site 19
Table 7. Route 350 Projected 2027 (Construction Period) Traffic Volumes 19
Table 8. Water Street Projected 2027 (Construction Period) Traffic Volumes 20
Table 9. Projected Site Driveway Volumes 21
Table 10. Route 350 Projected 2030 (Operations Period) Traffic Volumes 23
Table 11. Intersection LOS 24
Table 12. Water St Crossing Truck Sight Distances 26
Table 13. Wind Turbine Design Vehicle ESAL Calculations 28

FIGURES

Figure 1 – Study Area 1
Figure 2 – Main Facility Layout 2
Figure 3. Traffic Count Locations 5
Figure 4. Route 350 7
Figure 5. Water Street 8
Figure 6. Heavy Haul Road Alignment 9
Figure 7. Heavy Haul Road Cross Section 9
Figure 8. Port of Botwood (Google Streetview) 10
Figure 9. Heavy Haul Road Grading 11
Figure 10. Design Vehicle Height 11
Figure 11. Asphalt Cracks on Route 350 12
Figure 12. Travel Lanes on Route 350 13
Figure 13: Worker Requirements 17
Figure 14. Design Vehicle 18
Figure 15. Route 350 @ Heavy Haul Road Traffic Volumes 21
Figure 16. Operational Phase Worker Count 22
Figure 17. TAC Stopping Sight Distances (TAC, 2017) 25
Figure 18. Water St Intersection Grade 26
Figure 19. Design Vehicle Weight by Axle 27

APPENDICES

Annex A Traffic Volumes
Annex B Annex B Synchro Model
Annex C Wind Turbine Transport Vehicles
Annex D Site Photos

Annex E Traffic Signal Warrant Analysis

1 Introduction

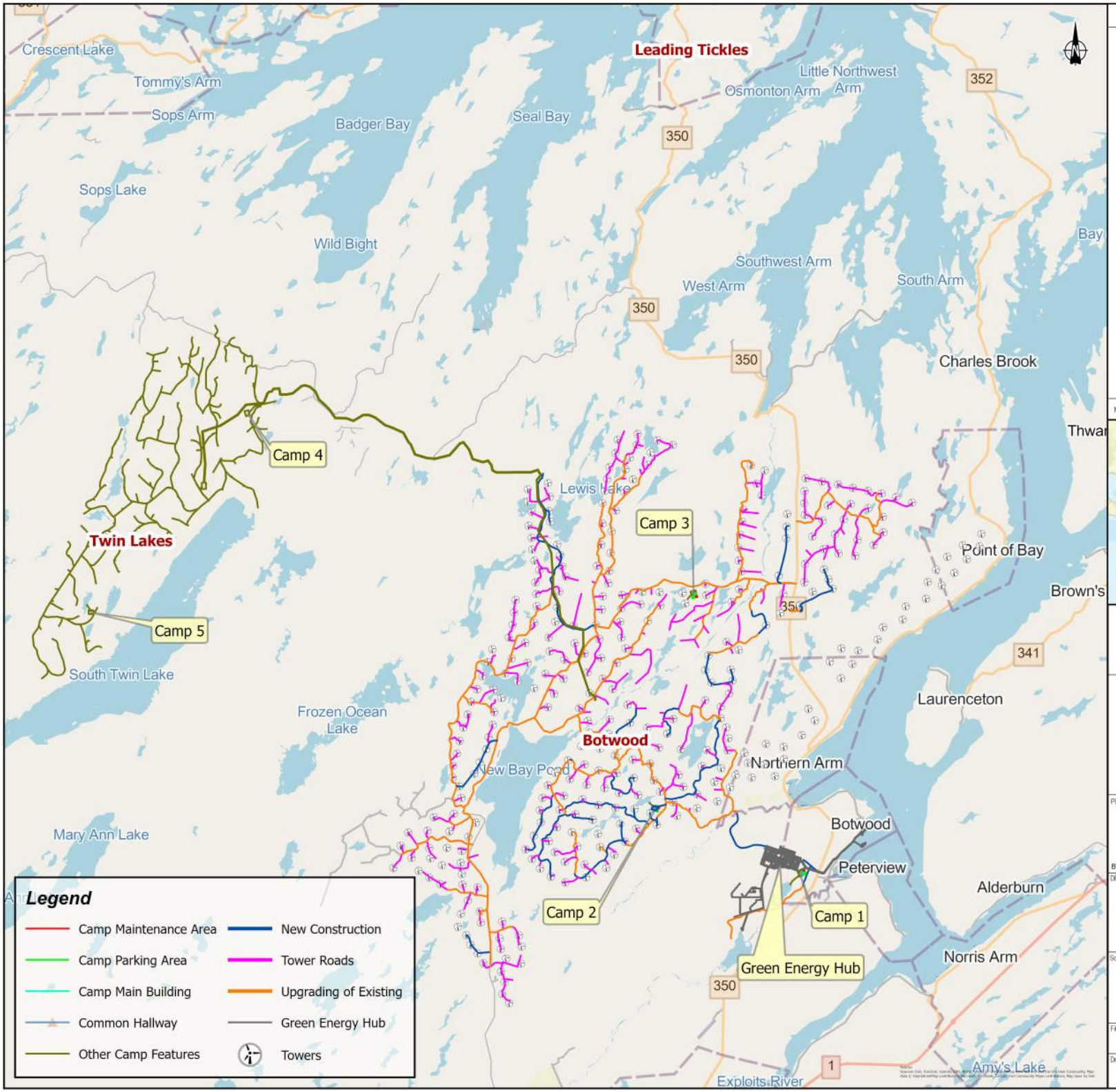
1.1 Background

Exploits Valley Renewable Energy Corporation (EVREC) is proposing to develop and operate a Green Energy Facility that will be located on previously developed land near Botwood in Central Newfoundland, Canada. The facility will include a 3.5 gigawatt (GW) onshore wind energy project consisting of three wind farms with up to 530 turbines, a 150-megawatt solar farm, and a 2.6 GW hydrogen/ammonia production facility. Construction of the facility is proposed to start in 2026, and production will begin in 2028.

EVREC hired Englobe to complete a Traffic Impact Study (TIS) for the development following the requirements that were identified in the **EIS guidelines for Botwood and Area EVREC Green Energy Project Botwood Area, NL Exploits Valley Renewables Energy Corporation**.

The overall Green Energy Facility will include multiple camps where workers are housed, access roads for access to the solar and wind farm equipment, and the Green Energy Hub where the hydrogen/ammonia production facility is located. The overall site and associated infrastructure are shown on the study area map in **Figure 1**.

All required infrastructure will be located on EVREC land and access to the infrastructure will be facilitated via a combination of new road construction and upgrades to existing roads within the EVREC site. Therefore, the majority of traffic impacts resulting from the development are anticipated to occur during the construction phase when equipment and materials are brought to the site. These impacts will occur primarily in the Botwood area between the Port of Botwood (located east of Route 350) and the main entrance to the Green Energy Facility (located west of Route 350). Therefore, the TIS focused primarily on the area shown in the main facility layout identified in **Figure 2**. This includes the port, a Heavy Haul Road that will be constructed from the Port to the main facility, and the proposed crossing of the Heavy Haul Road on Route 350 (Botwood Highway).


Crescent Lake
Tommy's Arm
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Badger Bay
Seal Bay
Leading Tickles
Little Northwest Arm
Osmonton Arm
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Wild Bight
Southwest Arm
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Lewis Lake
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Twin Lakes
Point of Bay
Brown's
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Camp 5
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South Twin Lake
Laurenceton
Frozen Ocean Lake
Botwood
New Bay Pond
Northern Arm
Mary Ann Lake
Botwood
Peterview
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Camp 2
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Exploits River
1
Legend
Camp Maintenance Area
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Other Camp Features
New Construction
Tower Roads
Upgrading of Existing
Green Energy Hub
Towers
NOTES
No.
Date
Revisions
By
Appr.
Study Area
ENGLOBE
PROJECT TITLE
EVREC
Traffic Impact Study
BOTWOOD
NEWFOUNDLAND AND LARADOR
DRAWING TITLE
Figure 1
Study Area
Scale
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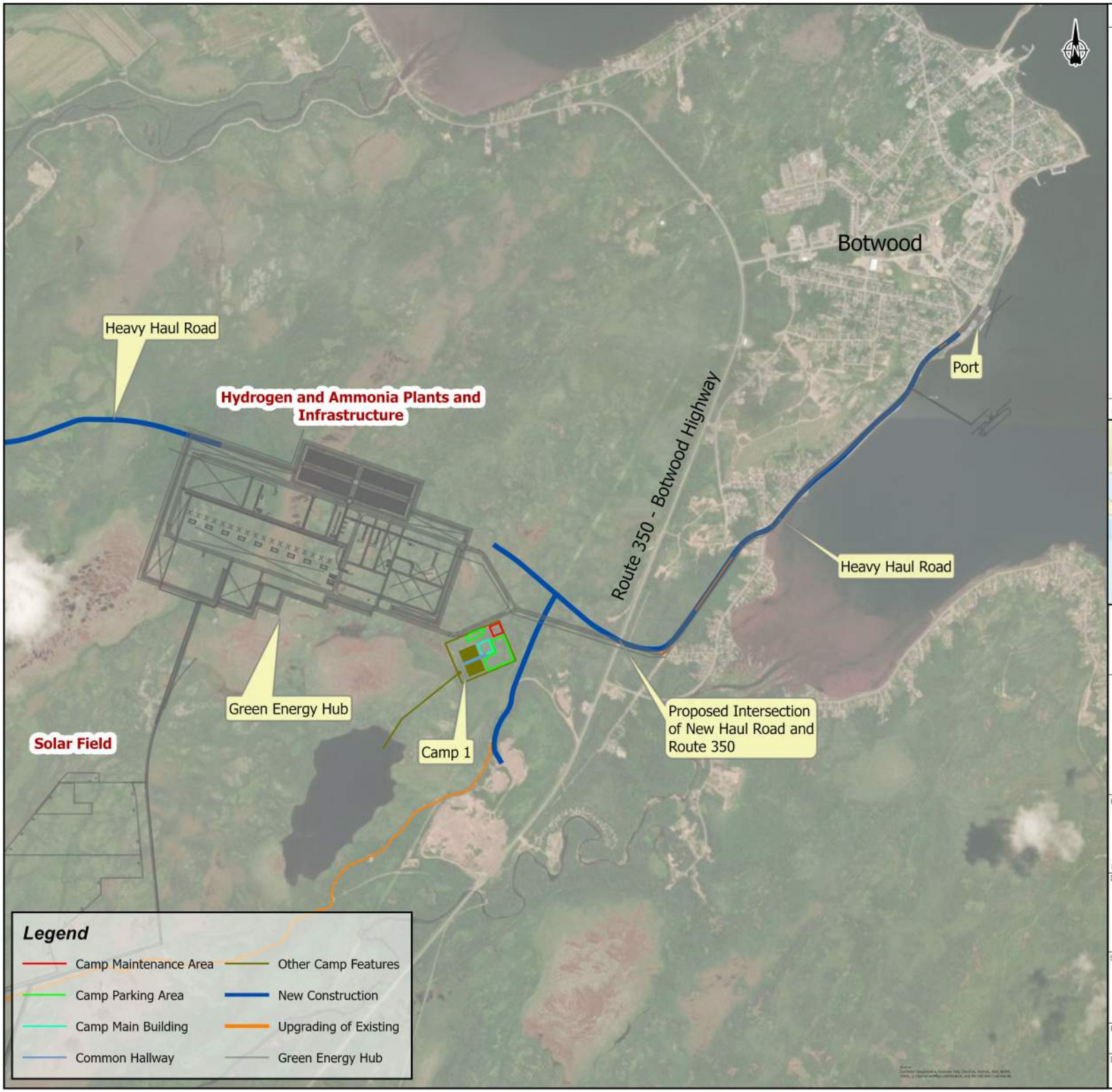
2504299-1 Everec.aprx
Date : 2025-09-24
Drawing No.
Figure 1 - Study Area



NOTES

No.	Date	Revisions	By	Appr.

eNGLOBe

PROJECT TITLE

EVREC
Traffic Impact Study

BOTWOOD — NEWFOUNDLAND AND LARADOR

DRAWING TITLE

Figure 2
Main Facility Layout

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Drawing No.: Figure 2 - Main Facility Layout

1.2 Study Task

This study included the following tasks as required to meet all requirements of section 7.2.6 of the Newfoundland and Labrador Environmental Impact Statement Guidelines for Botwood and Area EVREC Green Energy Project Registration (No. 2327 - April 2025). Tasks took place at the study area surrounding the proposed intersection of Botwood Highway and the project's New Heavy Haul Road. The following tasks were completed:

- detailed review of all background documents and information provided by EVREC to develop an understanding of the tasks required for the construction and operations of the facility;
- review of both horizontal and vertical alignment of the existing road infrastructure, identifying any structures, signs, or other circumstances that may conflict with the movement of oversized and overweight loads;
- collection of an existing traffic count on Botwood Highway just north of Water Street;
- pavement condition assessment and drainage infrastructure review;
- development of projections for the increased deterioration of pavement structure at the Botwood Highway crossing caused by the transportation of oversized and overweight loads;
- preparation of a traffic control plan for intrusive movements of oversized loads crossing the Botwood Highway, and;
- consult with the Newfoundland and Labrador Department of Transportation and Infrastructure to understand all permits for work within public right of way that may be needed during construction and operation.

1.3 Study Methodology

Englobe staff completed a site visit to review existing conditions and set up a Miovision Scout camera to collect traffic volumes on the Botwood Highway on August 13, 2025. At this time pictures of road and related infrastructure condition including the asphalt surface, shoulders, pavement markings, utilities, signs and ditches were taken. The utility and sign locations, and road vertical and horizontal alignment was also documented. A MioVision camera was used to collect 24 hours of vehicle traffic in both northbound and southbound lanes of the Botwood Highway north of Water Street.

Using data collected during the site visit, and information provided by EVREC, infrastructure condition assessments and traffic analysis were completed. A traffic management plan for the construction and operational periods was developed to ensure safety of employees and the public. Potential deterioration of the road structure on the Botwood Highway (Route 350), at the Heavy Haul Road crossing was estimated based on design vehicle loads and anticipated traffic volumes.

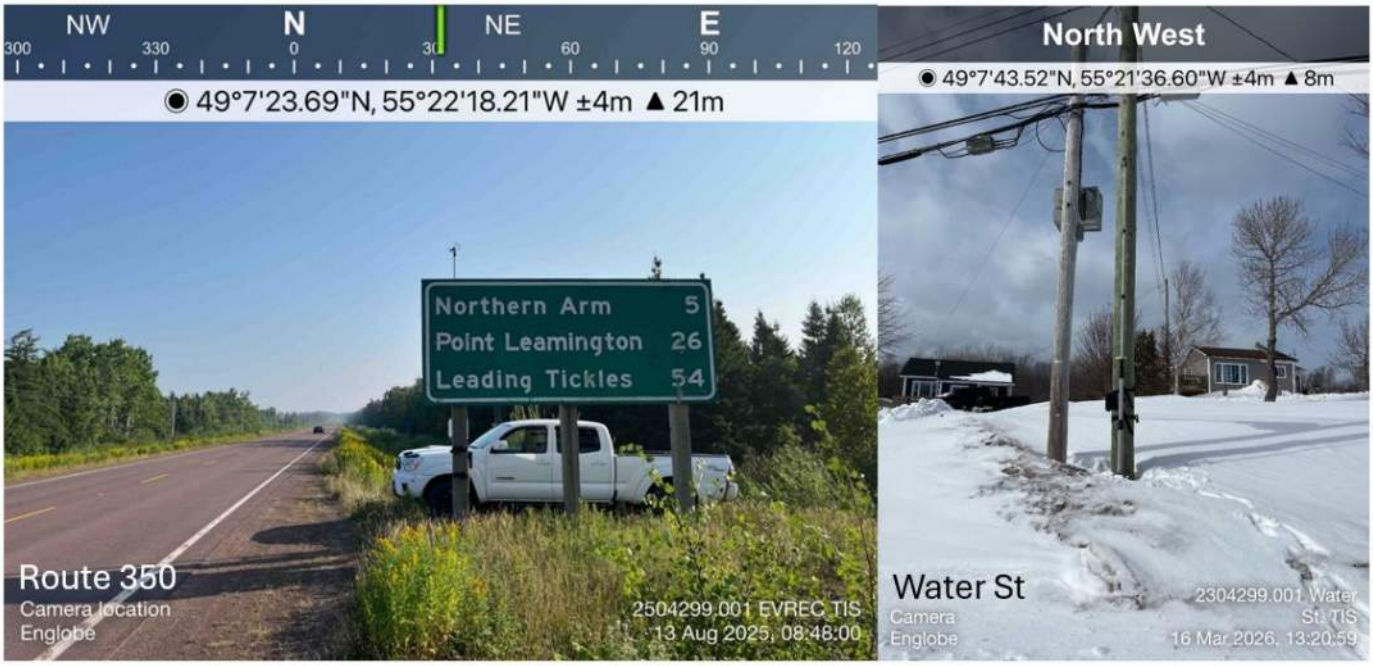
2 Data Collection

2.1 Traffic Count

A 24-hour count was collected to assess existing conditions on the Botwood Highway near the proposed crossing of the Heavy Haul Road. Data was collected on Wednesday, August 13, 2025, from 8:15 am to Thursday, August 14, 2025, at 8:15 am. A MioVision Scout camera was installed along the east side of the road on the back of an existing highway sign to count the number of vehicles over the 24-hour period.

In March 2026 the team also collected traffic data and measured sight distances along Water St at the intersection with the Heavy Haul Road. Pictures of the traffic count setup and the sight distances were collected at this time. The traffic count locations are shown in **Figure 3**

Figure 3. Traffic Count Locations



2.2 Highway Infrastructure

Englobe staff completed a site visit of Botwood Highway north of Water Street in the area where the Heavy Haul Road is expected to cross Botwood Highway. Existing conditions of the roadway, shoulder, and roadside infrastructure were reviewed. A field report was prepared that described the existing conditions. Pictures were collected and geotagged for reference and are included in **Annex D**. The highway infrastructure is reviewed in more detail in **Section 3** and the pavement deterioration is analyzed in **Section 6**.

3 Existing Conditions

3.1 Infrastructure Review

The study area for the overall site encompasses a very large area, as was shown previously in **Figure 1**. The main focus of the TIS and the existing infrastructure review was the port, the proposed Heavy Haul Road, and the crossing of Route 350, as shown previously **Figure 2**. Equipment being brought to the construction site will arrive at the Port of Botwood, be transported along the Heavy Haul Road until it crosses Route 350 and then continue along the Heavy Haul Road within the Green Energy Facility site. The Green Energy Hub is located near the main entrance to the overall Green Energy Facility site and serves as the Hydrogen and Ammonia production facility. During construction work will take place throughout the overall Green Energy Facility site, while during the operations phase the majority of activity will happen at the Green Energy Hub. This section provides a review of existing infrastructure that we expect could be impact by the construction and operation phases of the project.

3.1.1 Route 350

Botwood Highway (NL 350) is classified as an RCU-80 highway that provides access from Leading Tickles to the TransCanada Highway (Route 1) as shown in **Figure 4**. Botwood Highway is designated as a “protected road” per Protected Roads under the Urban and Rural Planning Act, 2000. The project’s Heavy Haul Road will intersect and cross the Botwood Highway in between Water St and Fernwood Dr where it has a posted speed limit of 80km/h.

Figure 4. Route 350

3.1.2 Water St

Water St is classified as an RLU50 and is the primary road leading into Botwood's Town Centre. The Heavy Haul Road will cross Water St just south of Parsleys Road, following the existing alignment of the Exploits Valley and Beothuk Trail. Water St connects to Route 350 south of the study area and terminates north of the study area at Church Rd. Water St operates as a local road and has gravel shoulders; a painted centerline and a posted speed limit of 40km/h. Englobe collected traffic volumes on Water St to determine the current vehicle volume characteristics and sight distances for the Heavy Haul Road crossing. Water St is shown in **Figure 5.**

Figure 5. Water Street

3.1.3 Heavy Haul Road

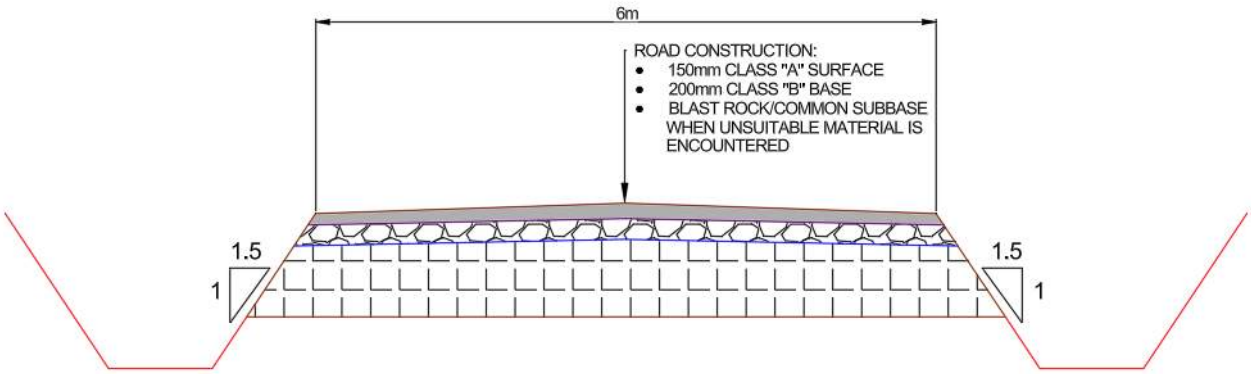
EVREC is proposing to construct a Heavy Haul Road that will connect the Port of Botwood to the Green Energy Facility. The Heavy Haul Road will be used to transport the majority of the equipment and materials that will be needed on the EVREC site. The use of a Heavy Haul Road is being proposed as it will help minimize conflicts with traffic on the existing road network and it will also reduce impacts to the existing transportation infrastructure in the area. The Heavy Haul Road will begin at the Port of Botwood and will be constructed on the Exploits Valley Beothuk Trail which runs parallel to Water Street. It will then cross Botwood Highway (Route 350) north of Water Street in the vicinity of Pumphouse Road. The proposed alignment of the Heavy Haul Road is shown in **Figure 6.** The Heavy Haul Road will cross Route 350 at an at-grade crossing and will continue to the west as the primary access into the EVREC site.

The proposed width of the Heavy Haul Road is 6 m, and the road will be constructed of 150 mm Class A surface and 200 mm Class B base material. Additional common subbase material will be added as required when unsuitable material is encountered. The proposed typical cross-section is shown below in **Figure 7**. Several shorter sections of the Heavy Haul Road will be widened from 6 m to 15 - 20 m to provide passing areas to allow smaller vehicles to pass wider speciality equipment during transport to the Green Energy Facility site.

It is also noted in the Newfoundland and Labrador Policy for Highway Access Management that commercial accesses from a provincial road are to have a maximum width of 15 m.

Figure 6. Heavy Haul Road Alignment

Figure 7. Heavy Haul Road Cross Section



3.1.4 Port of Botwood

The Port of Botwood is a deep-water access port located within the Town of Botwood. The port has served various industrial sectors for over 100 years. The port can accommodate vessels up to 385 meters and is shown below in **Figure 8**. The port is approximately 4 km away from the Green Energy Facility. Most materials and supplies will be received through the port of Botwood to minimize use of public roadways. Access from the Port to the EVREC site will be facilitated by the Heavy Haul Road.

Figure 8. Port of Botwood (Google Streetview)

3.1.5 Utilities

There are no visible underground infrastructures such as hydrants, manholes, or culverts. There are utility lines that run along the west side of Route 350. The Heavy Haul Road will pass beneath these utility lines. The grading plans for the proposed Heavy Haul Road show a fill of 3 meters on the west side of Route 350, as shown in **Figure 9**, and the Heavy Haul Road will be designed to match with the existing pavement elevation of Route 350.

The tallest vehicle that is expected to travel along the Heavy Haul Road is a truck carrying a turbine blade, which will have a total height of 5.4 m, as shown in **Figure 10** below. The height from the surface of Route 350 to the utility lines was not measured, but it was estimated as approximately 2.5m during the site visit. Therefore, there does not appear to be sufficient clearance for the design vehicle to pass beneath the lines.

The utility lines in this area are owned by Bell Aliant; therefore, it is recommended that EVREC engage with Bell Aliant to clarify required clearances to the utility lines and to confirm what modifications to the existing lines will be needed to accommodate the Heavy Haul Road.

It was also noted that North of the intersection with Route 350 and the Heavy Haul Road, existing resource roads connected to Route 350 are proposed to be upgraded for wind turbine sites. There is one additional access shown on the west side of Route 350 and two additional access shown on the east side of Route 350. Detailed site visits were not completed for these sites; however, it was noted upon reviewing client submitted plans, there are utility lines on the west side of Route 350 in these areas. It is recommended that the height of these utility lines be measured to confirm available clearances in consultation with Bell Aliant.

Figure 9. Heavy Haul Road Grading

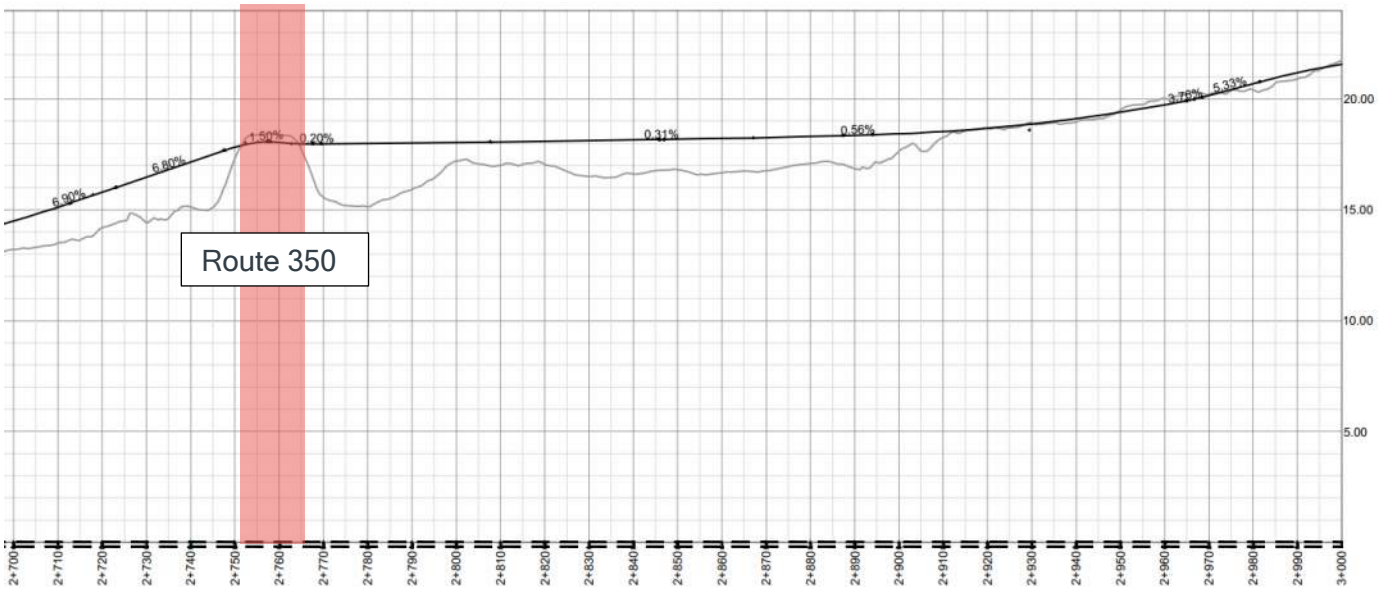
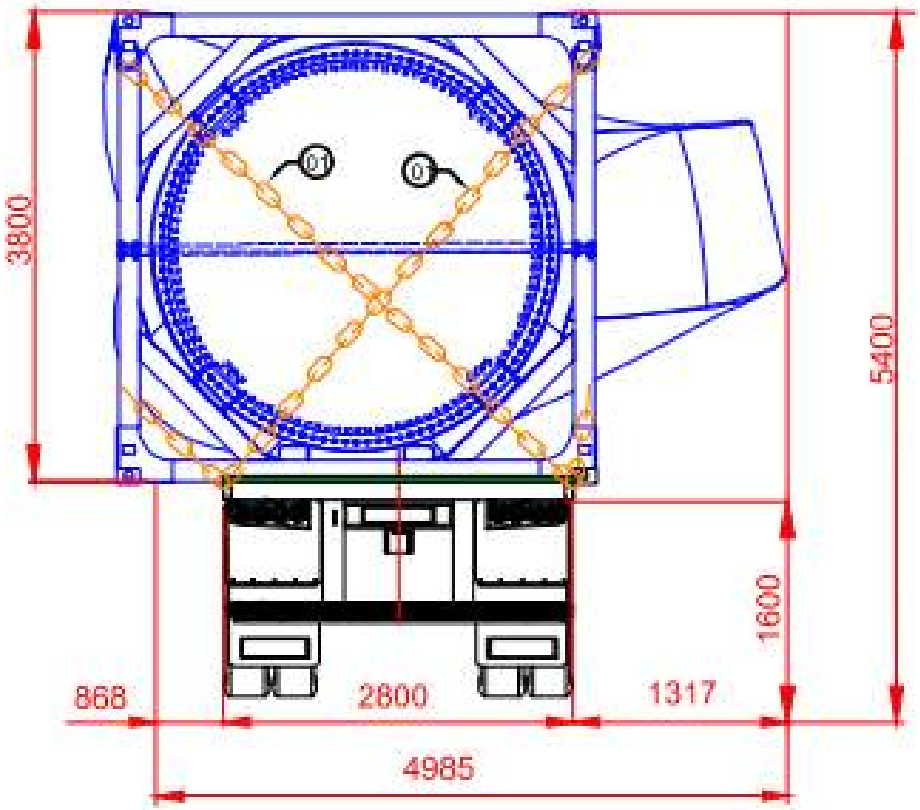


Figure 10. Design Vehicle Height

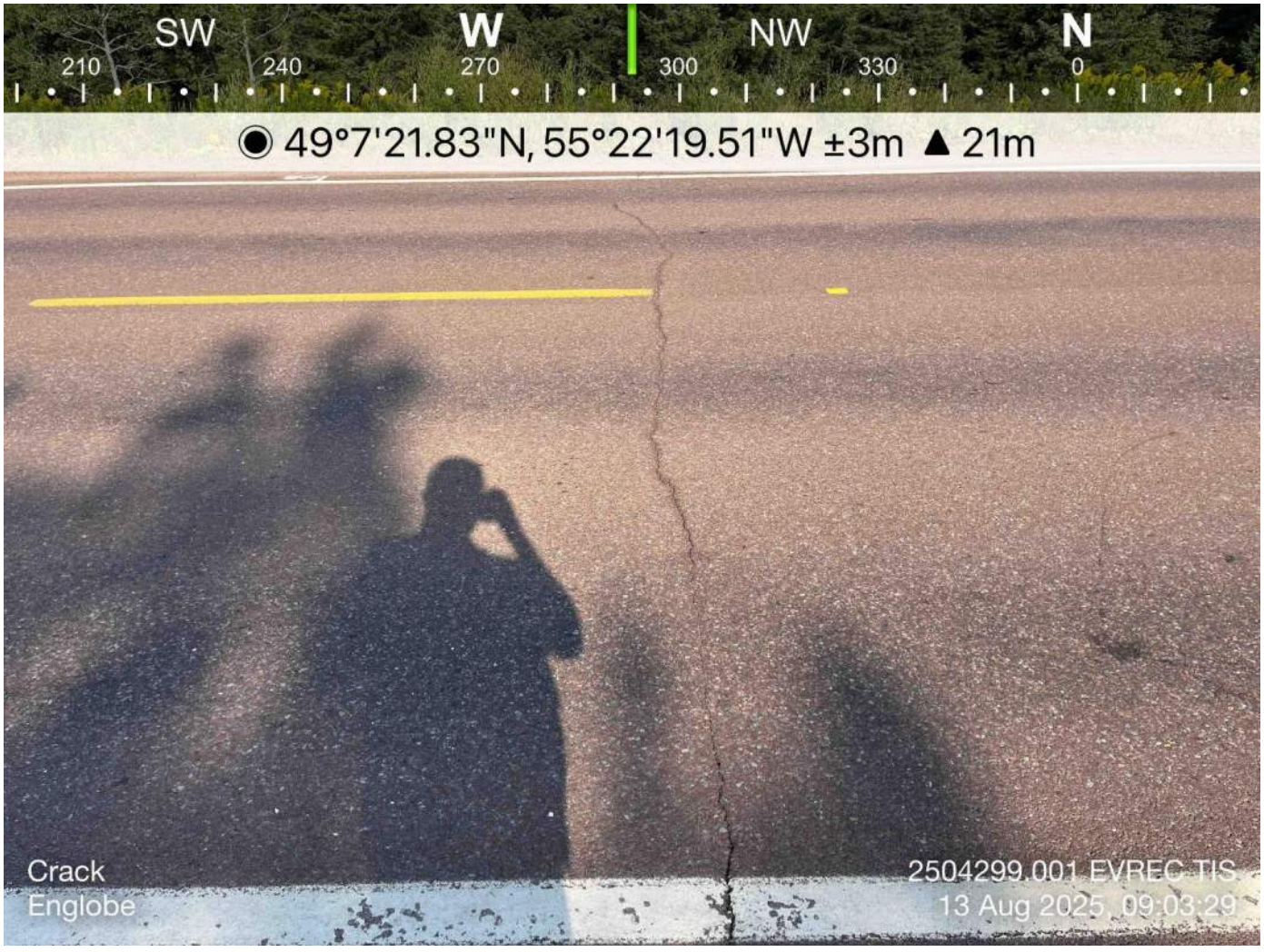


3.2 Infrastructure Condition

3.2.1 Route 350

During the site visit the team reviewed the existing conditions at the proposed intersection of the Heavy Haul Road and Route 350. There are no publicly owned bridges, culverts or overpasses along or around Route 350 that will be used by EVREC for the transportation of materials within the project area. The road surface's current condition was reviewed. Asphalt is in good condition, with minimal rutting and few cracks along the inspected segment. This section of Route 350 was resurfaced in 2019 with 50mm of surface course asphalt, over the existing roadway surface. Examples of the cracking (**Figure 11**) and rutting (**Figure 12**) are shown below.

Figure 11. Asphalt Cracks on Route 350



The crack shown in **Figure 11** is perpendicular to the travel lane and is a transverse crack. This type of crack is often due to asphalt shrinkage and not directly related to traffic load, but heavy traffic can worsen the condition of these cracks. Evidence of rutting was also noted on the highway; however, the rutting depth was not measured during the site visit.

The shoulder was also reviewed and observed to have an edge drop from the asphalt to the gravel shoulder. The exact height of the drop was not measured during the site visit. Sand was observed to

have accumulated on the shoulder and vegetation is growing on the gravel shoulder. The gravel shoulder is shown in **Figure 12**.

Figure 12. Travel Lanes on Route 350

4 Traffic Analysis

4.1 Existing Traffic Volumes

4.1.1 Route 350

Historical traffic counts were obtained from the Newfoundland and Labrador Department of Transportation and Infrastructure, however these counts were obtained in 2020 during the off season, showing lower values than the counts collected in August 2025 as part of this study. The following analysis was completed based on counts collected by Englobe in August 2025. The peak hour volumes on the Botwood Highway at the location of the data collection is summarized in **Table 1** below. The AM Peak Hour was 10:30 am - 11:30, while the PM Peak Hour was 3:30 - 4:30 pm for all vehicle classes. We did note that the heavy vehicles (transport trucks, dump trucks, buses) had different peak time. The heavy vehicles had peak hours from 9:15 - 10:15 am and 12:45 - 1:45 pm in both the southbound and northbound directions.

Table 1. Existing Route 350 Peak Hour Volumes

	Northbound	Southbound	2-way Total
AM Peak (10:30 - 11:30 AM)	107	147	254
PM Peak (3:30 pm - 4:30 PM)	200	140	340
Daily Total	1,904	1,873	3,777

The total two-way Average Daily Traffic (ADT) value for this Highway segment was 3,777 vehicles. The current percentage of heavy traffic on this segment is 3.6%. The Botwood Highway currently

experiences a level of service (LOS) A based of the 2022 Highway Capacity Manual. The volume to capacity ratio is significantly lower that the cut off for free flow conditions of a two-lane undivided 80km/h collector highway.

To better understand the average gap available between vehicles passing by the proposed crossing location of the Heavy Haul Road, the average gap by hour was calculated based on the hourly traffic volumes. The results are shown below in **Table 2**. The data indicates that during the busiest time of day the minimum average gap between vehicles would be 18 seconds. This indicates that there would be ample opportunity for large trucks to cross the highway.

Table 2. Existing Route 350 Hourly Volumes and Gaps

	Southbound Hourly Volume	Northbound Hourly Volume	Average Southbound Gap (sec)	Average Northbound Gap (sec)
12:00:00 AM	2	6	1800	600
1:00:00 AM	3	7	1200	514
2:00:00 AM	4	2	900	1800
3:00:00 AM	3	1	1200	3600
4:00:00 AM	10	3	360	1200
5:00:00 AM	44	10	82	360
6:00:00 AM	106	33	34	109
7:00:00 AM	126	57	29	63
8:00:00 AM	106	76	34	47
9:00:00 AM	116	78	31	46
10:00:00 AM	143	91	25	40
11:00:00 AM	146	102	25	35
12:00:00 PM	124	116	29	31
1:00:00 PM	124	150	29	24
2:00:00 PM	145	168	25	21
3:00:00 PM	139	187	26	19
4:00:00 PM	113	198	32	18
5:00:00 PM	83	149	43	24
6:00:00 PM	120	124	30	29
7:00:00 PM	79	136	46	26
8:00:00 PM	53	100	68	36
9:00:00 PM	43	52	84	69
10:00:00 PM	30	38	120	95
11:00:00 PM	11	20	327	180

4.1.2 Water Street

In March 2026 traffic volumes were collected on Water St. The existing traffic volumes were collected to determine the use of the heavy haul road for traffic strictly crossing the road to get to the EVREC site. The existing peak AM and PM vehicle volume hours start at 10:00 AM and 2:15 PM respectively. The AM, PM and daily totals for northbound and southbound traffic on Water St are shown in **Table 3**.

Table 3. Existing Water St Peak Hour Volumes

	Northbound	Southbound	2-way Total
AM Peak (10:00AM -11:00AM)	44	48	92

	Northbound	Southbound	2-way Total
PM Peak (2:15 PM -3:15 PM)	64	76	140
Daily Total	624	660	1284

To better understand the average gap available between vehicles passing by the proposed crossing location of the Heavy Haul Road, the average gap by hour was calculated based on the hourly traffic volumes. The results are shown below in **Table 4**. The data indicates that during the busiest time of day the minimum average gap between vehicles would be 53 seconds. This indicates that there would be an opportunity for large trucks coming to and from the port to cross Water St.

Table 4. Existing Water Street Hourly Volumes and Gaps

	Southbound Hourly Volume	Northbound Hourly Volume	Average Southbound Gap (sec)	Average Northbound Gap (sec)
6:30 AM	5	6	720	600
7:30 AM	22	26	164	138
8:30 AM	34	33	106	109
9:30 AM	34	35	106	103
10:30 AM	49	48	73	75
11:30 AM	51	33	71	109
12:30 PM	51	52	71	69
1:30 PM	62	64	58	56
2:30 PM	68	59	53	61
3:30 PM	49	52	73	69
4:30 PM	59	54	61	67
5:30 PM	34	42	106	86
6:30 PM	40	34	90	106
7:30 PM	32	32	113	113
8:30 PM	32	21	113	171
9:30 PM	7	13	514	277
10:30 PM	11	7	327	514
11:30 PM	5	4	720	900
12:30 AM	2	1	1800	3600
1:30 AM	1	1	3600	3600
2:30 AM	0	0	3600	3600
3:30 AM	1	2	3600	1800
4:30 AM	3	2	1200	1800
5:30 AM	1	2	3600	1800
6:30 AM	7	1	514	3600

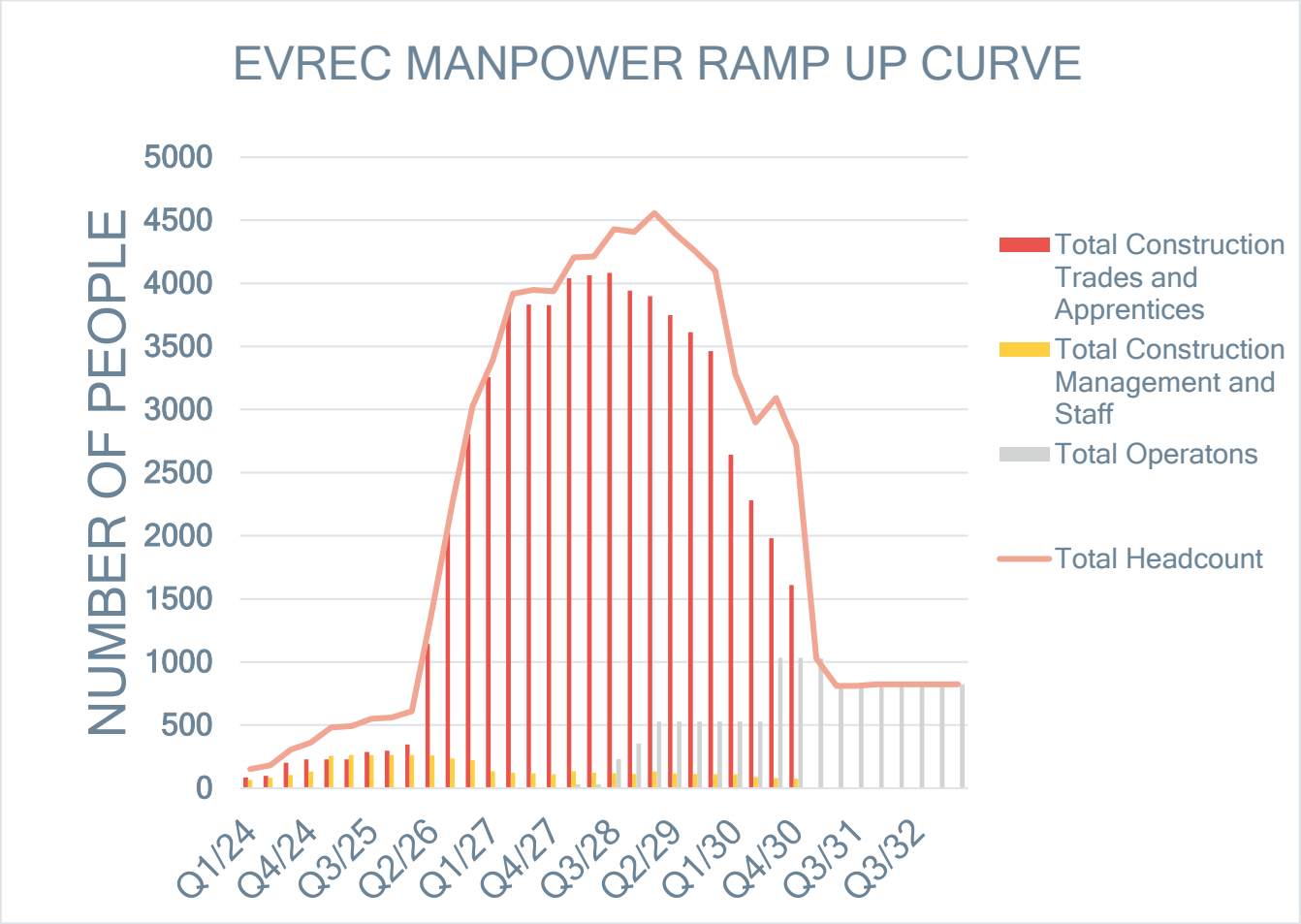
4.2 Future Construction Volumes

4.2.1 Personnel

During the construction phase of the project there will be a headcount of up to 4,000 personnel and during the operational phase a head count of 600 personnel. The majority of required personnel will be

housed on-site. The project is set to ramp up in 2027 with approximately 3,800 workers per day. During the construction phases there will be 2 shifts per day, in some circumstances 3 shifts. The construction shifts will be 7:00 am to 3:00 pm and 3:00 pm to 11:00 pm, and when required an overnight shift from 11:00 pm to 7:00 am. Construction workers will be hired locally as much as possible, however camps for workers to live in will be provided on the EVREC site. There are 5 camps associated with the project. The wind camp will function on 2 weeks in, 2 weeks out schedule with a Saturday turnaround day. The locations of the 5 camps were shown previously in **Figure 1.** Those working at the EVREC site but not within a camp such as management, will be housed in the surrounding communities. The increase in personnel for the construction phase of the project is shown in **Figure 13.**

Figure 13: Worker Requirements



Those who commute to the EVREC construction site will initially be encouraged to use a private vehicle, but as time progresses there could be a park-n-ride location set up off site where workers can park their vehicle and be transported by bus into the work sites, depending on needs. Other than the laydown areas at the Turbine Sites, there will be no other parking spaces provided.

4.2.2 Equipment Transportation

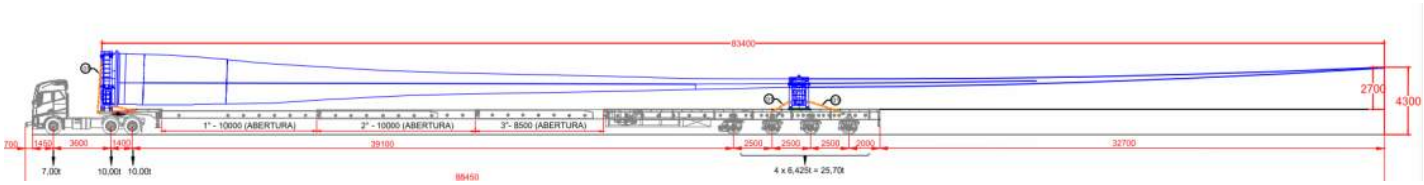
Equipment will be hauled to the EVREC site using the proposed Heavy Haul Road. The equipment brought to the site will be modular and assembled on location. When possible, smaller equipment will be sourced locally and transported on the existing road network where it will enter the Heavy Haul

Road at the new intersection with Route 350. The project will prioritize just-in-time delivery procedures to reduce congestion and storage requirements. Equipment will travel for the most part on the Heavy Haul Road, with some equipment from the local area traveling on sections of the public roads. Newfoundland's overweight and over dimensional special permits for a single trip allow a maximum vehicle weight of 70,000 kg, a maximum width and height of 4.88m and a maximum length of 35m. The design vehicle for this facility will be longer, wider and taller than these dimensions, as discussed in the next section.

4.2.2.1 Wind Turbine Transportation

The design vehicle for the transportation of equipment is a truck transporting a wind turbine blade, as shown below in **Figure 14**. The dimensions of the vehicle are 88.5m long, 4.99 m wide and 5.4 m tall. The design vehicle weighs 52,700kg. An excessive over dimension permit will be required to transport this vehicle as it is longer, wider and taller than the maximums identified in the overweight and over dimensional special permit.

Figure 14. Design Vehicle



4.2.2.1.1 HIGHWAY CROSSINGS OF ROUTE 350 AND WATER ST

There are 530 proposed turbine sites within the EVREC site. Each proposed turbine location has laydown areas for 3 blades, a hub, 5 tower sections, a nacelle, and a drive train. Each blade must be transported individually. Each component will require individual transport from the port to the site, requiring it to cross Route 350. The turbine transport vehicle plans are attached in **Annex C**. The total number of turbine related truck crossings expected on Route 350 as well as Water St is summarized below in **Table 5**.

Table 5 Turbine Related Truck Crossings at Route 350 and Water St

Turbine Blade	1,590
Hub	530
Nacelle	530
Drive Train	530
Tower sections	2,650
Overall Crossings	**5,830**

[1]data above are based on 530 turbine sites

Based on data provided the travel time from the Port of Botwood to the Green Energy Hub is 18 minutes. A 15% additional turnaround time was added for the roundtrip duration. Therefore, a round trip on the Heavy Haul Road from the Port of Botwood to the site will take approximately 40 minutes drive time in perfect conditions. Loading and unloading time was not factored into these calculations. The table below shows the maximum number of wind turbine related trips from the port to the site based off one truck and the ports work hours.

Table 6. Wind Turbine Related Trips from Port to EVREC Site

Maximum trips per day	18	weekdays	overtime
Maximum trips per day	12	weekdays	
Maximum trips per day	6	weekends	
Maximum trips per day	12	weekends	overtime

There is substantial capacity for the increase in traffic volumes on Route 350. Resource roads (Heavy Haul Roads) are not uncommon on Route 350 as there is an existing resource road connection to Route 350 south and north of the proposed Heavy Haul Road. There will be an estimated 5,830 turbine related oversized loads transported across Route 350 on the proposed Heavy Haul Road. The anticipated vehicle hourly volumes on Route 350 are shown in **Table 7**, the average gaps between vehicles vary throughout the 24 hour period averaging during the day around 30 seconds between vehicles with gaps as low as 17 seconds during peak hour volumes.

Table 7. Route 350 Projected 2027 (Construction Period) Traffic Volumes

	Southbound Hourly Volume	Northbound Hourly Volume	Southbound Gap (sec)	Northbound Gap (sec)
12:00:00 AM	2	6	1731	577
1:00:00 AM	3	7	1154	495
2:00:00 AM	4	2	865	1731
3:00:00 AM	3	1	1154	3462
4:00:00 AM	10	3	346	1154
5:00:00 AM	46	10	79	346
6:00:00 AM	148	62	23	47
7:00:00 AM	194	87	21	36
8:00:00 AM	110	79	33	46
9:00:00 AM	121	81	30	44
10:00:00 AM	149	95	24	38
11:00:00 AM	152	106	24	34
12:00:00 PM	129	121	28	30
1:00:00 PM	129	156	28	23
2:00:00 PM	151	175	24	21
3:00:00 PM	195	244	25	19
4:00:00 PM	118	206	31	17
5:00:00 PM	86	155	42	23
6:00:00 PM	125	129	29	28
7:00:00 PM	82	141	44	25
8:00:00 PM	55	104	65	35
9:00:00 PM	45	54	81	67
10:00:00 PM	31	40	115	91
11:00:00 PM	11	21	315	173

Based on the existing volumes collected on Water St in Botwood, the table below shows the southbound and northbound traffic and associated gaps projected for the 2027 construction period. The smallest gap based on 2026 traffic was just above 50 seconds, with the growth in traffic volumes the smallest average gap reduced to 48 seconds at 2:30 pm. All movements at the intersection of Water St and the Heavy Haul Road will be through movements, so turning movements were not analyzed. An average of two trucks per hour were used as a baseline for Heavy Haul Road through traffic, based on round-trip travel time to the site from the port.

Table 8. Water Street Projected 2027 (Construction Period) Traffic Volumes

	Southbound Hourly Volume	Northbound Hourly Volume	Southbound Gap (sec)	Northbound Gap (sec)
12:00:00 AM	6	7	655	545
1:00:00 AM	24	29	149	126
2:00:00 AM	37	36	96	99
3:00:00 AM	37	39	96	94
4:00:00 AM	54	53	67	68
5:00:00 AM	56	36	64	99
6:00:00 AM	56	57	64	63
7:00:00 AM	68	70	53	51
8:00:00 AM	75	65	48	55
9:00:00 AM	54	57	67	63
10:00:00 AM	65	59	55	61
11:00:00 AM	37	46	96	78
12:00:00 PM	44	37	82	96
1:00:00 PM	35	35	102	102
2:00:00 PM	35	23	102	156
3:00:00 PM	8	14	468	252
4:00:00 PM	12	8	298	468
5:00:00 PM	6	4	655	818
6:00:00 PM	2	1	1636	3273
7:00:00 PM	1	1	3273	3273
8:00:00 PM	1	1	3600	3600
9:00:00 PM	1	2	3273	1636
10:00:00 PM	3	2	1091	1636
11:00:00 PM	1	2	3273	1636

4.2.3 Projected Intersection Volumes

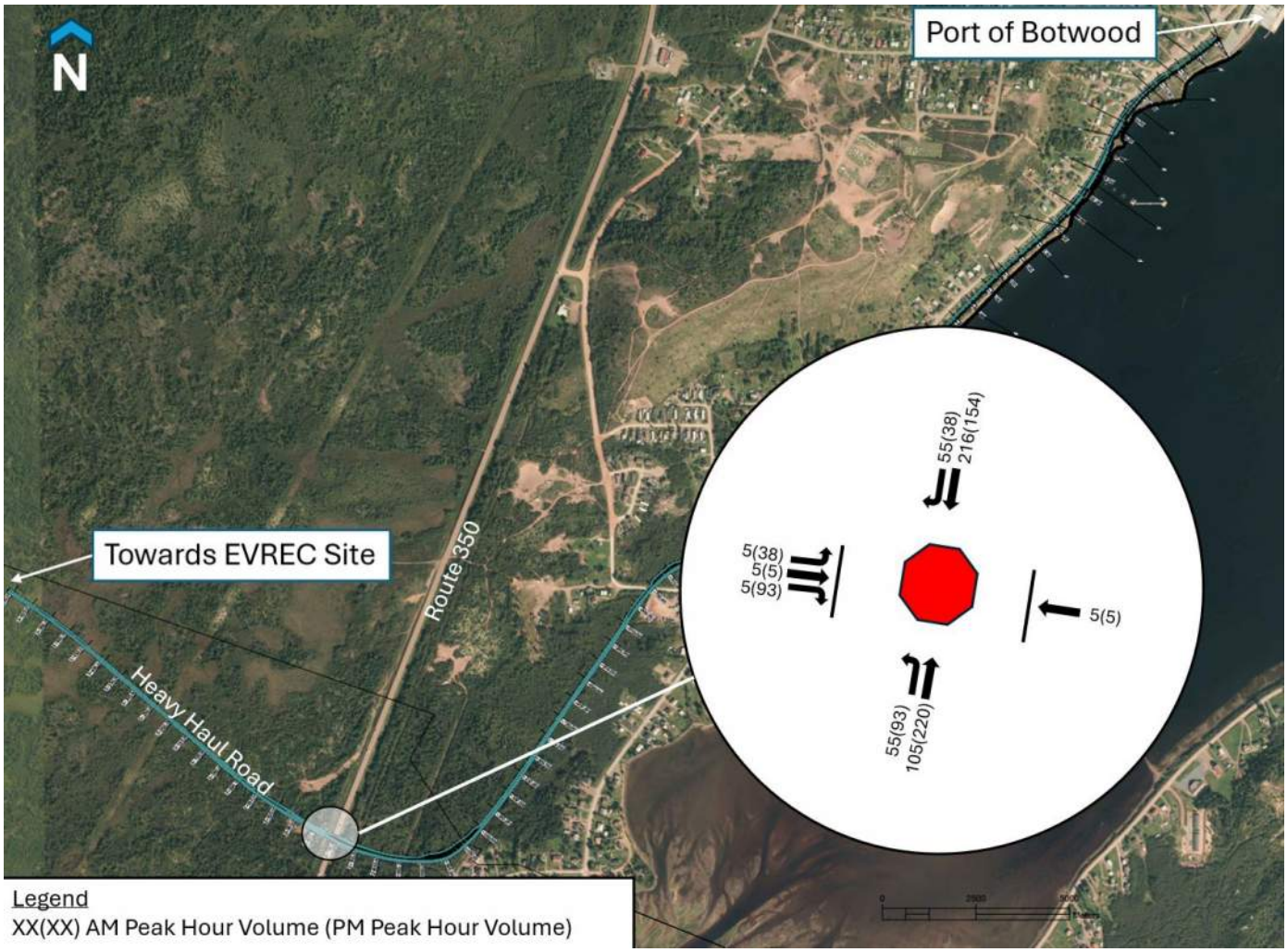
As a result of the projected number of workers entering and exiting the EVREC site, the AM Peak hour is expected to shift from 10:30 – 11:30 am to 6:30 – 7:30 am. Future analysis of peak hours uses the 6:30 -7:30 am period as the AM Peak hour and 3:30-4:30 as the PM Peak hour. Using the existing traffic volumes on Route 350 and the expected traffic that will be generated by the Green Energy Facility, the projected AM and PM peak hour traffic volumes at the intersection of Route 350 and the Heavy Haul Road were estimated. The additional movements generated entering and exiting the Heavy Haul Road to the Green Energy Hub were classified into workers, managers and trucks in **Table 9**.

Table 9. Projected Site Driveway Volumes

	AM Peak (6:30 am-7:30am)		PM Peak (3:30pm-4:30pm)	
	Entering	Exiting	Entering	Exiting
Workers	35	5	35	35
Management	75	2	75	75
Trucks	2	2	2	2
Total	112	9	112	112

The turning movement volumes at the intersection of Route 350 and the Heavy Haul Road are displayed below in **Figure 15**.

Figure 15. Route 350 @ Heavy Haul Road Traffic Volumes

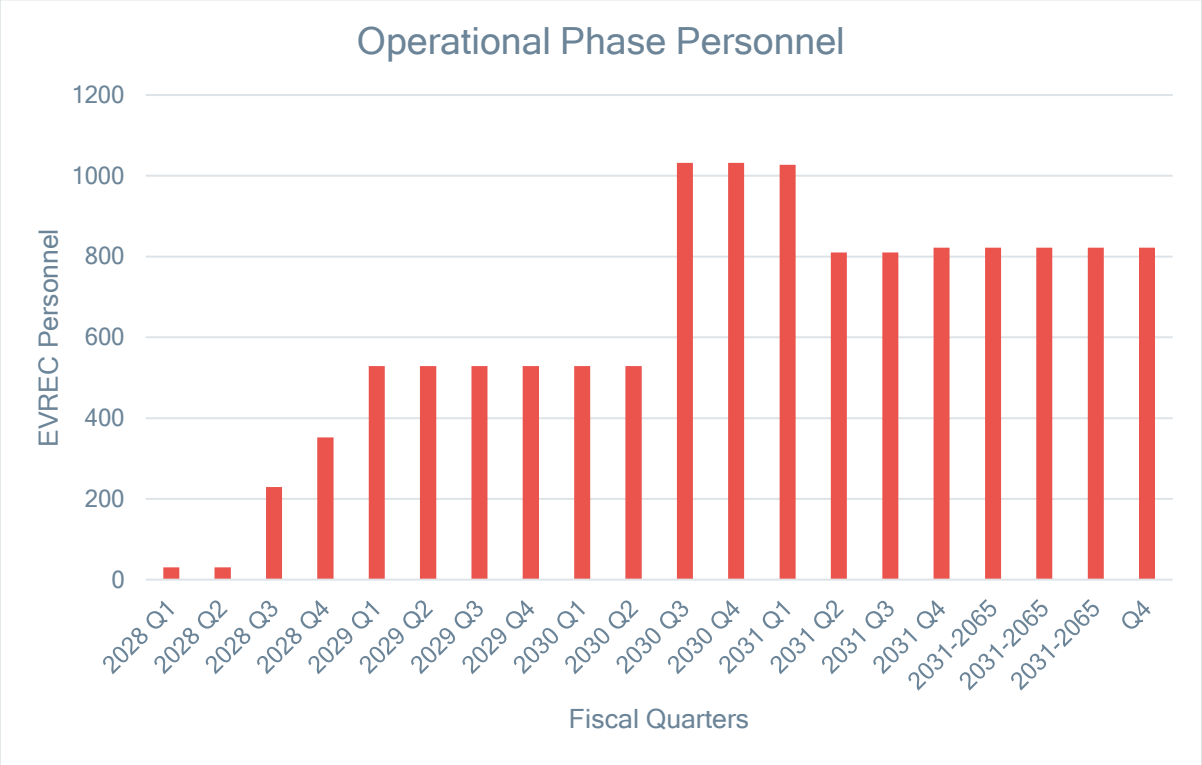


4.3 Future Operations Volumes

4.3.1 Personnel

The future EVREC operations primarily take place at the Green Energy Hub shown in **Figure 2**. The workforce decreases after construction as seen in **Figure 13** . There will be around 150 management personnel living off site within existing communities, they will be working 10 hours a day 5 days a week with no night shift requirements. The graph in **Figure 13** below shows the number of personnel throughout the duration of the project. Once the construction of both the windfarms and ammonia plants and their surrounding infrastructure are completed, the total operational head count will peak around 1020 workers in 2030 and 2031 before reducing to approximately 825 workers from 2031-2065. The majority of workers will be living on site, with some management living in the surrounding towns. There is rotational work at the Green Energy Hub so each rotation will average 509 personnel during 2031 through to 2065. The operational personnel count by quarter is shown in **Figure 16**.

Figure 16. Operational Phase Worker Count



4.3.2 Projected Operations Volumes

In 2030, operations for the Green Energy Hub begin to add vehicle volumes on Route 350, however the number of construction related vehicles will decrease. The increased entering and exiting trips at the intersection of Route 350 and the Heavy Haul Road as a result of completed build out are estimated to be 150 (management). The trips will mostly comprise of light vehicles with the exception of repairs and maintenance of equipment within the EVREC site. The Projected traffic volumes in 2030 can be seen in **Table 10.**

Table 10. Route 350 Projected 2030 (Operations Period) Traffic Volumes

	Southbound Hourly Volume	Northbound Hourly Volume	Southbound Gap (sec)	Northbound Gap (sec)
12:00:00 AM	2	7	1636	545
1:00:00 AM	3	8	1091	468
2:00:00 AM	4	2	818	1636
3:00:00 AM	3	1	1091	3273
4:00:00 AM	11	3	327	1091
5:00:00 AM	48	11	74	327
6:00:00 AM	127	36	23	47
7:00:00 AM	164	67	21	36
8:00:00 AM	117	84	31	43
9:00:00 AM	128	86	28	42
10:00:00 AM	156	90	23	36
11:00:00 AM	161	112	22	32
12:00:00 PM	136	128	26	28
1:00:00 PM	136	165	26	22
2:00:00 PM	160	185	23	19
3:00:00 PM	173	226	24	18
4:00:00 PM	124	218	29	17
5:00:00 PM	91	164	39	22
6:00:00 PM	132	136	27	26
7:00:00 PM	87	150	41	24
8:00:00 PM	58	110	62	33
9:00:00 PM	47	57	76	63
10:00:00 PM	33	42	109	86
11:00:00 PM	12	22	298	164

During operation there would be little to no traffic on the Heavy Haul Road crossing Water St. The product from the Green Energy Hub will be transported to the port via pipeline. The liquid ammonia stored at the Green Energy Hub will be piped to the Port via an underground ammonia pipeline. For this reason, the product transfer will not contribute to vehicle traffic on Water St and other public roadways.

5 Traffic Management Plan

This section outlines the future traffic conditions resulting from this project and recommendations to reduce the risk to the public as a result of construction and operational phases.

5.1 Future Intersection LOS

A Synchro model of the Heavy Haul Rd intersection was created to analyze the level of service of each approach at the intersection. Each approach was modeled with a single lane accommodating all left, right and through movements and it was assumed that stop control would be present on the Heavy Haul Road while the Route 350 approaches would remain free flow. The Synchro results indicate that the maximum delay is expected on the westbound approach of the Heavy Haul Road during the PM Peak (3:30 – 4:30 pm). The delay and LOS results for all approaches are outlined in **Table 11**. A printout of the Synchro model is attached in **Annex B**. Because the intersection maintained an acceptable level of service during construction, and traffic volumes are expected to decrease during the operational phase, no additional LOS modeling was deemed necessary.

Table 11. Intersection LOS

Intersection			Overall LOS	Movement LOS // Average Delay (sec/veh) // 95th Percentile Queue (m)											
				Eastbound			Westbound			Northbound			Southbound		
Main Street @ Minor Street	Traffic Control	Peak Period		L	T	R	L	T	R	L	T	R	L	T	R
Route 350/ Heavy Haul Road	STOP	AM	A	B 10.9 1.4			B 11.8 0.2			A 1.0 0.3			A 0.0 0.0		
		PM	A	B 13.2 7.9			**C** **15.7** **2.9**			A 2.9 2.1			A 0.0 0.0		

5.2 Intersection Considerations

Overweight and oversized loads need limited use of the public roads, and using the just in time scheduling previously discussed, road crossings can be scheduled to reduce crossings during peak hour traffic. Public road crossings should be avoided during shift changes during the afternoon peak hour from 3:30 to 4:30. Newfoundland and Labrador's Department of Transportation has a Traffic Control Manual revised in 2018, detailing methods of traffic control required when working on public roadways. Because the Heavy Haul Road will have large and oversized loads travelling across Route 350, a minimum stopping sight distance of 155 m prior to the intersection is recommended by the Transportation Association of Canada (TAC). It is recommended to install static warning signs in advance of the proposed intersection to alert vehicles on Route 350 of trucks entering the roadway. It is also recommended the client considers placing signs alerting truck drivers of an intersection ahead on the Heavy Haul Road.

Figure 17. TAC Stopping Sight Distances (TAC, 2017)

Design Speed (km/h)	Stopping Sight Distances (m) for Automobiles and Trucks
40	60 - 70
50	85 - 110
60	105 - 130
70	135 - 180
80	155 - 210
90	190 - 265
100	235 - 330

Because trucks could be crossing Route 350 or Water Street in the dark it is advised to consider illumination at the intersections of Route 350 and Water St with the Heavy Haul Road. There are two existing lit intersections along Route 350, 1 light at the Water Street intersection and 1 light at the Valley Road intersection on Route 350. The Newfoundland and Labrador Department of Transportation and Infrastructure does not have a highway lighting specification section within the Highway Specifications Book. However, the Newfoundland and Labrador Highway Access Policy states that "The illumination needs required as a result of proposed geometric improvements to accommodate the proposed development shall be assessed in accordance with TAC Guide for Illumination of Isolated Rural Intersections and TAC Guide for the Design of Roadway Lighting". The added illumination would allow better visibility in darker months (November- January).

A Transportation Association of Canada (TAC) Traffic Signal Warrant was completed to determine if the intersection of Route 350 and the Heavy Haul Road required traffic signals. The intersection was assumed to have zero pedestrian traffic in this analysis. The analysis found that signals were not warranted at this intersection. The score of the intersection was 25 points out of 100 possible points, much lower than the threshold for a signalized intersection. The traffic signal warrant analysis is attached in **Annex E**.

5.3 Water St and Heavy Haul Road Sight Distance

During a site visit in March 2026, Englobe measured sight distances at the proposed heavy haul road crossing on Water St. There is an existing trail that will be converted to the heavy haul road, so the sight distances were measured to and from the existing trail. The trucks will cross Water St on their way to and from the Port on their way to the EVREC site. According to the TAC Geometric Design

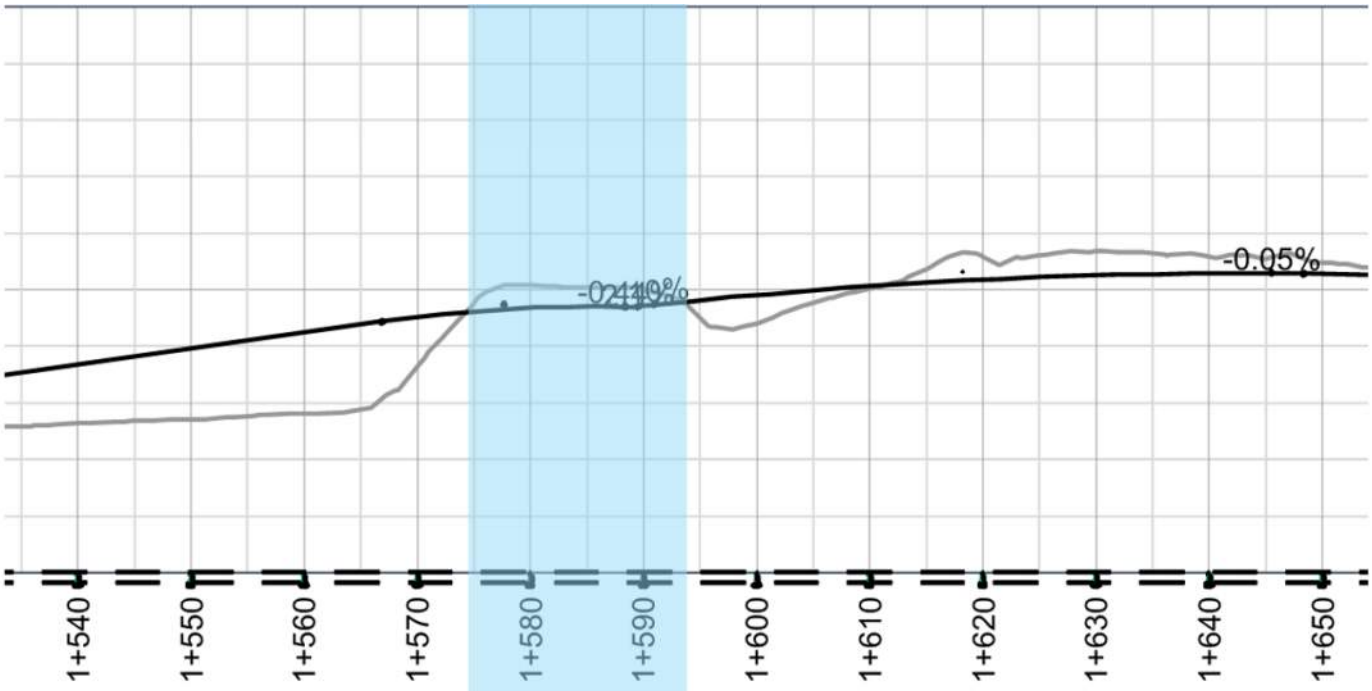
Guide Chapter 9, the required time gap for a combination truck to cross the road is 10.5 seconds. Based on a target height of 0.6m and the design speed of Water St being 50 km/h, the intersection sight distance (ISD) required would be 150 m. There is sufficient intersection sight distance on the eastbound approach (towards the port), but when vehicles are traveling westbound (away from the port) there is insufficient intersection sight distance to make the crossing maneuver. The stopping sight distance (SSD) calculated based on the TAC Geometric Design Guide Chapter 2 was 65 m and was sufficient on both northbound and southbound approaches. The desired and actual measured intersection sight distances are shown in **Table 12**.

Table 12. Water St Crossing Truck Sight Distances

		TAC Recommended			Achieved	
	Direction	Desired ISD (m)	Desired SSD (m)	Available Sight Distance (m)	ISD	SSD
Truck Crossing Movement	North	150	65	85	NO	YES
	South	150	65	192	YES	YES

The road profile for the future Heavy Haul Road crossing at Water St is shown in **Figure 18** below. The chainage of the intersection with Water St occurs at 1+575 to 1+595. The proposed elevation of the heavy haul road is below the existing road surface of Water Street, which means Water Street will have to be regraded approximately 0.4 m lower than its current elevation. It is recommended that the approaches of Water Street also be regraded back far enough (approximately 80 m to the north) to reduce the vertical curve north of the intersection and provide sufficient sight distance to the crossing.

Figure 18. Water St Intersection Grade



6 Pavement Deterioration

This section develops projections for pavement deterioration as a result of oversized loads, and construction equipment crossing Route 350.

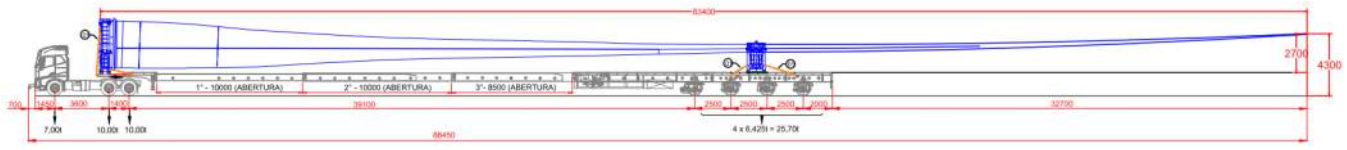
6.1 Heavy Vehicles

Based on the current conditions of Route 350 previously described in the infrastructure condition assessment the impact of heavy vehicles can be determined. The vehicles used as a result of the EVREC project will vary between passenger vehicles to transport trucks hauling oversized loads.

6.1.1 Design Vehicle

The design vehicle for the Heavy Haul Road is a transport truck responsible for transporting the turbine blades. The weight of the vehicle is shown in the figure below. The other vehicles and loads used in the calculation of total ESALs can be found in **Annex C**.

Figure 19. Design Vehicle Weight by Axle



There are 530 wind turbine sites within the EVREC project area. Each blade requires its own oversized truck for transport. The trips required to deliver equipment to the sites are shown previously in **Table 5**.

6.2 Equivalent Single Axle Load

The equivalent single axle loads (ESALs) for the Route 350 and Heavy Haul Road crossings describes the force that is applied to the road during each crossing in terms of an equivalent single axle load. The structural number and terminal serviceability were assumed to be 3.0 and 2.5 respectively. Based on the drawings submitted by the client, there are 9 different load combinations to be used for the delivery vehicles. The load from each truck is broken down into three components, the steering axle, the tractor tandem axle and the trailer single axle. All trailer axles are assumed to be singles for a more conservative approach. The three axle types all feature varying loading conditions based on the components being transported. Based on the road information received from the client and the assumptions stated above the ESALs were calculated and are shown in **Table 13** below for each design vehicle.

Table 13. Wind Turbine Design Vehicle ESAL Calculations

Equipment Type	Steering LEF	Tandem LEF	Total Trailer LEF	ESALs per vehicle	Trips per vehicle	Total ESALs
1. Tower section 1	0.334	1.61	56.108	58.05	530	30,767
2. Tower section 2	0.191	1.61	47.017	48.82	530	25,875
3. Tower section 3	0.741	4.739	0.633 130.08	136.19	530	72,181
4. Tower section 4	0.334	2.003 3.098	8.651	14.09	530	7,468
5. Tower section 5	0.175	0.784 1.196	8.273	10.43	530	5,528
6. Drive Train	0.741	4.449	32.402	37.59	530	19,923
7. Hub	0.175	0.251 1.61	8.032	10.07	530	5,337
8. Nacelle	0.334	0.794	7.092	8.22	530	4,357
9. Blade	0.576	3.0195	1.679	5.27	1590	8,379
Total ESALs	**179,813**					

The total number of trucks passing over Route 350 was based off the number of turbine sites and the other infrastructure constructed on the EVREC site. Loads 1-8 are each required once for each turbine site, while there are 3 blades required for each turbine site. The total turbine crossing related load on Route 350 is predicted to be **179,813 ESALs** over 2 years. The estimated design life of Route 350 is 920,000 ESALs. The increase in ESALs represents a 20% reduction of the highways planned life. We recommend that the asphalt condition be monitored during the construction phase and the surface be re-paved if necessary to address any asphalt deterioration that does occur during the construction or operations phases.

7 Construction Permitting

According to the Newfoundland and Labrador provincial website, Route 350 is a Protected Road. Protected Roads are subject to zoning under a municipality's development regulations, as the Heavy Haul Road runs through the municipal planning area of Botwood. The municipality development regulations state:

- No vehicular access shall be closer than 10 m to the street line of a street intersection of a local road, or 20 m to the street line of a street intersection in the case of a collector or arterial road.
- "All access to a provincial highway is determined by the Department of Transportation and Infrastructure" (Note: access permits are administered by Service NL).

The Newfoundland and Labrador Department of Transportation and Infrastructure (NLDTI) confirmed a Highway Access Permit is required.

Permits will outline conditions to be complied with and can include the need for sureties and the like depending on the scope. A Highway Access Permit could require engineered designs depending on the nature of the access. The designs would need to be submitted to the NLDTI Highway Design division for review. Any work, regardless of type that involves the Department's right of ways require permits from NLDTI. This project is considered a Commercial Access according to NLDTI Specifications Book Division 11. The minimum distance of 80 m between commercial accesses on all arterial roads and on collector or local roads with a posted speed limit greater than 60 km/hr is required. **The proposed development access location meets the requirements for sight distance and access spacing.**

8 Conclusions and Recommendations

Based on the findings of the study, the following conclusions and recommendations are provided to help mitigate potential impacts:

Existing conditions

- Upon review there are no structures, or signs that may conflict with the movement of oversized and overweight loads. However, there are utility lines above of the west leg of the proposed intersection. It is recommended to communicate with the owner of the utility lines to confirm next steps and ensure sufficient clearance is available to accommodate the design vehicle.
- Traffic counts were collected on Route 350 near Water St in Botwood, that confirmed it currently functions with free-flowing traffic, and no delay.

Condition Assessment

- A pavement condition assessment and drainage infrastructure confirmed the drainage of Route 350 is satisfactory. The pavement has minor existing rutting and cracking.

Traffic Analysis

- Route 350 will continue to operate efficiently with the addition of the intersection with the Heavy Haul Road.
- The LOS for the proposed intersection is A, and the highest delay occurs at 3:30 when shift change coincides with the existing afternoon peak hour traffic volume. It is recommended to schedule overweight and oversized load crossings outside the Am and PM peak hours.

Traffic Management Plan

- A signal warrant was completed for the intersection, and it found that the intersection does not require a traffic signal. If trucks are crossing Route 350 during periods with short average gaps between cars it is recommended to have flaggers stop traffic and allow the trucks to cross.

- It was determined that the average gap in traffic between vehicles traveling on Water St are sufficient to accommodate crossings on the Heavy Haul Road. Flaggers could still be considered to temporarily stop traffic for crossings that occur during peak periods.
- It is recommended to add vehicle crossing roadway signs in advance of the Heavy Haul Road intersections, to warn drivers of crossing vehicles.
- It is recommended that intersection lighting be added at the intersections with the Heavy Haul Road to illuminate the intersection at night. Intersection lighting is present at other nearby intersections on Route 350 in the area.
- It is recommended that utility providers be consulted to confirm clearance requirements to the existing utility infrastructure along Route 350 near the access points.
- There is sufficient stopping sight distance on northbound and southbound approaches and intersection sight distance on the eastbound approach. There is insufficient intersection sight distance on the westbound approach.
- It is recommended that the Water Street crossing should be regraded when the Heavy haul road is built to increase sight distance on the westbound approach on the Heavy Haul Road.

Pavement deterioration

- The oversized/overweight loads are expected to reduce the pavement lifespan by 20% at the Heavy Haul Road and Route 350 intersection. It is recommended that pavement surface at the intersection be monitored during construction and re-paved if deterioration does occur.

Construction and permitting

- The proposed development access location meets the requirements for sight distance and access spacing.
- The Newfoundland and Labrador Department of Transportation and Infrastructure confirmed a Highway Access Permit is required.

Annex A Traffic Volumes

Englobe Corp Moncton (NB)
1234 Place

Omaha, Alabama, United States 12345
506-857-2777 abigail.cartwright@englobecorp.com

Count Name: EVREC
Site Code:
Start Date: 08/13/2025

Direction (Southbound)

Start Time	Lights	Other Vehicles	Total
8:15 AM	26	1	27
8:30 AM	25	1	26
8:45 AM	30	0	30
9:00 AM	28	2	30
9:15 AM	18	1	19
9:30 AM	34	1	35
9:45 AM	26	6	32
10:00 AM	17	3	20
10:15 AM	31	4	35
10:30 AM	43	4	47
10:45 AM	40	1	41
11:00 AM	26	2	28
11:15 AM	30	1	31
11:30 AM	43	4	47
11:45 AM	39	1	40
12:00 PM	30	1	31
12:15 PM	29	2	31
12:30 PM	27	1	28
12:45 PM	30	4	34
1:00 PM	23	0	23
1:15 PM	40	3	43
1:30 PM	30	4	34
1:45 PM	23	1	24
2:00 PM	23	0	23
2:15 PM	46	0	46
2:30 PM	43	0	43
2:45 PM	32	1	33
3:00 PM	34	1	35
3:15 PM	29	0	29
3:30 PM	34	1	35
3:45 PM	40	0	40
4:00 PM	39	1	40
4:15 PM	24	1	25
4:30 PM	28	2	30
4:45 PM	17	1	18
5:00 PM	31	0	31
5:15 PM	16	1	17
5:30 PM	16	0	16
5:45 PM	19	0	19

6:00 PM	29	0	29
6:15 PM	28	0	28
6:30 PM	21	0	21
6:45 PM	42	0	42
7:00 PM	22	0	22
7:15 PM	20	0	20
7:30 PM	16	0	16
7:45 PM	21	0	21
8:00 PM	16	0	16
8:15 PM	11	0	11
8:30 PM	12	0	12
8:45 PM	14	0	14
9:00 PM	9	1	10
9:15 PM	12	0	12
9:30 PM	7	0	7
9:45 PM	14	0	14
10:00 PM	9	0	9
10:15 PM	9	0	9
10:30 PM	5	0	5
10:45 PM	7	0	7
11:00 PM	2	0	2
11:15 PM	3	0	3
11:30 PM	2	0	2
11:45 PM	4	0	4
08/14/2025 12:00 AM	0	0	0
12:15 AM	2	0	2
12:30 AM	0	0	0
12:45 AM	0	0	0
1:00 AM	1	0	1
1:15 AM	1	0	1
1:30 AM	0	0	0
1:45 AM	1	0	1
2:00 AM	1	0	1
2:15 AM	2	0	2
2:30 AM	0	0	0
2:45 AM	1	0	1
3:00 AM	0	0	0
3:15 AM	0	0	0
3:30 AM	2	0	2
3:45 AM	1	0	1
4:00 AM	1	0	1
4:15 AM	2	0	2
4:30 AM	1	1	2
4:45 AM	5	0	5
5:00 AM	8	0	8
5:15 AM	9	0	9
5:30 AM	9	1	10
5:45 AM	17	0	17
6:00 AM	18	0	18
6:15 AM	16	1	17
6:30 AM	39	1	40
6:45 AM	30	1	31

7:00 AM	47	1	48
7:15 AM	24	3	27
7:30 AM	29	0	29
7:45 AM	22	0	22
8:00 AM	23	0	23
8:15 AM	0	0	0
Total	1806	67	1873
Total %	96.4	3.6	100.0
AM Times	10:30 AM	9:15 AM	10:30 AM
AM Peaks	139	11	147
PM Times	3:30 PM	12:45 PM	3:30 PM
PM Peaks	137	11	140

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1234 Place

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Count Name: EVREC
Site Code:
Start Date: 08/13/2025

Direction (Northbound)

Start Time	Lights	Other Vehicles	Total
8:15 AM	21	1	22
8:30 AM	15	1	16
8:45 AM	14	2	16
9:00 AM	18	0	18
9:15 AM	15	6	21
9:30 AM	17	2	19
9:45 AM	16	4	20
10:00 AM	14	3	17
10:15 AM	19	1	20
10:30 AM	31	1	32
10:45 AM	20	2	22
11:00 AM	22	2	24
11:15 AM	27	2	29
11:30 AM	23	2	25
11:45 AM	21	3	24
12:00 PM	34	2	36
12:15 PM	21	0	21
12:30 PM	31	0	31
12:45 PM	28	0	28
1:00 PM	41	2	43
1:15 PM	39	1	40
1:30 PM	32	2	34
1:45 PM	32	1	33
2:00 PM	31	0	31
2:15 PM	38	4	42
2:30 PM	41	2	43
2:45 PM	50	2	52
3:00 PM	42	0	42
3:15 PM	47	0	47
3:30 PM	38	3	41
3:45 PM	54	3	57
4:00 PM	47	0	47
4:15 PM	54	1	55
4:30 PM	39	1	40
4:45 PM	56	0	56
5:00 PM	56	0	56
5:15 PM	35	0	35
5:30 PM	29	0	29
5:45 PM	29	0	29

6:00 PM	20	1	21
6:15 PM	40	0	40
6:30 PM	32	0	32
6:45 PM	31	0	31
7:00 PM	36	0	36
7:15 PM	36	0	36
7:30 PM	25	1	26
7:45 PM	37	1	38
8:00 PM	31	0	31
8:15 PM	22	0	22
8:30 PM	29	0	29
8:45 PM	18	0	18
9:00 PM	19	0	19
9:15 PM	14	0	14
9:30 PM	10	0	10
9:45 PM	9	0	9
10:00 PM	12	0	12
10:15 PM	7	0	7
10:30 PM	11	0	11
10:45 PM	8	0	8
11:00 PM	3	0	3
11:15 PM	10	0	10
11:30 PM	3	0	3
11:45 PM	4	0	4
08/14/2025 12:00 AM	1	0	1
12:15 AM	0	0	0
12:30 AM	3	0	3
12:45 AM	2	0	2
1:00 AM	1	0	1
1:15 AM	3	0	3
1:30 AM	1	0	1
1:45 AM	2	0	2
2:00 AM	1	0	1
2:15 AM	0	0	0
2:30 AM	1	0	1
2:45 AM	0	0	0
3:00 AM	0	0	0
3:15 AM	1	0	1
3:30 AM	0	0	0
3:45 AM	0	0	0
4:00 AM	1	0	1
4:15 AM	0	0	0
4:30 AM	0	0	0
4:45 AM	2	0	2
5:00 AM	1	0	1
5:15 AM	1	0	1
5:30 AM	5	0	5
5:45 AM	2	1	3
6:00 AM	7	1	8
6:15 AM	8	0	8
6:30 AM	7	0	7
6:45 AM	10	0	10

7:00 AM	11	1	12
7:15 AM	14	2	16
7:30 AM	9	1	10
7:45 AM	17	2	19
8:00 AM	20	1	21
8:15 AM	1	0	1
Total	1836	68	1904
Total %	96.4	3.6	100.0
AM Times	10:30 AM	9:15 AM	10:30 AM
AM Peaks	100	15	107
PM Times	3:30 PM	12:45 PM	3:30 PM
PM Peaks	193	5	200

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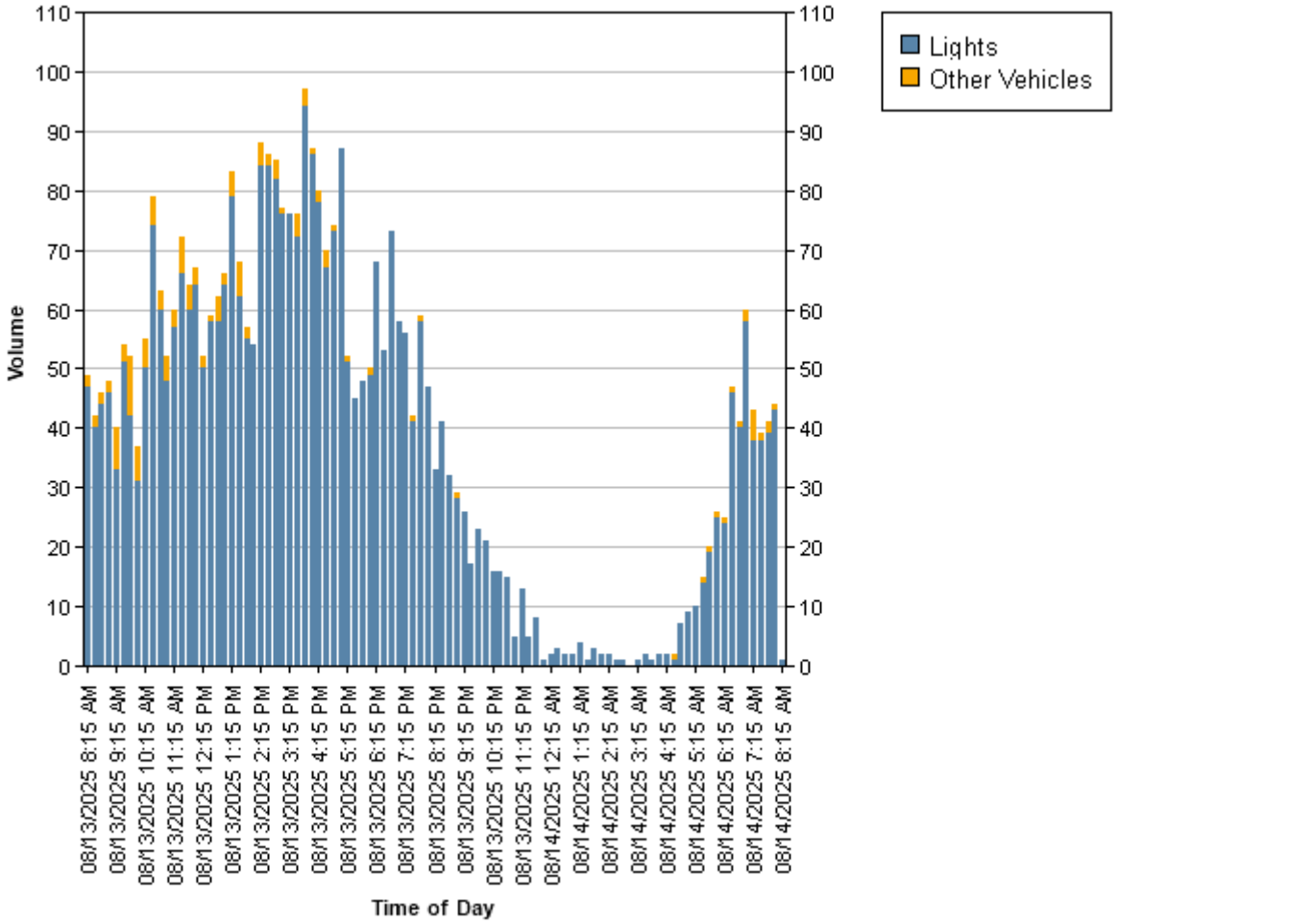
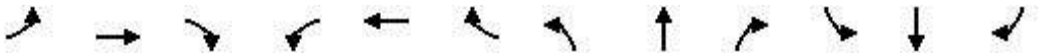


Annex B Synchro Model

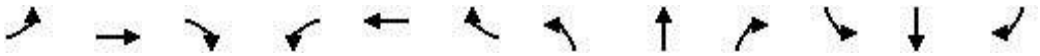
ENGLOBE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	5	15	0	5	0	15	118	0	0	162	19
Future Volume (Veh/h)	15	5	15	0	5	0	15	118	0	0	162	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			7%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.78	0.78	0.78
Hourly flow rate (vph)	16	5	16	0	5	0	16	128	0	0	208	24
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	382	380	220	398	392	128	232			128		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	382	380	220	398	392	128	232			128		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	97	99	98	100	99	100	99			100		
cM capacity (veh/h)	566	546	820	541	536	922	1307			1434		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	37	5	144	232
Volume Left	16	0	16	0
Volume Right	16	0	0	24
cSH	650	536	1307	1434
Volume to Capacity	0.06	0.01	0.01	0.00
Queue Length 95th (m)	1.4	0.2	0.3	0.0
Control Delay (s)	10.9	11.8	1.0	0.0
Lane LOS	B	B	A	
Approach Delay (s)	10.9	11.8	1.0	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	34.1%	ICU Level of Service	A	
Analysis Period (min)	15			



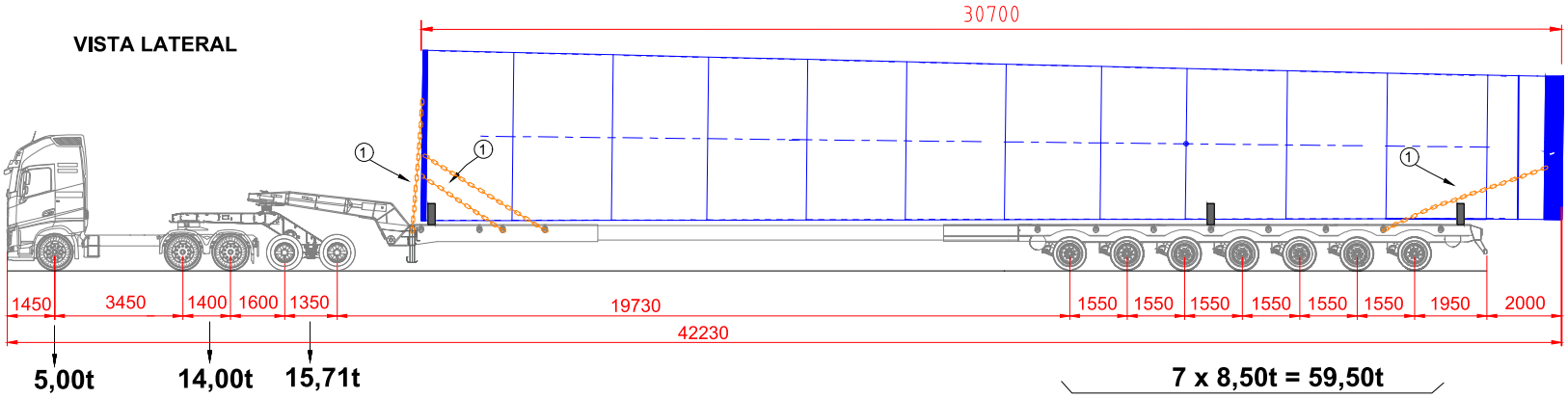
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	5	93	0	5	0	93	220	0	0	154	38
Future Volume (Veh/h)	38	5	93	0	5	0	93	220	0	0	154	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			7%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	41	5	101	0	5	0	106	250	0	0	175	43
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	661	658	196	762	680	250	218			250		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	661	658	196	762	680	250	218			250		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	99	88	100	99	100	92			100		
cM capacity (veh/h)	349	354	845	262	343	788	1340			1316		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	147	5	356	218
Volume Left	41	0	106	0
Volume Right	101	0	0	43
cSH	585	343	1340	1316
Volume to Capacity	0.25	0.01	0.08	0.00
Queue Length 95th (m)	7.9	0.4	2.1	0.0
Control Delay (s)	13.2	15.7	2.9	0.0
Lane LOS	B	C	A	
Approach Delay (s)	13.2	15.7	2.9	0.0
Approach LOS	B	C		

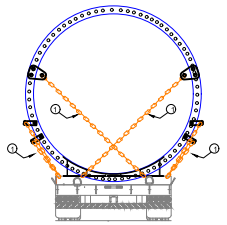
Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	51.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Annex C Wind Turbine Transport Vehicles

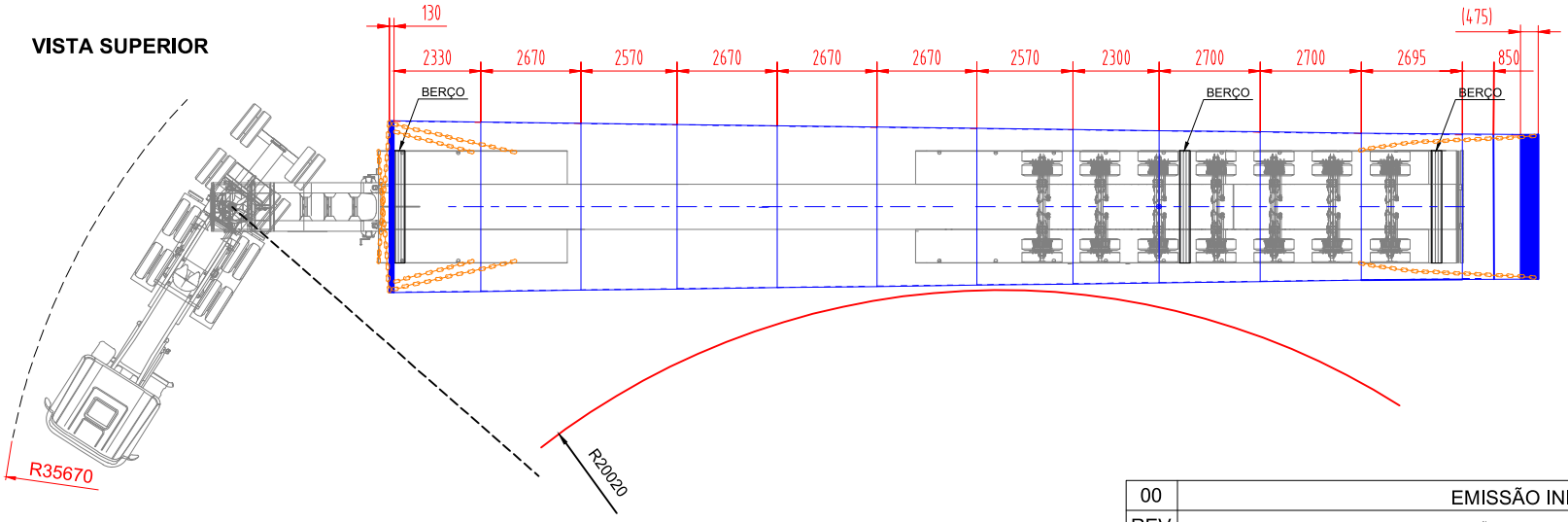
VISTA LATERAL



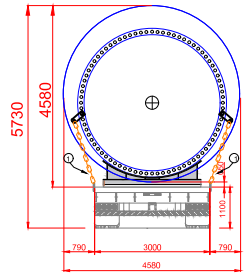
VISTA FRONTAL



VISTA SUPERIOR



VISTA TRASEIRA



LEGENDA

- LINHAS DE CONTORNO DO EQUIPAMENTO TRANSPORTADOR
- LINHAS DE CONTORNO DA CARGA
- CORRENTES DE AMARRAÇÃO
- BERÇOS

CONFIDENCIAL

ESTE DESENHO É PROPRIEDADE EXCLUSIVA DA "TRANSMÁQUINAS" SENDO PROIBIDA TODA E QUALQUER REPRODUÇÃO OU COMUNICAÇÃO À OUTRA SEM PRÉVIA AUTORIZAÇÃO ESCRITA, DE ACORDO COM O ESTABELECIMENTO SOB AS PENAS COMINADAS NO CAPÍTULO VI TÍTULO II DO LIVRO II DO CÓDIGO CIVIL BRASILEIRO.

MATERIAIS DE AMARRAÇÃO

ITEM	QNT.	DESCRIÇÃO	CARGA DE TRABALHO	FATOR DE SEGURANÇA	MATERIAL
01	08	CORRENTES 13mm x 6,0m GRAU 8	5.300KG	4x a carga de trabalho	AÇO ALLOY
02	16	GANCHOS CLEVIS PARA CORRENTES 13mm	5.300KG	4x a carga de trabalho	AÇO ALLOY
03	08	TENSIONADORES	5.900KG	4x a carga de trabalho	AÇO ALLOY
04	08	MANILHA DE 1/4	12.000KG		AÇO ALLOY
05	03	CAMADA DE TAMAME DE 40M			
06	03	EVA DE 10M BRANCO E PLÁSTICO STRECH			

OBSERVAÇÕES

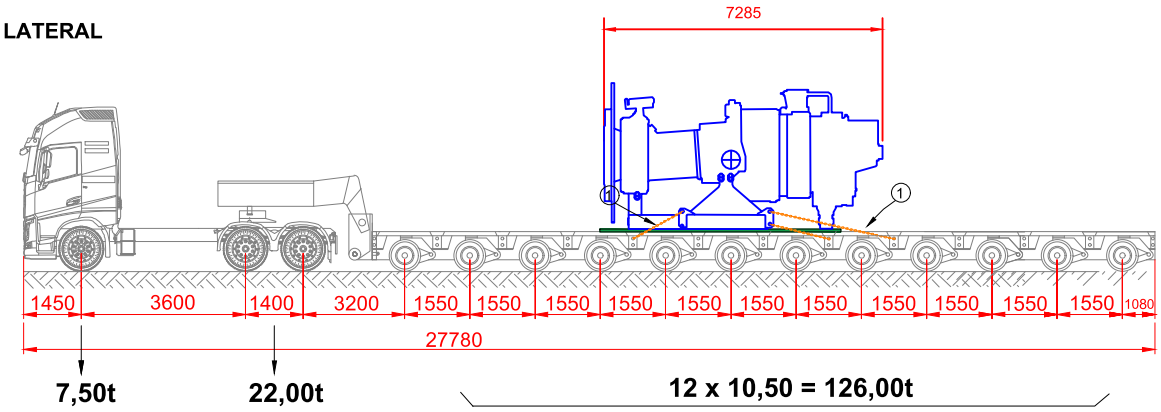
1. Os berços devem estar apoiados sobre prancha de forma a manter a altura,sendo que devem ser fixos na plataforma da carreta por meio de travas metálicas soldadas em sua estrutura para evitar qualquer movimento em casos de frenagem brusca ou trânsito em trechos sinuosos com alta inclinação.
2. Os olhais de ancoragem (amarração) da carreta devem estar em boas condições de uso e ser regularmente inspecionado pela transportadora.
3. Orelhetas são de responsabilidade do fornecedor / cliente

REV.	DESCRIÇÃO	DATA	EXEC.
00	EMISSÃO INICIAL	05/01/2024	Mauricio Figueiredo

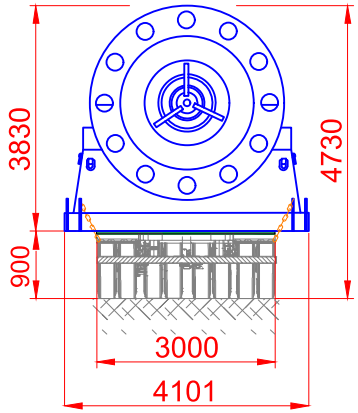
DIMENSÕES DA CARGA				DIMENSÕES DO CONJUNTO TRANSPORTADOR:			TARA:
TRAMO SECTION - 5				CAVALO: 6X4			10,540t
ORIGEM:				EQUIP: DOLLY DUPLO			2,5t
DESTINO				EQUIP: PRANCHA EXTENSIVA 7 EIXOS			17,00t
COMPRIMENTO	LARGURA	ALTURA	PESO	COMPRIMENTO	LARGURA	ALTURA	PBTC
30700 mm	4580 mm	4580 mm	64,17t	42230mm	4580 mm	5730 mm	94,21t

EXECUTADO:	MAURICIO FIGUEIREDO	CLIENTE: GOLDWIND	DIMENSÕES: MILÍMETROS / DATA: 05/01/2024
VERIFICADO:	JULIO CESAR SHETTINO		AREA: ENGENHARIA
	Mauricio Pinheiro Figueiredo Engenheiro Mecânico CREA/MA: 1120475074/D	TRANSMÁQUINAS	TÍTULO: TRAMO SECTION - 5
APROVADO:	Mauricio P. Figueiredo		Nº DES.: MF-01.08/2024
CREA:	1120475074	PATOS DE MINAS - MG	ESCALA: INDICADA / REVISÃO: 00 / FOLHA: 1/3

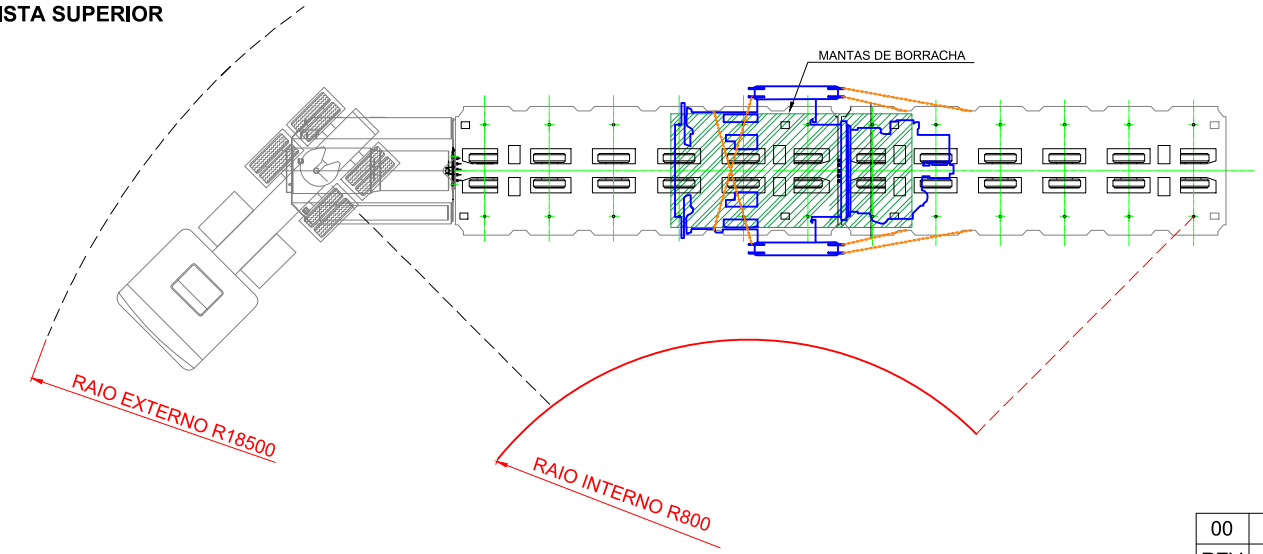
VISTA LATERAL



VISTA TRASEIRA



VISTA SUPERIOR



MATERIAIS DE AMARRAÇÃO

ITEM	QNT.	DESCRIÇÃO	CARGA DE TRABALHO	FATOR DE SEGURANÇA	MATERIAL
01	06	CORRENTES 13mm x 6,0m GRAU 8	5.300KG	4x a carga de trabalho	AÇO ALLOY
02	12	GANCHOS CLEVIS PARA CORRENTES 13mm	5.300KG	4x a carga de trabalho	AÇO ALLOY
03	06	TENSIONADORES	5.900KG	4x a carga de trabalho	AÇO ALLOY
04	06	MANILHA DE 1/4	12.000KG		AÇO ALLOY
05	03	CAMADA DE TAMAME DE 40M			
06	03	EVA DE 10M BRANCO E PLÁSTICO STRECH			

OBSERVAÇÕES

1. Os berços devem estar apoiados sobre prancha de forma a manter a altura,sendo que devem ser fixos na plataforma da carreta por meio de travas metálicas soldadas em sua estrutura para evitar qualquer movimento em casos de frenagem brusca ou trânsito em trechos sinuosos com alta inclinação.
2. Os olhais de ancoragem (amarração) da carreta devem estar em boas condições de uso e ser regularmente inspecionado pela transportadora.
3. Orelhetas são de responsabilidade do fornecedor / cliente

LEGENDA

- LINHAS DE CONTORNO DO EQUIPAMENTO TRANSPORTADOR
- LINHAS DE CONTORNO DA CARGA
- CORRENTES DE AMARRAÇÃO
- MANTAS DE BORRACHA

CONFIDENCIAL

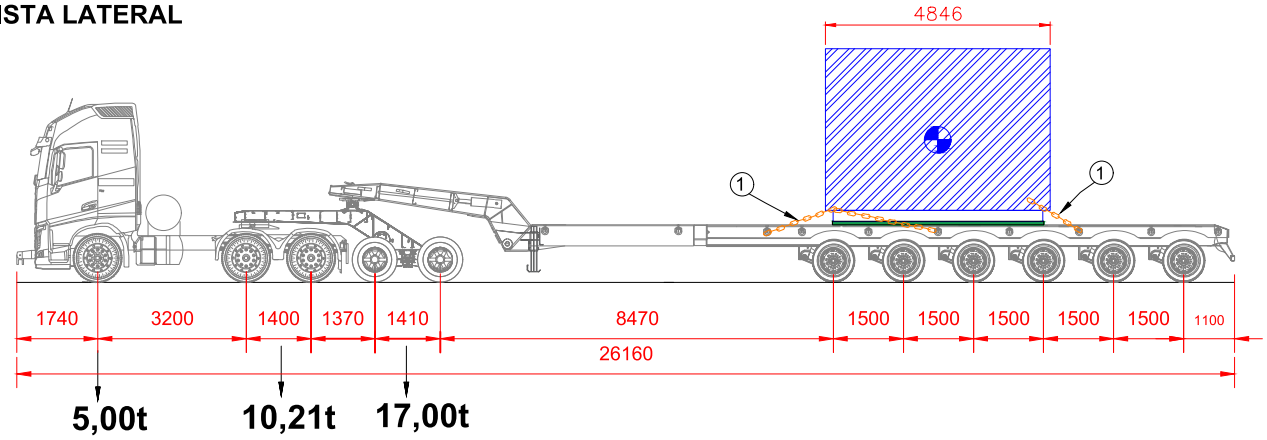
ESTE DESENHO É PROPRIEDADE EXCLUSIVA DA "TRANSMÁQUINAS" SENDO PROIBIDA TODA E QUALQUER REPRODUÇÃO OU COMUNICAÇÃO A OUTRA SEM PRÉVIA AUTORIZAÇÃO ESCRITA, DE ACORDO COM O ESTABELECIMENTO SOB AS PENAS COMINADAS NO CAPÍTULO VI, TÍTULO II DO LIVRO II DO CÓDIGO CIVIL BRASILEIRO.

REV.	DESCRIÇÃO	DATA	Resp. Técnico
00	EMISSÃO INICIAL	05/01/2024	Mauricio Figueiredo

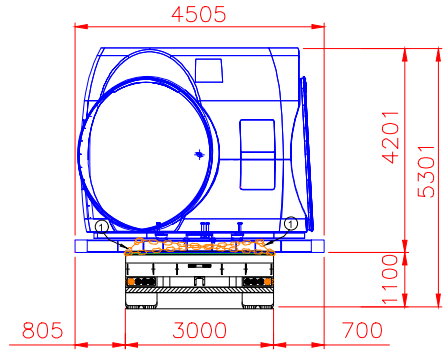
DIMENSÕES DA CARGA				DIMENSÕES DO CONJUNTO TRANSPORTADOR:			TARA:
DRIVE TRAIN				CAVALO: 6X4			11,00t
ORIGEM:				EQUIP: PESCOÇO HIDRÁULICO + MH			4,20t
DESTINO				EQUIP: LINHA 12 EIXOS (20,70 + 18,30)			39,00t
COMPRIMENTO	LARGURA	ALTURA	PESO	COMPRIMENTO	LARGURA	ALTURA	PBTC
7285 mm	4101 mm	3830 mm	101,30t	27780mm	4101 mm	4730 mm	155,50t

EXECUTADO:	MAURICIO FIGUEIREDO	CLIENTE: GOLDWIND	DIMENSÕES: MILÍMETROS / DATA: 05/01/2024
VERIFICADO:	JULIO CESAR SHETTINO		AREA: ENGENHARIA
	Mauricio Pinheiro Figueiredo Engenheiro Mecânico CREA/MA: 1120475074/D	TRANSMÁQUINAS	TÍTULO: TRANSPORTE DE DRIVE TRAIN
APROVADO:	Mauricio P. Figueiredo		Nº DES.: MF-01.10-3/2024
CREA:	1120475074	PATOS DE MINAS - MG	ESCALA: INDICADA / REVISÃO: 00 / FOLHA: 1/3

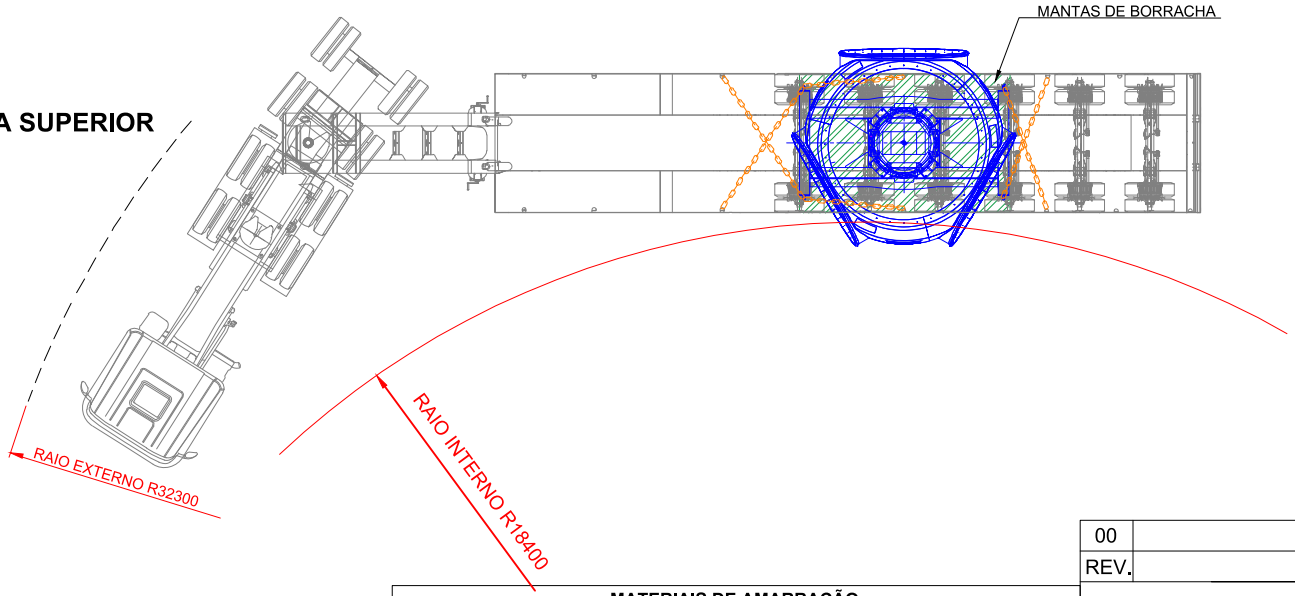
VISTA LATERAL



VISTA TRASEIRA



VISTA SUPERIOR



LEGENDA

- LINHAS DE CONTORNO DO EQUIPAMENTO TRANSPORTADOR
- LINHAS DE CONTORNO DA CARGA
- CORRENTES DE AMARRAÇÃO
- MANTAS DE BORRACHA

CONFIDENCIAL

ESTE DESENHO É PROPRIEDADE EXCLUSIVA DA "TRANSMÁQUINAS" SENDO PROIBIDA TODA E QUALQUER REPRODUÇÃO OU COMUNICAÇÃO À OUTRA SEM PRÉVIA AUTORIZAÇÃO ESCRITA, DE ACORDO COM O ESTABELECIMENTO SOB AS PENAS COMINADAS NO CAPITULO VI TITULO II DO LIVRO II DO CÓDIGO CIVIL BRASILEIRO.

MATERIAIS DE AMARRAÇÃO

ITEM	QNT.	DESCRIÇÃO	CARGA DE TRABALHO	FATOR DE SEGURANÇA	MATERIAL
01	06	CORRENTES 13mm x 6,0m GRAU 8	5.300KG	4x a carga de trabalho	AÇO ALLOY
02	12	GANCHOS CLEVIS PARA CORRENTES 13mm	5.300KG	4x a carga de trabalho	AÇO ALLOY
03	06	TENSIONADORES	5.900KG	4x a carga de trabalho	AÇO ALLOY

OBSERVAÇÕES

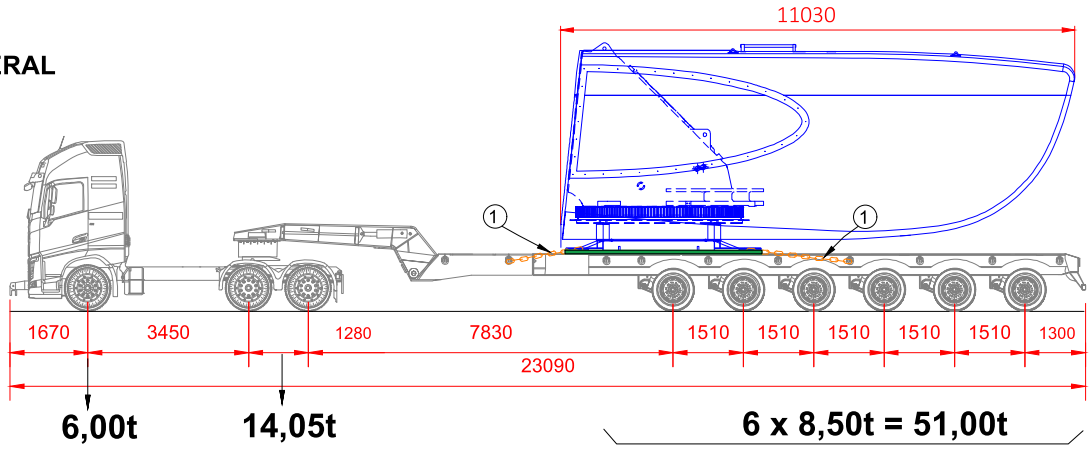
1. Os berços devem estar apoiados sobre prancha de forma a manter a altura,sendo que devem ser fixos na plataforma da carreta por meio de travas metálicas soldadas em sua estrutura para evitar qualquer movimento em casos de frenagem brusca ou trânsito em trechos sinuosos com alta inclinação.
2. Os olhais de ancoragem (amarração) da carreta devem estar em boas condições de uso e ser regularmente inspecionado pela transportadora.
3. Orelhetas são de responsabilidade do fornecedor / cliente

REV.	DESCRIÇÃO	DATA	Resp. Técnico
00	EMISSÃO INICIAL	05/01/2024	Mauricio Figueiredo

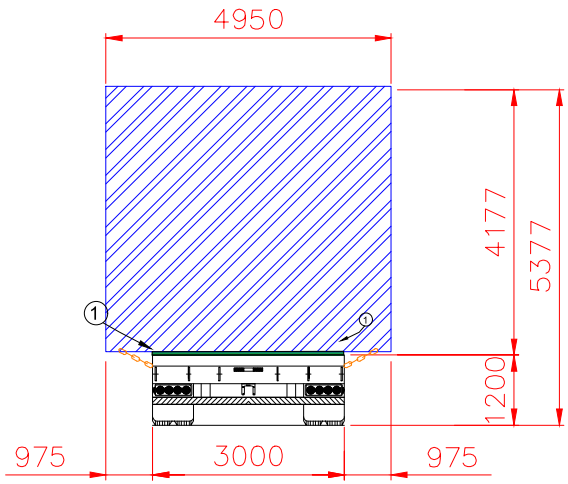
DIMENSÕES DA CARGA				DIMENSÕES DO CONJUNTO TRANSPORTADOR:			TARA:
HUB				CAVALO: 6X4			10,40t
ORIGEM:				EQUIP: PRANCHA RETA 6 EIXOS			18,00t
DESTINO				EQUIP:			
COMPRIMENTO	LARGURA	ALTURA	PESO	COMPRIMENTO	LARGURA	ALTURA	PBTC
4846 mm	4505 mm	4201 mm	56,558t	26160 mm	4505 mm	5301 mm	84,95t

EXECUTADO:	MAURICIO FIGUEIREDO	CLIENTE: GOLDWIND	DIMENSÕES: MILÍMETROS / DATA: 05/01/2024
VERIFICADO:	JULIO CESAR SHETTINO		AREA: ENGENHARIA
	Mauricio Pinheiro Figueiredo Engenheiro Mecânico CREA/MA: 1120475074/D	TRANSMÁQUINAS	TÍTULO: TRANSPORTE DE HUB
APROVADO:	Mauricio P. Figueiredo	PATOS DE MINAS - MG	Nº DES.: MF-01.12-1/2024 / REVISÃO: 00 / FOLHA: 1/3
CREA:	1120475074		

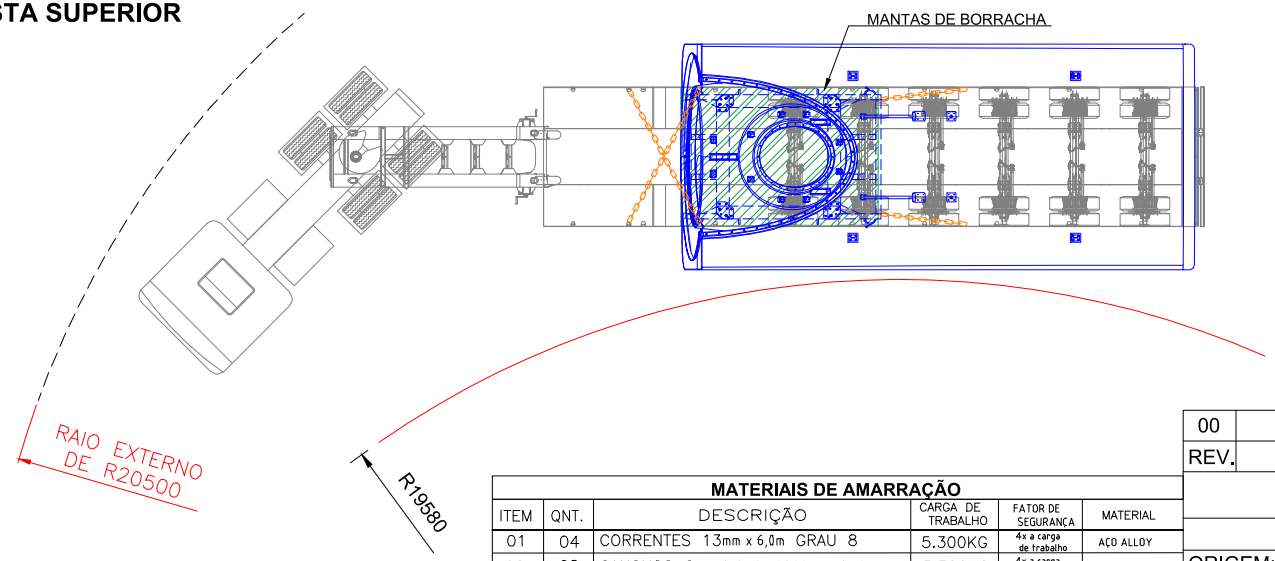
VISTA LATERAL



VISTA TRASEIRA



VISTA SUPERIOR



LEGENDA

- LINHAS DE CONTORNO DO EQUIPAMENTO TRANSPORTADOR
- LINHAS DE CONTORNO DA CARGA
- CORRENTES DE AMARRAÇÃO
- MANTAS DE BORRACHA

CONFIDENCIAL

ESTE DESENHO É PROPRIEDADE EXCLUSIVA DA "TRANSMÁQUINAS" SENDO PROIBIDA TODA E QUALQUER REPRODUÇÃO OU COMUNICAÇÃO A OUTRA SEM PRÉVIA AUTORIZAÇÃO ESCRITA, DE ACORDO COM O ESTABELECIMENTO SOB AS PENAS COMINADAS NO CAPÍTULO VI TÍTULO II DO LIVRO II DO CÓDIGO CIVIL BRASILEIRO.

MATERIAIS DE AMARRAÇÃO

ITEM	QNT.	DESCRIÇÃO	CARGA DE TRABALHO	FATOR DE SEGURANÇA	MATERIAL
01	04	CORRENTES 13mm x 6,0m GRAU 8	5.300KG	4x a carga de trabalho	AÇO ALLOY
02	08	GANCHOS CLEVIS PARA CORRENTES 13mm	5.300KG	4x a carga de trabalho	AÇO ALLOY
03	04	TENSIONADORES	5.900KG	4x a carga de trabalho	AÇO ALLOY
04	04	MANILHA DE 1/4	12.000KG		AÇO ALLOY
05	03	CAMADA DE TAMAME DE 40M			
06	03	EVA DE 10M BRANCO E PLÁSTICO STRECH			

OBSERVAÇÕES

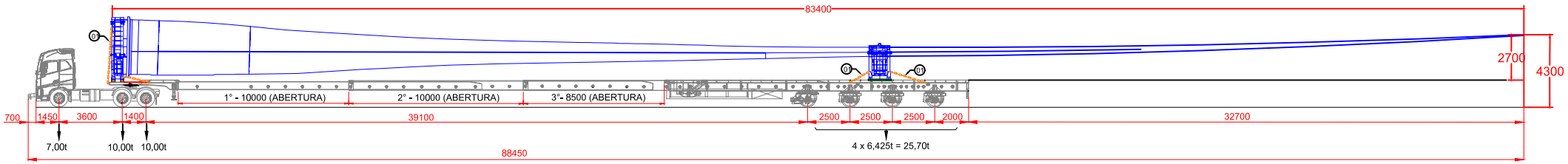
1. Os berços devem estar apoiados sobre prancha de forma a manter a altura,sendo que devem ser fixos na plataforma da carreta por meio de travas metálicas soldadas em sua estrutura para evitar qualquer movimento em casos de frenagem brusca ou trânsito em trechos sinuosos com alta inclinação.
2. Os olhais de ancoragem (amarração) da carreta devem estar em boas condições de uso e ser regularmente inspecionado pela transportadora.
3. Orelhetas são de responsabilidade do fornecedor / cliente

REV.	DESCRIÇÃO	DATA	Resp. Técnico
00	EMISSÃO INICIAL	25/07/2023	Mauricio Figueiredo

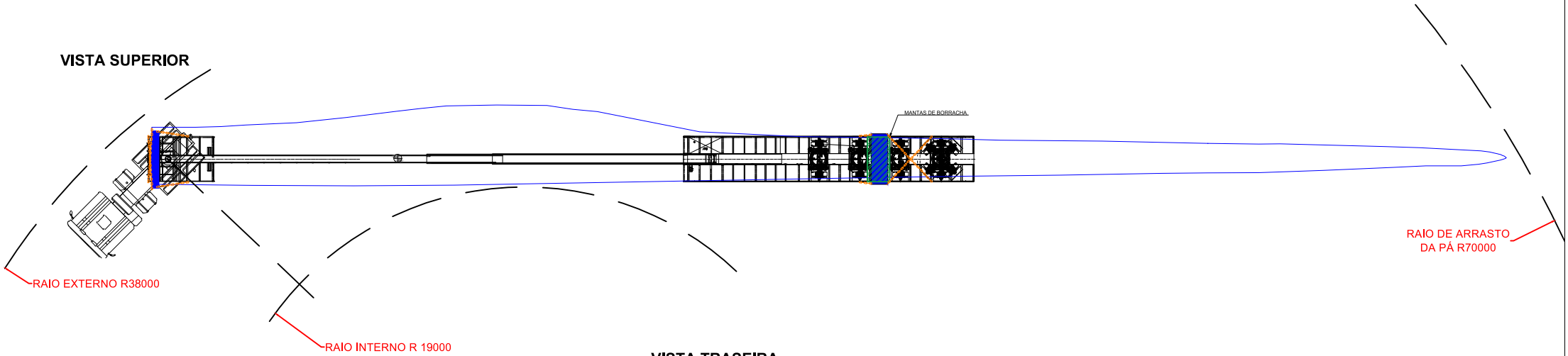
DIMENSÕES DA CARGA				DIMENSÕES DO CONJUNTO TRANSPORTADOR:			TARA:
NACELLE				CAVALO: 6X4			10,45t
ORIGEM:				EQUIP: PRANCHA RETA 6 EIXOS			16,00t
DESTINO				EQUIP:			-
COMPRIMENTO	LARGURA	ALTURA	PESO	COMPRIMENTO	LARGURA	ALTURA	PBTC
11030 mm	4950 mm	41770 mm	43,60t	23090mm	4950 mm	5377 mm	70,05t

EXECUTADO:	MAURICIO FIGUEIREDO	CLIENTE: GOLDWIND	DIMENSÕES: MILÍMETROS / DATA: 25/07/2023
VERIFICADO:	JULIO CESAR SHETTINO		AREA: ENGENHARIA
	Mauricio Pinheiro Figueiredo Engenheiro Mecânico CREA/MA 1120475074/D		TÍTULO: TRANSPORTE DE NACELLE
APROVADO:	Mauricio P. Figueiredo	TRANSMÁQUINAS	Nº DES.: MF-01.11/2024
CREA:	1120475074	PATOS DE MINAS - MG	ESCALA: INDICADA / REVISÃO: 00 / FOLHA: 1/3

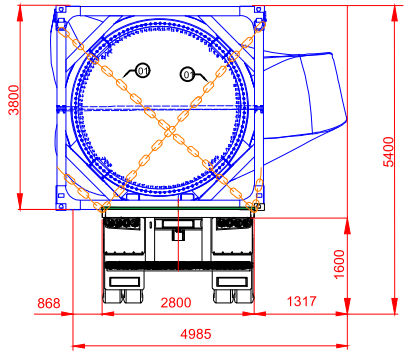
VISTA LATERAL



VISTA SUPERIOR



VISTA TRASEIRA



LEGENDA

- LINHAS DE CONTORNO DO EQUIPAMENTO TRANSPORTADOR
- LINHAS DE CONTORNO DA CARGA
- CORRENTES DE AMARRAÇÃO
- MANTAS DE BORRACHA

MATERIAIS DE AMARRAÇÃO

ITEM	QNT.	DESCRIÇÃO	CARGA DE TRABALHO	FATOR DE SEGURANÇA	MATERIAL
01	08	CORRENTES 13mm x 6,0m GRAU 8	5.300KG	4x a carga de trabalho	AÇO ALLOY
02	16	GANCHOS CLEVIS PARA CORRENTES 13mm	5.300KG	4x a carga de trabalho	AÇO ALLOY
03	08	TENSIONADORES	5.900KG	4x a carga de trabalho	AÇO ALLOY
04	–	MANTAS DE BORRACHA			

OBSERVAÇÕES

1. Os frames devem estar apoiados sobre prancha, sendo que alguns pontos podem ser utilizados dormentes de madeira de forma a manter a altura.
2. Os olhais de ancoragem (amarração) da carreta devem estar em boas condições de uso e ser regularmente inspecionado pela transportadora.

CONFIDENCIAL

ESTE DESENHO É PROPRIEDADE EXCLUSIVA DA "TRANSMÁQUINAS" SENDO PROIBIDA TODA E QUALQUER REPRODUÇÃO OU COMUNICAÇÃO À OUTRA SEM PRÉVIA AUTORIZAÇÃO ESCRITA, DE ACORDO COM O ESTABELECIMENTO SOB AS PENAS COMINADAS NO CAPÍTULO VI TÍTULO II DO LIVRO II DO CÓDIGO CIVIL BRASILEIRO.

REV.	DESCRIÇÃO	DATA	EXEC.
00	EMISSÃO INICIAL	05/01/2024	Mauricio Figueiredo

DIMENSÕES DA CARGA				DIMENSÕES DO CONJUNTO TRANSPORTADOR:			TARA:
BLADE				CAVALO: 6X4			10,50t
ORIGEM:				EQUIP: -			-
DESTINO				EQUIP: PRANCHA EXTENSIVA 4 EIXOS			18,00t
COMPRIMENTO	LARGURA	ALTURA	PESO	COMPRIMENTO	LARGURA	ALTURA	PBTC
84300 mm	4985 mm	3800 mm	24,20t	88450mm	4985 mm	5400 mm	52,70t

EXECUTADO:	MAURICIO FIGUEIREDO	CLIENTE: GOLDWIND	DIMENSÕES: MILÍMETROS / DATA: 05/01/2024
VERIFICADO:	JULIO CESAR SHETTINO		AREA: ENGENHARIA
	Mauricio Pinheiro Figueiredo Engenheiro Mecânico CREA/MA: 1120475074/D	TRANSMÁQUINAS	TÍTULO: TRANSPORTE DE BLADE
APROVADO:	Mauricio P. Figueiredo		Nº DES.: MF-01.24/2024
CREA:	1120475074	PATOS DE MINAS - MG	ESCALA: INDICADA / REVISÃO: 00 / FOLHA: 1/3

Annex D Site Photos

NE E SE S
49°7'18.79"N, 55°22'21.90"W ±3m ▲18m
Asphalt crack
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:58:08

W NW N NE
49°7'24.51"N, 55°22'18.38"W ±4m ▲22m
Powerline
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:59:26

NE E SE S
49°7'17.63"N, 55°22'22.67"W ±4m ▲17m
Asphalt crack
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:58:42

SE S SW W NW
49°7'24.53"N, 55°22'18.38"W ±3m ▲19m
Powerline
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:59:40

S SW W NW
49°7'20.87"N, 55°22'20.67"W ±4m ▲21m
Low power line
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 09:02:55

W NW N NE
49°7'23.83"N, 55°22'18.16"W ±4m ▲22m
Road
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 09:48:21

NW N NE E
49°7'23.91"N, 55°22'18.13"W ±4m ▲ 22m
Road
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:48:50

NW N NE E
49°7'24.54"N, 55°22'18.25"W ±3m ▲ 19m
Shoulder
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:52:08

SE S SW W
49°7'23.93"N, 55°22'18.18"W ±4m ▲ 22m
Road
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:48:55

SE S SW W
49°7'24.26"N, 55°22'18.46"W ±4m ▲ 19m
Shoulder
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:52:18

NW N NE E
49°7'24.47"N, 55°22'17.78"W ±4m ▲ 19m
Shoulder
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:51:50

N NE E SE
49°7'20.58"N, 55°22'20.34"W ±4m ▲ 21m
Steep bank
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 09:01:58

N NE E SE S
0 30 60 90 120 150 180
49°7'20.56"N, 55°22'20.32"W ±4m ▲ 21m
Steep bank
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 09:02:02

NW N NE E
300 330 0 30 60 90
49°7'24.48"N, 55°22'18.36"W ±4m ▲ 22m
W Ditch
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 08:49:33

W NW N NE
270 300 330 0 30 60
49°7'20.84"N, 55°22'20.74"W ±4m ▲ 20m
Steep bank
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 09:02:31

S SW W NW
180 210 240 270 300 330
49°7'24.51"N, 55°22'18.32"W ±4m ▲ 20m
W Trail
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 08:50:11

W NW N NE
240 270 300 330 0 30 60
49°7'20.90"N, 55°22'20.77"W ±4m ▲ 21m
Steep bank
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 09:02:37

SW W NW N
210 240 270 300 330 0
49°7'24.54"N, 55°22'18.30"W ±4m ▲ 20m
W Trail
Englobe
2504299.001 EVREC.TIS
13 Aug 2025, 08:50:16

SW W NW N
210 240 270 300 330 0
49°7'20.05"N, 55°22'20.66"W ±4m ▲19m
Asphalt crack
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 09:01:32

SW W NW N
210 240 270 300 330 0
49°7'21.83"N, 55°22'19.51"W ±3m ▲21m
Crack
Englobe
2504299.001 EVREC TIS

E SE S SW W
90 120 150 180 210 240 270
49°7'24.07"N, 55°22'18.08"W ±3m ▲21m
Camera location
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:47:43

SW W NW N
210 240 270 300 330 0
49°7'22.71"N, 55°22'18.93"W ±4m ▲19m
Crack
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 09:03:58

NW N NE E
300 330 0 30 60 90 120
49°7'23.69"N, 55°22'18.21"W ±4m ▲21m
Northern Arm 5
Point Leamington 26
Leading Tickles 54
Camera location
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:48:00

NW N E E SE
330 0 30 60 90 120
49°7'24.17"N, 55°22'17.95"W ±4m ▲21m
E Ditch
Englobe
2504299.001 EVREC TIS
13 Aug 2025, 08:49:10

E
90
SE
120
150
S
180
210
49°7'24.49"N, 55°22'17.76"W ±4m
E Trail
Englobe

NE
60
E
90
120
SE
150
S
180
49°7'24.51"N, 55°22'17.78"W ±3m
E Trail
Englobe

North
49°7'39.43"N, 55°21'38.03"W ±4m ▲7m
Culvert
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:33:49

South
49°7'40.21"N, 55°21'37.81"W ±3m ▲7m
Guide rail
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:25:54

East
49°7'39.84"N, 55°21'38.00"W ±4m ▲5m
Culvert
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:34:02

West
49°7'43.17"N, 55°21'36.49"W ±4m ▲8m
Parsleys Intersection
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:22:28

West
49°7'41.64"N, 55°21'37.46"W ±3m ▲7m
Driveway
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:24:27

North
49°7'41.57"N, 55°21'37.56"W ±4m ▲8m
Pylons
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:24:10

North East
49°7'36.32"N, 55°21'38.51"W ±4m ▲ 6m
Riverview intersection
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:31:16

North
49°7'35.36"N, 55°21'39.40"W ±4m ▲ 6m
Sight Distance - North Bound -
0.6m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:30:01

South
49°7'43.74"N, 55°21'35.93"W ±3m ▲ 8m
Shelter
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:21:31

North
49°7'35.81"N, 55°21'39.01"W ±4m ▲ 6m
Sight Distance - North Bound -
0.6m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:30:29

North
49°7'35.32"N, 55°21'39.38"W ±4m ▲ 5m
Sight Distance - North Bound
0.6m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:29:52

North
49°7'37.40"N, 55°21'38.30"W ±4m ▲ 7m
Sight Distance - North Bound -
0.15m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:32:03

North
49°7'37.42"N, 55°21'38.26"W ±4m ▲ 6m
Sight Distance - North Bound -
0.15m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:32:30

South
49°7'43.84"N, 55°21'36.24"W ±3m ▲ 8m
Sight Distance - South Bound -
0.15 height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:39:52

South West
49°7'44.12"N, 55°21'35.91"W ±4m ▲ 7m
Sight Distance - South Bound -
0.6m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:41:15

South
49°7'43.82"N, 55°21'36.25"W ±4m ▲ 8m
Sight Distance - South Bound -
0.15 height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:40:12

South West
49°7'44.12"N, 55°21'35.91"W ±4m ▲ 7m
Sight Distance - South Bound -
0.6m height
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:41:57

North West
49°7'41.67"N, 55°21'37.42"W ±3m ▲ 7m
Trail
Englobe
2304299.001 Water St. TIS
16 Mar 2026, 13:24:38

North East

49°7'41.71"N, 55°21'37.43"W ±3m ▲ 9m

South East

49°7'40.86"N, 55°21'38.12"W ±4m ▲ 5m

South West

49°7'40.16"N, 55°21'37.95"W ±4m ▲ 6m

North West

49°7'43.52"N, 55°21'36.60"W ±4m ▲ 8m

North West

49°7'43.64"N, 55°21'35.96"W ±3m ▲ 7m

South West

49°7'42.14"N, 55°21'37.24"W ±4m ▲ 7m

ENGLOBE

Annex E Traffic Signal Warrant Analysis

Traffic Signal and Pedestrian Signal Head Warrant Analysis

Main Street (name)	Route 350	Direction (EW or NS)	NS	Road Authority:	
Side Street (name)	EVREC Heavy Haul Rd	Direction (EW or NS)	EW	City:	Botwood, NL
Quadrant / Int #		Comments		Analysis Date:	2025 Sep 24, Wed
	CHECK SHEET			Count Date:	2025 Aug 13, Wed
for Warrant Calculation Results, please hit 'Page Down'				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	RT Channelization (y/n)	UpStream Signal (m)	# of Thru Lanes	LT Phase Type	RTOR Allowed (y/n)	Actuated Thru Phase
Route 350	NB									0			
Route 350	SB									0			
EVREC Heavy Haul Rd	WB									0			
EVREC Heavy Haul Rd	EB									0			

Saturation Flow Rates (if not default) (vphpl)		Default Saturation Flow Rates (vphpl)
Left Turn		1,650
Through		1,800
Right Turn		1,500

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	2,778
Central Business District	(y/n)	n

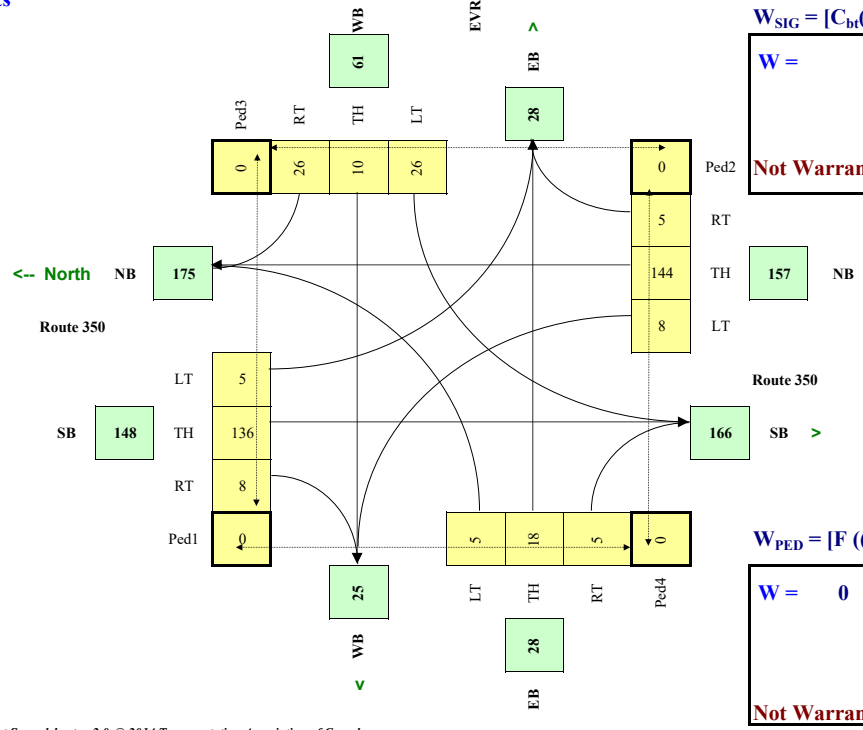
Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Route 350	NS	80	3.6%	n	0.0
EVREC Heavy Haul Rd	EW		100.0%	n	0.0

Set Peak Hours

Traffic Input	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:30 - 8:30	20	84	5	5	117	20	0	15	0	5	65	5	0	0	0	0
10:30 - 11:30	5	150	5	5	197	5	0	22	0	5	22	5	0	0	0	0
11:30 - 12:30	5	110	5	5	128	5	0	5	0	5	5	5	0	0	0	0
12:30 - 1:30	5	136	5	5	126	5	0	5	0	5	5	5	0	0	0	0
3:30 - 4:30	5	220	5	5	154	5	150	5	150	5	5	5	0	0	0	0
5:00 - 6:00	5	164	5	5	91	5	5	5	5	5	5	5	0	0	0	0
Total (6-hour peak)	**45**	**864**	**30**	**30**	**813**	**45**	**155**	**57**	**155**	**30**	**107**	**30**	**0**	**0**	**0**	**0**
Average (6-hour peak)	**8**	**144**	**5**	**5**	**136**	**8**	**26**	**10**	**26**	**5**	**18**	**5**	**0**	**0**	**0**	**0**
													10.0	10.0	15.0	15.0

Actual Pedestrian Crossing Distance (m)

Average 6-hour Peak Turning Movements



$W_{SIG} = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$

W = 25 (Veh) 25 (Ped) 0

Not Warranted - Vs<75

RESET SHEET

$W_{PED} = [F ((Xped_m)d_m/K_2) + (Xped_s)d_s/K_3)]$

W = 0

Not Warranted - Ped Vol<25(avg)

Traffic Signal Warrant Spreadsheet - v2.0 © 2014 Transportation Association of Canada

APPENDIX Q.1
Avifauna Management Plan

Prepared by: Strum Consulting

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

strum

CONSULTING

AVIFAUNA MANAGEMENT PLAN
Exploits Valley Renewable Energy Corporation
EVREC Green Energy Hub, Near Botwood, NL

May 11, 2026

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Scope 1
1.3 Revision & Document Control 2
1.4 Spatial Boundaries 2
2.0 ROLES AND RESPONSIBILITIES 3
2.1 Site Manager or Equivalent Role 3
2.2 Environmental Coordinator or Equivalent Role 3
2.3 Construction Manager or Equivalent Role 4
3.0 REGULATORY REQUIRMENTS 4
3.1 Responsible Authorities 5
3.2 Sensitive Timing Windows 5
4.0 SUMMARY OF PRIORITY SPECIES 5
5.0 MITIGATION MEASURES 6
6.0 AVIAN MONITORING 6
6.1 Avian Collision and Mortality Monitoring 6
6.1.1 Monitoring Frequency, Area and Methods 6
6.1.1.1 Wind Project Area 6
6.1.1.2 Solar and Industrial Project Area 11
6.1.1.3 Estimating Mortality Using Other Methods 12
6.1.2 Reporting 12
6.2 Nest Sweeps 13
6.2.1 Monitoring and Reporting 13
7.0 ADAPTIVE MANAGEMENT 15
7.1.1 Contingency Plan 16
8.0 REPORTING AND RECORD KEEPING REQUIREMENTS 17
8.1 Reporting Procedures 17
8.2 Record Keeping Requirements 17
9.0 COMMUNICATIONS 17
9.1 Key Contacts 17
9.2 Training Requirements 17
10.0 STATEMENT OF QUALIFICATIONS AND LIABILITY 19
11.0 REFERENCES 21

LIST OF TABLES

Table 3.1: Summary of Sensitive Timing Windows for Avian Species 5
Table 4.1: Avian Priority Species 5

LIST OF APPENDICES

Appendix A: Mitigation Measures

LIST OF ACRONYMS

AMP	Avifauna Management Plan
BWPA	Botwood Wind Project Area
EARD	Environmental Assessment Registration Document
ECCC-CWS	Environment and Climate Change Canada – Canadian Wildlife Service
EEMP	Environmental Effects Monitoring Program
EIS	Environmental Impact Statement
ESA	*Endangered Species Act*
EVREC	Exploits Valley Renewable Energy Corporation
GPS	Global positioning system
IPA	Industrial Project Area
LTWPA	Leading Tickles Wind Project Area
MBCA	*Migratory Bird*
MBR	Migratory Bird Regulations
NLECCC	Newfoundland & Labrador Environment, Conservation and Climate Change
NLFAL	Newfoundland Department of Forestry, Agriculture and Land
PA	Project Area
SAR	Species at Risk
SARA	*Species at Risk Act*
SLWPA	Seabrights Lake Wind Project Area
SPA	Solar Project Area
TLWPA	Twin Lakes Wind Project Area
WPA	Wind Project Area

1.0 INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC, the "Proponent") is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5-gigawatt (GW) green hydrogen project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3.5 GW wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen and ammonia. The Proponent prepared and submitted the Project's Environmental Assessment Registration Document (EARD) in October 2024. Subsequently, Newfoundland and Labrador Environment, Conservation and Climate Change (NLECCC) determined that the Project requires an Environmental Impact Statement (EIS) and provided guidelines for the completion of the EIS.

The EIS guidelines for this Project (NLECCC, 2025) requires the development an Avifauna Management Plan (AMP) [including migratory birds and Species at Risk (SAR)]. This AMP will be submitted with the Project EIS. This AMP is preliminary and will be finalized in consultation with the Newfoundland Department of Forestry, Agriculture and Land (NLFAL) and Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS).

The following guidelines will be referenced in the development of environmental effects monitoring and post-construction monitoring plans:

- Environment and Climate Change Canada's Canadian Wildlife Service (Atlantic Region) – Wind Energy & Birds Environmental Assessment Guidance Update (ECCC-CWS, 2022).
- Wind Turbines and Birds - Updated Guidance for Environmental Assessment and Monitoring, Canadian Wildlife Service – Atlantic Region (ECCC-CWS, 2018).
- Wind Turbines and Birds - A Guidance Document for Environmental Assessment, Canadian Wildlife Service (ECCC-CWS, 2007b).
- Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds (ECCC-CWS, 2007a).
- Various provincial and ECCC special management practices and species at risk management plans.

1.1 Purpose

The purpose of this preliminary AMP is to outline procedures for site personnel throughout all phases of the Project (site preparation, construction, operations and maintenance, and decommissioning) for how to respond to avifauna emergencies (e.g., injury, mortality), incidents, and monitoring procedures to ensure compliance with the *Endangered Species Act*, S.N.S., 1998, c.11 (ESA), *Migratory Birds Convention Act* (MBCA), and *Species at Risk Act* (SARA).

1.2 Scope

This preliminary AMP has been developed to satisfy the requirements outlined in the EIS guidelines and commitments made within the EIS regarding the development of procedures to

respond to avifauna emergencies and incidents, as well as monitoring procedures. The scope of this AMP includes the following:

- Identification of roles and responsibilities
- Mitigation measures (Appendix A)
- Avian collision and mortality monitoring
    - Carcass searches (wind)
    - Scavenger trials (wind)
    - Searcher efficiency trials (wind)
    - Data analysis (all)
    - Frequent monitoring for flares (industrial)
    - Incidental monitoring (all)
    - Contingency Plan (all)
- Nest sweeps
- Adaptive management
- Reporting and record keeping requirements

1.3 Revision & Document Control

This is a 'living' document and will be revised and updated, as necessary, to account for the changing Project activities and/or additional assessments completed as part of post-approval work. At a minimum, this document will be reviewed and revised, if necessary, on an annual basis. Revisions will be completed by the Proponent based on detailed design considerations, conditions from pending permitting, and construction and operational considerations and input where appropriate from specialist consultants.

1.4 Spatial Boundaries

The AMP applies to the immediate area in which the Project activities may occur and are likely to cause direct and indirect effects to avifauna within the Project Area (PA), which includes the following components:

- Wind Project Area (WPA) – the sum of all wind project areas
    - Botwood Wind Project Area (BWPA) – the individual Botwood Wind Project Area.
    - Leading Tickles Wind Project Area (LTWPA) – the individual Leading Tickles Wind Project Area.
    - Twin Lakes Wind Project Area (TLWPA) – the individual Twin Lakes Wind Project Area.
    - Seabrights Lake Wind Project Area (SLWPA) – the individual Seabrights Lake Wind Project Area.
- Industrial Project Area (IPA) – the industrial Project component Project Area.
- Solar Project Area (SPA) – the solar Project component Project Area.

Habitat loss, fragmentation, and injury/mortality have the potential to occur within the PA. Avifauna most affected within this boundary are birds flying through the WPA and IPA, as well

as nesting birds during construction, which may be at greater risk of direct interactions with infrastructure (e.g., turbines and flares) and equipment (i.e., vehicles).

2.0 ROLES AND RESPONSIBILITIES

The following roles and responsibilities will apply to personnel working on the Project and will require them to:

- Ensure that all avifauna protection measures are in place and are adhered to during work activities as described in this AMP and as applicable to their scope of work.
- Complete site orientation, including wildlife awareness training.
- Report all SAR observations and/or individuals in distress, to the Environmental Coordinator for assessment, tracking, reporting, and/or monitoring purposes.

2.1 Site Manager or Equivalent Role

The Site Manager or equivalent role will be a Proponent representative and will oversee the planning and execution of Project activities. The Site Manager will be responsible for the following tasks under the AMP:

- Ensure Project activities comply with applicable federal, provincial, and municipal standards or regulations.
- Retain all environmental incident forms, including all spills and any health and safety related incidents.
- Work closely with the Environmental Coordinator to implement mitigations outlined in this Plan and complete any external reporting.
- Implement corrective actions that may be a result of environmental matters including non-routine regulatory agency inspections or investigations, regulatory violations, and any assessed fines and penalties associated with adverse effects to avifauna.
- Maintain communication with regulatory agencies concerning biodiversity or environmental updates resulting from Project activities.

2.2 Environmental Coordinator or Equivalent Role

The Environmental Coordinator or equivalent role will be a Proponent representative and will implement the planning and execution of Project activities. The Environmental Coordinator will be responsible for the following tasks under the AMP:

- Work closely with the Site Manager to implement actions and mitigation measures outlined in this Plan.
- Advise Site Manager and Construction Manager on appropriate buffer zones and ensure they are flagged (as appropriate), established, and maintained for active nests and avian SAR.
- Assist with the submission of updates and reports, as necessary, to the appropriate provincial and federal authorities regarding avifauna injury, mortality, and avian SAR.

- Support the Site Manager regarding communication with regulatory agencies concerning biodiversity or environmental related updates resulting from Project activities.
- Conduct routine inspection, monitoring, and reporting to ensure compliance.
- Assist or implement with deployment and installation of controls and protection measures, as applicable.
- Assist Site Manager and Construction Manager in education activities to ensure Project personnel are aware of requirements outlined in this Plan.
- Maintain a record of avifauna sightings

2.3 Construction Manager or Equivalent Role

The Construction Manager or equivalent role will ensure that all on-site personnel hired to support Project construction are adequately trained and oriented to the avifauna protection procedures described in this AMP. This may be an external party if the Proponent sub-contracts all or portions of the site development/construction work to a third party. They will also be responsible to:

- Support the Environmental Coordinator with procurement of avifauna mitigation and control measures applicable to their scope of work.
- Communicate all avian sightings to the Environmental Coordinator in the event of a nest being encountered or an avian SAR being observed.
- Implement and enforce any Stop Work Orders and ensure that activities do not proceed until proper mitigation measures are in place.
- Maintain a list of avifauna sightings reported from Project personnel to provide to the Environmental Coordinator.
- Review any non-compliance events and support the Environmental Coordinator with implementation of corrective actions.
- Promote best management practices.
- Promote health and safety of personnel and avifauna.
- Ensure that the following are on-site:
    - Up-to-date design drawings including areas to be avoided (e.g., wetlands, watercourses, old-growth forest, SAR etc.).
    - Copy of any required approvals and permits.

3.0 REGULATORY REQUIRMENTS

This AMP has been developed in accordance with applicable laws and regulations relating to the protection of avian species, including the following:

Federal Legislation

- *Species at Risk Act S.C. 2002, c. 29*
- *Migratory Bird Convention Act, 1994*
- *Canada Wildlife Act*
- *Canadian Environmental Protection Act, 1999*

Provincial Legislation

- *Endangered Species Act, SNL 2001, c E-10.1*
- *Newfoundland Wild Life Act, RSNL 1990, c W-8*
- *Environment Protection Act,* S.N.L. 2002, c. E-14

3.1 Responsible Authorities

There are several federal and provincial departments that govern land-use and acceptable practices regarding avifauna and habitat protection. Any communication with external regulators will be completed by the Site Manager or delegate. Key departments include (list not exhaustive):

- Environment and Climate Change Canada (ECCC)
- ECCC-CWS
- Department of Forestry, Agriculture and Land (NLFAL-Wildlife Division)
- Newfoundland and Labrador Environment, Conservation and Climate Change (NLECCC)

3.2 Sensitive Timing Windows

Sensitive timing windows have been established for avifauna to reduce disturbances to avifauna during vulnerable life stages such as breeding, nesting, and migration periods (Table 3.1, below).

Table 3.1: Summary of Sensitive Timing Windows for Avian Species

Species/Group	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Raptor (breeding/nesting)												
Avian (spring/fall migration)												
Breeding Birds												

4.0 SUMMARY OF PRIORITY SPECIES

Avifauna SAR present in the PA or identified during desktop review and carried through the effects assessment in the EIS are summarized in Table 4.1.

Table 4.1: Avian Priority Species

Common Name	Scientific Name	COSEWIC Status	SARA Status	NLESA Status	NF S-Rank
Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	Vulnerable	S3S4
Olive-sided Flycatcher	*Contopus cooperi*	Special Concern	Special Concern	Vulnerable	S3B,SUM
Red Crossbill	*Loxia curvirostra*	Threatened	Threatened	Threatened	S1S2

Common Name	Scientific Name	COSEWIC Status	SARA Status	NLESA Status	NF S-Rank
Rusty Blackbird	*Euphagus carolinus*	Special Concern	Special Concern	Vulnerable	S2S3B,SUM
Newfoundland gray-cheeked thrush*	*Catharus minimus minimus*	--	--	Threatened	S2B,SUM

Source: [1]Government of Canada 2023, [2]Government of NL 2023, [3]ACCDC 2023

*Identified through desktop review and carried through the EIS.

This table will be reviewed and updated during annual document revisions; additional species may be added to this table. More detailed information on the locations of these SAR identified in the PA can be found in the EIS.

5.0 MITIGATION MEASURES

Mitigation measures that the Proponent has committed to throughout the EIS are detailed in Appendix A. Mitigation measures take into account the Project EIS guidelines (NLECCC, 2025) and are in compliance with the *Migratory Birds Convention Act*, 1994 and with the *Species at Risk Act*.

6.0 AVIAN MONITORING

The legislation and guidelines listed in the regulatory context section, as well as the EIS guidelines, will be referenced in the development of this management plan. Current post-EIS avian monitoring commitments made by the Proponent will be described in this section. This is a preliminary management plan, which will be finalized in consultation with ECCC-CWS and NLFAL following the submission of the EIS.

6.1 Avian Collision and Mortality Monitoring

Monitoring will occur for avian collisions and mortality relating to the Project. Methods, monitoring frequency, reporting, and a contingency plan for avian collision and mortality monitoring are described in the following sections. Mitigations associated with avian collision and mortality monitoring are provided in Appendix A.

6.1.1 Monitoring Frequency, Area and Methods

Monitoring frequency and methods are described by PA within this section.

6.1.1.1 Wind Project Area

Post-construction mortality/injury monitoring and carcass searches (e.g., including monitoring for predator removal of carcasses) will be conducted to assess mortality levels caused by turbine operations, for a minimum of one year, developed in consultation with government regulatory bodies (ECCC-CWS, 2022). Post-construction mortality monitoring will require an

MBR permit. Under the MBR, a scientific permit is required to possess and handle any stranded, injury, or dead migratory birds during mortality monitoring, including the collection of a migratory bird (dead or alive), feathers, or part of a migratory bird. Any birds found injured that may require transport to on-land facilities must also be reported. Record will be kept of such incidents.

During avian mortality monitoring, if continuous incidents and/or a concerning number (e.g., ten or more individuals or one SAR in a single event) of avian injuries and/or deaths occur, a report will be submitted to regulators and additional mitigation measures may need to be implemented in the future as part of the contingency plan and adaptive management (see Section 7).

Carcass Searches

Within the WPA, carcass searches will be conducted, where practical, to verify the accuracy of the pre-construction bird mortality predictions and identify any unexpected risks (ECCC-CWS, 2007a). During spring migration, a minimum of six to eight weeks of carcass searches should be conducted. During fall migration, a minimum of eight to ten weeks of carcass searches should be conducted. The number of years and duration of monitoring each year required will be determined through consultation with ECCC-CWS and NLFAL (ECCC-CWS, 2007b).

A subset of turbines will be selected to cover representative areas in consultation with ECCC-CWS and NLFAL (ECCC-CWS, 2007a). The search area selected for each representative turbine will be equal to the area cleared for the turbine pad and will be divided into equally spaced transects. The cleared area may vary between individual turbine pads (e.g., due to terrain, nearby sensitive features, etc.), therefore, the actual area searched will be calculated for each turbine's search area.

The methodology outlined in Recommended Protocols for Monitoring Impacts of Wind Turbines on birds (ECCC-CWS, 2007a) will be followed while conducting the surveys.

Methods for carcass searches include the following:

- Record the date and start and end time of the survey.
- Record weather conditions (e.g., wind speed and precipitation) at time of survey.
- Note any significant weather events between the survey dates (e.g., storm events, wind warnings, high levels of precipitation).
- Carcass searches should be conducted every 3 days at each site during the monitoring period, to minimize loss of carcasses due to scavenging, and to estimate more reliably the actual date/weather conditions when mortality took place. In some circumstances (e.g., presence of many, very efficient scavengers) it may be necessary to increase the frequency. Conversely, if carcass removal trials indicate that most carcasses persist for a week or more, then less frequent searches may be acceptable.
- Visual carcass searching tends to be most efficient in bright light conditions, with a light breeze (which can cause feathers to flutter), and when it has not rained recently (rain

tends to flatten feathers).
- Carcass searches should focus on the area where the search is most efficient – this will usually be the gravel pad at the base of the turbine, roads extending from it, and any areas of ground nearby that are either covered with short vegetation (e.g., grasses or low forbs) or are bare.
- Once a search area has been selected, searching should be undertaken uniformly throughout the search area, so that all parts of it are searched equally intensively.
- Whenever possible, searches should begin as soon after sunrise as practical, to minimize carcass loss from early morning scavengers.
- The search area of each plot must be recorded.
- The search pattern must remain the same for the entire duration of the monitoring program to maintain searcher consistency.

When a carcass is observed, the following data will be collected:

- The date and time found.
- The state of decomposition, to help estimate the number of days since death.
- The extent and type of injury sustained (if identifiable).
- The species (or the best estimate of species, if it is in too poor condition to identify completely).
- The distance and direction from the nearest turbine as well as global positioning system (GPS) coordinates of the carcass (to serve as a verification check).
- The substrate on which the victim was found.
- Information on average wind strength and direction on each night since the last search is also required.

Scavenger Trials

Scavenger trials will be conducted at least twice each season when searches are being completed to correct for carcasses that were scavenged before the carcass search period. The methods are as follows:

- Carcasses should be laid out in the search area, georeferenced by GPS, and then looked for on the day of the next carcass search. Carcass persistence should be examined over various intervals, either by setting out carcasses at different intervals before the search (e.g., some immediately after the previous search, others the day before), or by setting them out the night before a search, but then leaving all carcasses in place for up to 2 weeks, checking them on each search occasion for their persistence.
- Carcasses should be distributed at all turbines where searches are undertaken, with no more than two carcasses per turbine. A minimum of 20 carcasses per season should be distributed. Carcasses should be distributed across the range of different substrates being searched, roughly in proportion to their proportions in the search area (e.g., if 20% of the search area is a gravel pad and 80% is grass, then 20% of the carcasses should be placed on the gravel pad, and 80% in grass).

- A variety of carcass sizes may be used; however, if using size as an interaction (variable) proponents would need to ensure an adequate number of carcasses per size is used (minimum ten carcasses/size class is recommended) which may result in higher numbers of trial carcasses required.
- Carcasses used should be as fresh as possible as decomposed carcasses are less attractive to scavengers. If frozen carcasses are used, they shall be thawed prior to beginning the trials.
- All carcasses placed shall have an associated carcass ID number to properly keep track of which carcasses are lost during the trials to ensure proper reporting of carcasses.
- Carcasses should be placed using rubber (or other scent-free) gloves to avoid leaving a human scent that might bias trial results by attracting scavengers.

Searcher Efficiency Trials

Searcher efficiency trials test the field biologist's ability to find carcasses independently placed in the search area while surveying transects. These trials are conducted as efficiency can vary greatly among searchers, therefore influencing total mortality estimates.

Searcher efficiency trials will be conducted separately from the scavenger removal trials. Trials will be conducted for each person involved in carcass searches and will occur at the same time as regular carcass searches, without the searcher knowing to remove potential bias. An independent tester will randomly place a minimum of 20 carcasses per season throughout the Project, prior to the regularly scheduled carcass searcher. The number of carcasses will be determined in consultation with regulators. No more than two carcasses will be placed at a single turbine, and carcasses will be placed across various habitat types and vegetation visibility classes (easy, moderate, and difficult). Carcasses will be placed using rubber or other scent-free gloves to avoid leaving human scents that could bias results. Carcass locations will be recorded in UTM coordinates.

Carcasses used will be as fresh as possible (if frozen, they will be thawed) and can include carcasses found during carcass searches. No SAR carcasses will be used, and at least one third of the carcasses used will be bats. If bird and bat carcasses are not available, other small mammals or bird carcasses (e.g., mice, chicks) will be used that are similar in size and colouration. All carcasses will have an associated ID number identifying the season, and carcass identifier, and will include a discreet marking (e.g., clipping of ear, wing, leg, fur, etc.) so the tester can verify it as a trial carcass.

Searchers will survey the search area as usual during a carcass search, and at the end of the day, the tester will compare the number of carcasses found to the number of carcasses placed. If a carcass was not found by the searcher and is missing when the tester returns, it is considered scavenged and will not count against the searcher's efficiency.

Any carcasses that were not found should be retrieved immediately after the search to determine whether they were scavenged or overlooked. Optionally, they may then be left in

place as part of a scavenger efficiency trial, unless they are required for further searcher efficiency trials.

Data Analysis

As the survey protocol from ECCC-CWS (2007a) does not include specific calculations to be used in the data analysis, the following methodology has largely been adapted from Ontario Ministry of Natural Resources (OMNR, 2024).

Scavenger Correction Factor

The proportions of carcasses remaining after each visit will be pooled to calculate the overall scavenger correction (S_c) factors:

$$S_c = \frac{n_{visit1} + n_{visit2} + n_{visit3\ldots} + n_{visit8}}{n_{Visit0} + n_{visit1} + n_{visit2\ldots} + n_{visit7}} \quad \textit{Eq. 1}$$

Where:

- S_c = the proportion of carcasses not removed by scavengers over the search period.
- n_{visit0} = the total number of carcasses placed.
- n_{visit1} to n_{visit8} = the numbers of carcasses remaining on visits one through eight.

Searcher Efficiency

Searcher efficiency (S_e) will be calculated for each searcher as follows:

$$S_e = \frac{number\ of\ test\ carcasses\ found}{number\ of\ test\ carcasses\ placed - number\ of\ carcasses\ scavenged} \quad \textit{Eq. 2}$$

The number of turbines that each individual searches will vary; therefore, a weighted average or overall searcher efficiency will be calculated that reflects the proportion of turbines each searcher searched:

$$S_{eo} = S_{e1}\left(\frac{n_1}{T}\right) + S_{e2}\left(\frac{n_2}{T}\right) + S_{e3}\left(\frac{n_3}{T}\right) \ldots \quad \textit{Eq. 3}$$

Where:

- S_{eo} = the overall searcher efficiency.
- S_{e1} and $_2$ and $_3$ = individual searcher efficiency ratings.
- n_1 and $_2$ and $_3$ = the number of turbines searched by each searcher.
- T = the total number of turbines searched by all searchers.

Proportion of Area Searched

The proportion of area searched (P_s) will be calculated as follows:

$$P_s = \frac{actual\ area\ searched}{\pi r^2} \quad \textit{Eq. 4}$$

Where:

- P_s = the proportion of the area searched.
- r = the search radius.

Or:

$$P_s = \frac{actual\ area\ searched}{l * w} \quad \textit{Eq. 4}$$

Where:

- P_s = the proportion of the area searched.
- l = the length of the search area
- w = the width of the search area

Corrected Mortality Estimates

The minimum estimated bat mortality (C) is calculated as follows:

$$C = \frac{c}{(S_{e0} \times S_c \times P_s)} \quad \textit{Eq. 5}$$

Where:

- C = the corrected number of bat fatalities.
- c = the number of carcasses found.
- S_{e0} = the weighted proportion of carcasses expected to be found by searchers (overall searcher efficiency).
- S_c = the proportion of carcasses not removed by scavengers over the search period.
- P_s = the proportion of the area searched.

6.1.1.2 Solar and Industrial Project Area

On-site Project workers will be trained in avian mortality and injury reporting. Avian mortality and injuries will be documented opportunistically during routine operations by the trained onsite staff within the IPA and SPA.

Opportunistic monitoring (e.g., during routine inspections – morning if possible) will occur for bird injuries and mortalities around the flare stacks when the flare stacks are in operation, particularly when flare stacks are in operation during nights in peak spring and fall migration

periods (i.e., April to May, and mid-August to October).

If an injured or deceased bird is encountered, report to the Environmental Coordinator through the Construction Manager. The Site Manager will be responsible for all external communications.

The threshold for action would be ten or more avian injury or mortalities documented, or in the event of the mortality or injury of an individual avian SAR, in a single day and related to the Project. If this occurs, the reporting procedure outlined in Section 8.1 must be followed, and the Proponent must contact the provincial or federal regulators (NLFAL or ECCC-CWS) within 24 hours to determine next steps such as additional mitigation measures or monitoring.

6.1.1.3 Estimating Mortality Using Other Methods

Analysis of post-construction mortality and injury surveys should be paired with radar and acoustic monitoring data. Radar and acoustic monitoring will provide context for the localized impacts on birds (ECCC-CWS, 2022). The results of these surveys will help identify any changes resulting from the Project to bird diversity and numbers by comparing the data collected to the pre-construction data. Requirements for these surveys will be determined through consultation with ECCC-CWS.

6.1.2 Reporting

Workers must report active nests and incidents (e.g., injury or mortalities) to the Environmental Coordinator through the Construction Manager as soon as possible. The Environmental Coordinator (or equivalent role) will keep a record, which will include date, time, location (GPS coordinates), observer, species, and number of individuals, as well as any other important notes such as state, behaviour, and/or habitat type. Photos and/or video footage will be included with the records if possible.

Workers should not touch any injured or deceased birds without specialized training to reduce the risk of pathogens (e.g., avian flu). While the mortality monitoring program (carcass searches) is occurring, carcasses must not be removed from turbine pads and workers must stop work and report any injured or deceased birds to the Environmental Coordinator immediately who will inform the surveyors conducting carcass searches.

An annual report will be prepared following each monitoring year and will be submitted electronically to NLFAL, ECCC-CWS, and the Birds Canada Wind Energy Bird & Bat Monitoring Database. The annual report will detail results of the carcass searches, scavenger removal trials, searcher efficiency trials, and any supplemental methods used. The report must be provided to CWS by December 31 of the same calendar year in which monitoring took place (ECCC-CWS, 2022).

ECCC-CWS will be notified by the Site Manager within 24 hours in the event of the mortality or injury of ten or more migratory birds in a single event or in the event of the mortality or injury of an individual avian SAR. Under the MBR, a scientific permit is required to possess or handle

any stranded, injured, or dead migratory bird. Under the Migratory Bird Regulations (MBR), a scientific permit is required to possess or handle any stranded, injured, or dead migratory bird. Any birds found injured that may require transport to on-land facilities must also be reported. Record will be kept of such incidents.

6.2 Nest Sweeps

Migratory birds are known to nest on human-built structures such as bridges, ledges, and gutters [e.g., doves and barn swallows (*Hirundo rustica*)], as well as on the ground in disturbed areas [e.g., killdeer (*Charadrius vociferus*)]. Specific species are known to nest in burrows in stockpiles or the banks of pits [e.g., bank swallow (*Riparia riparia*)]. During construction and operation of all three components of the Project, workers will need to monitor for any active stick nests, ground-nesting, cavities, or burrows during the breeding season. If a nest is found in an active work area, a buffer will need to be created until the nest is no longer active. Further details are provided below regarding this process.

6.2.1 Monitoring and Reporting

Nest Sweeps

- If vegetation removal is required within the breeding/nesting window (April 1 to September 30), the footprint must first be cleared via a nest sweep by an avian biologist with demonstrated experience in identifying bird nests.
    - For any active nest identified, an appropriately sized buffer will be established according to the severity of disturbance and species identified. Flagging tape may be placed at the limits of the buffer zone. There will be no flagging/marking of the exact locations of nests as this can increase the risk or predation or cause undue stress to avifauna.
    - If a nest of a SAR is detected, ECCC will be contacted by the Site Manager for further instruction. Note that, based on SARA, protections may extend beyond the nest and include the residence of that nest for SAR (e.g., dead or living trees, cavities, etc.). The structure housing the nest may be considered a residence throughout the year.
    - Commencement of Project activities/clearing within the buffer zone of an identified nest will not begin until the Environmental Coordinator has confirmed that the nest has been abandoned by the bird.
- Timing of clearing activities is generally dependent on seasonal conditions. If vegetation and tree clearing activities during the nesting/breeding season cannot be avoided, nest sweeps will be conducted by a qualified avian biologist and in consultation with ECCC-CWS to search for any confirmed breeding activity which must be avoided (i.e., active nests and recently fledged juveniles). Regulatory bodies will be contacted, when necessary, to receive advice on construction buffers for any avian activity that must be avoided during the nesting/breeding season.
- Monitor known nests around stockpiles and exposed areas from a distance with a spotting scope or binoculars to verify the effectiveness of the buffer until the nests are inactive.

When vegetation and tree clearing activities take place during the non-nesting/breeding season, crews must be aware of and monitor for nests protected year-round under the 2022 update to the Migratory Bird Regulations (under the *MBCA*). If a nest of a species with year-round protection is discovered in an area proposed for vegetation removal, consult with ECCC for further instruction.

There are 18 species of migratory birds identified on Schedule 1 of the MBR (2022) that have year-round nest protection until they can be deemed abandoned. Some of these species, with their associated protection time, include:

- Atlantic puffin (*Fratercula arctica*) – 12 months
- Northern gannet (*Morus bassanus*) – 12 months
- Leach's storm petrel (*Hydrobates leucorhous*) – 12 months
- Great blue heron (*Ardea herodias*) – 24 months
- Green heron (*Butorides virescens*)– 24 months
- Pileated woodpecker (*Dryocopus pileatus*) – 36 months
- The full list of 18 species can be viewed at: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/fact-sheet-nest-protection-under-mbr-2022.html#toc4

ECCC only needs to be informed, through application, if there is a need to damage, destroy, disturb, or remove an abandoned nest of a Schedule 1 species. Review the MBR (2022 updates) for more details.

Nest Reporting

Nest sweeps are to be conducted by an avian biologist, and associated reports will be kept on record by the Environmental Coordinator.

Workers must report active nests, established seabird colony sightings, and incidents (e.g., active nest disturbance/destruction, injury, or mortalities) to the Environmental Coordinator through the Construction Manager as soon as possible. The Environmental Coordinator will keep a record, which will include date, time, location (GPS coordinates), observer, species, and number of individuals, as well as any other important notes such as state, behaviour, and/or habitat type. Photos and/or video footage will be included with the reports if possible.

Workers should be aware of breeding behaviours that birds exhibit that may indicate a nearby nest (Stewart et al., 2015), which should also be reported to the Environmental Coordinator for further investigation:

- Distraction display or injury feigning (e.g., dragging a wing, limping, distressed calling).
- Nest building (including tree cavities and sediment burrows) or adult carrying nesting material.
- Used nest or eggshells found (occupied or laid within the period of the survey).
- Recently fledged young (nidicolous species) or downy young (nidifugous species),

including incapable of sustained flight.
- Adult carrying a white, round fecal sac.
- Adult carrying food.
- Nest with young heard crying for parental care.

Nests that are being built are also considered as active and as confirmed breeding evidence as per the Maritime Breeding Bird Atlas (Birds Canada, n.d.).

Workers must immediately stop work and report active nests to the Environmental Coordinator through the Construction Manager so proper measures can be taken, as described above (e.g., implementing a buffer, consulting with regulatory bodies, etc.).

NLFAL and ECCC-CWS will be consulted within 24 hours on issues by the Site Manager (or delegate) relating to the destruction/disturbance of active bird nests.

7.0 ADAPTIVE MANAGEMENT

Workers must report active nests, seabird colony sightings, and incidents (e.g., injury or mortalities) to the Environmental Coordinator through the Construction Manager as soon as observed (same day). The Environmental Coordinator will keep a record, which will include date, time, location, observer, species, and number of individuals, as well as any other important notes such as state, behaviour, and/or habitat type. Photos and/or video footage will be included with the reports if possible.

Thresholds for adaptive management (e.g., bird deterrents, transmission line modifications, lighting modifications) include any injury or mortality event that requires reporting to government regulatory bodies, as described below.

If avifauna interaction rates become concerning (i.e., ten or more individuals in a single event, or multiple injury and/or mortality events over time in a specific location, especially of SAR birds), adaptive management options will be considered, reviewed with the regulator, and may include:

Wind Project Area

- Implementation of audio or visual deterrents (e.g., birds of prey calls, reflector tape, etc.) in high-risk areas.
- Installation of perch guards and bird diverters/deflectors on infrastructure (e.g., pipes, buildings, lines/wires, etc.) to limit interactions with birds.
- Implement adaptive measures such as audio (e.g., birds of prey calls) or visual deterrents (e.g., reflector tape) if bird interactions in active quarry areas become a problem (e.g., interaction with equipment, nesting in active areas, etc.).

Solar Project Area

- Implementation of audio or visual deterrents (e.g., birds of prey calls, reflector tape,

etc.) in high-risk areas.
- Installation of perch guards and bird diverters/deflectors on infrastructure (e.g., pipes, buildings, flare stacks, lines/wires, etc.) to limit interactions with birds.
- Install netting or sonic bird repellents to prevent collisions and deter birds from landing or roosting on solar panels.
- Adjust solar panel angles to minimize glare and bird reflections during peak migration periods (e.g., April to May, and mid-August to October).

Industrial Project Area

- Implementation of audio or visual deterrents (e.g., birds of prey calls, reflector tape, etc.) in high-risk areas.
- Installation of perch guards and bird diverters/deflectors on infrastructure (e.g., pipes, buildings, flare stacks, lines/wires, etc.) to limit interactions with birds.
- Implement adaptive measures such as audio (e.g., birds of prey calls) or visual deterrents (e.g., reflector tape) if bird interactions in active quarry areas become a problem (e.g., interaction with equipment, nesting in active areas, etc.).
- Alter vents at the industrial facility to prevent birds from tendering (e.g., installing cone-shaped mesh covers) on all open vents.
- Shutting down operations that require flare use during high-activity migration periods or nights with low visibility during peak migration periods (e.g., foggy, low cloud ceiling, etc.).

7.1.1 Contingency Plan

Contingency planning should be initiated when the results of monitoring suggest that there are negative impacts to birds and mitigation measures implemented to date are ineffective. One or more of the following contingency plan options should be considered for immediate implementation if negative impacts to birds are determined following monitoring:

- Employ active deterrents such as sonic devices to scare birds away from flares, solar panels, and high-risk turbines.
- Employ visual deterrents around the solar panels, such as reflective tape or predator decoys to scare birds away.
- Intensify carcass searches in areas with high mortality rates for a period determined in consultation with ECCC-CWS.
- Reduce nighttime lighting on vessels and in the Industrial Facility during migration periods (i.e., motion sensors, light directed downwards).

Consultation with ECCC-CWS and/or NLFAL will be completed to determine the appropriate contingency plan options based on the avian observations, behaviour, and data collected during the pre- and post-monitoring periods. Additional contingency plan options may be determined in conjunction with ECCC-CWS and/or NLFAL following consultation. The results of implementing contingency plan options should be included in the final report.

8.0 REPORTING AND RECORD KEEPING REQUIREMENTS

8.1 Reporting Procedures

The Site Manager is responsible for maintaining record of and conducting all external communications and reporting for the Project.

The Proponent will maintain records of all avifauna sightings, issues, and incidents. All reportable avifauna and active nest/cavity sightings and encounters must be reported to the Environmental Coordinator through the Construction Manager.

NLFAL and ECCC-CWS will be consulted within 24 hours on issues by the Site Manager (or delegate) relating to the destruction/disturbance of active bird nests, issues relating to SAR (e.g., active nests, injury, or death), or the injury/mortality of ten or more migratory birds in a single event.

Any birds found injured that may require transport to on-land facilities must also be reported. Record will be kept of such incidents.

All on-going monitoring programs will be recorded, with reports submitted to NLFAL and ECCC-CWS as requested or as applicable.

8.2 Record Keeping Requirements

All records associated with this AMP will be kept on file under the care and control of the Site Manager. The records will be kept in hardcopy and/or electronic versions and stored in such a way as to provide ease of access as well as ensure that deterioration, damage, and loss is prevented.

9.0 COMMUNICATIONS

9.1 Key Contacts

Contact details and information regarding everyone's role will be prepared and updated during annual revisions, at the beginning of each phase of the Project, or when there is a personnel change for the following roles:

- Site Manager
- Environmental Coordinator
- Construction Manager

9.2 Training Requirements

All personnel working on-site will receive orientation (through the Environmental Coordinator) specific to the AMP and education and training, which will include a review of the AMP, Species Identification Guide (SAR in particular), sensitive periods for avifauna, nest identification and breeding behaviour training, and commitments made to minimize impacts to

avifauna.

The Environmental Coordinator will be trained to identify breeding behaviour (as per the Maritime Breeding Bird Atlas), bird nests/cavities and appropriate buffers regarding construction activity, and bird species (SAR in particular) that have the potential to occur on/near the Project. This will facilitate routine monitoring and reporting to authorities, and the investigation of any incidents. The Environmental Coordinator will also be trained on all aspects of monitoring activities specific to this AMP.

If additional training is required, specialized practitioners (i.e., professional biologist or equivalent) may be employed or consulted to support the Environmental Coordinator if/as needed.

10.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of EVREC (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
- represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

Consultant will be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

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Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Emily MacLean, Environmental Scientist and reviewed by Jessica Lohnes, Terrestrial Specialist, and Mark MacDonald, Senior Terrestrial Lead.

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APPENDIX A
MITIGATION MEASURES

MITIGATION MEASURES

Potential environmental effects and associated pathways of the Project in relation to avifauna are grouped into three major categories:

- Habitat Loss, Alteration, and Fragmentation
- Injury and/or Mortality
- Sensory Disturbance

Habitat loss, alteration, and fragmentation are expected to occur primarily during construction activities such as vegetation clearing and grubbing, infrastructure placement, and road development. Injury and mortality may result from collisions with wind turbines, transmission lines, flares, buildings, and vehicles. Sensory disturbance from construction and operational activities may disturb avifauna due to increased noise and light. The following sections provide mitigations for these effects.

1.1 Habitat Loss, Alteration, and Fragmentation

- Adhere to Environment and Climate Change Canada (ECCC) guidelines on clearing windows for nesting migratory birds, where possible. Due to seasonal variability regarding conditions, if vegetation and tree clearing activities during the nesting/breeding season cannot be avoided, nests will be marked and avoided by appropriate buffers if found.
- Avoid disturbance of any ground- or burrow-nesting species should they initiate breeding activities within stockpiles or exposed areas during construction or operations, until chicks can fly, and the nesting areas are no longer being used. Exposed stockpiles will be limited, covered, or vegetated as much as possible during construction and operation phases.
- Limiting and managing exposed sedimentation banks to reduce the attraction of burrow-nesters such as bank swallows (e.g., maintain at least a 70 degree-slope), as per ECCC best management practices and recommendations.
- Develop a site reclamation plan in accordance with engineering standards and in consultation with NLECCC and NL Department of Forestry, Agriculture, and Lands (NL FAL).

1.2 Injury and Mortality

- Monitor for bird injuries and fatalities frequently within the Project Area (PA). ECCC-CWS will be notified in the event of mortality or injury. Under the Migratory Bird Regulations (MBR), a scientific permit is required to possess or handle any stranded, injured, or dead migratory bird. Any birds found injured that may require transport to on-land facilities must also be reported. Records will be kept of such incidents.
- Obstruction lighting marking the flare stacks will use lights with short flash durations and the ability to emit no light during the “off-phase” of the flash (i.e., LED lights), with the minimum number of flashes per minute and the briefest flash duration allowable, as recommended by CWS.

- Equip the flare stacks with a custom-fitted spike collar to deter birds from perching on the stacks.
- Eliminate suitable perching areas within a 120 m radius of the flare.
- Where feasible, tinted or frosted glass windows will be used in buildings to reduce bird mortality from collisions.
- Perform routine checks for bird injuries and fatalities especially when the flare stacks are in operation during nights in peak spring and fall migration periods (i.e., April to May, and mid-August to October).

1.3 Sensory Disturbance

- Establish and implement speed limits to minimize dust and potential collisions.
- Conduct regular maintenance of machinery and equipment to ensure they are in good working order to minimize potential noise and air emissions and increase fuel efficiency.
- Use noise controls (e.g., mufflers) on machinery and equipment, where applicable, to limit disturbance.
- Feeding, hunting or harassment of wildlife by onsite Project personnel will be prohibited.
- Require that fuel storage areas, refueling and equipment lubrication are located a minimum of 30 m from any surface water feature. Implement a hazardous substances management and spill prevention plan, which outlines the requirement for spill kits on all equipment as needed.
- Incorporate a lighting plan for construction-related activities into the EPP.
- Limit unnecessary lighting as much as possible, especially at night.
- Follow Transport Canada requirements for navigational hazard markings and lighting on transmission lines, including the installation of strobe or intermittent/flashing lighting.

APPENDIX Q.2
Emergency Response Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

EMERGENCY RESPONSE PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, it's professional advisers and contract staff engaged on the project that is specificically engaged in the project.

TABLE OF CONTENTS

Table of Contents 2
1. INTRODUCTION 4
1.1. Guideline Requirements 4
1.2. Purpose Of This Document 4
1.3. Objective 4
2. PROJECT DESCRIPTION 5
2.1. Site Location 6
3. REGULATORY CONTEXT 7
3.1. Federal Regulatory Requirements 7
3.2. Provincial Regulatory Requirements 8
3.3. Municipal Regulatory Requirements 9
4. EMERGENCY RESPONSE PLAN GUIDELINES 10
4.1. Operations Information 11
4.2. Emergency Response Organization 12
4.3. Contractors (Construction and Maintenance) 17
5. EMERGENCY RESPONSE PLAN DETAILS 17
5.1. Emergency Categories 17
5.2. Classification of Emergencies 18
5.3. Emergency Communication 20
5.4. Coordination With Outside Authorities 22
5.5. Coordination With Local Authorities 22
5.6. Scenario Specific Emergency Response Procedure 23
5.7. Inclement Weather 45
5.8. Wildlife Incidents 56
6. OTHER INFORMATION 56
6.1. Local Community Liaison 56
6.2. Emergency Communications 57
6.3. Hazard Recognition And Assessment 57
6.4. Emergency Response Plan Holders 60

7. PERIODIC REVIEW / AUDIT.....60
8. COMPANY INFORMATION.....61
9. REFERENCES.....61
10. LIST OF ABBREVIATIONS.....61

Appendix A Wildlife Response Plan

1. INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt3.5-gigawatt (GW) green hydrogen Project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3,54,000+megawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. Guideline Requirements

"The EIS shall include an Engagement and Participation Plan that describes how local communities, cottage owners, recreational users, and interested persons can meaningfully participate in the planning of all phases of the Project (construction, operation and maintenance, decommissioning and rehabilitation) and how they will continue to be engaged throughout the life of the Project, including in the monitoring of environmental effects".

1.2. Purpose Of This Document

This Emergency Response Plan (ERP) has been developed to satisfy Section 10 of the Environmental Impact Statement (EIS) Guidelines (DECC 2025) and Section 58 of the Newfoundland and Labrador Environmental Protection Act (EPA).

1.3. Objective

EVREC is committed to protecting the safety of its personnel, contractors, the public and the environment. Upholding this commitment requires extensive planning and preparation. The purpose of an emergency response plan / emergency action plan is to outline, in advance, the specific procedures and actions that should be taken in the event of an

emergency or crisis. The primary goals of such a plan are to protect lives, minimize injuries, prevent property damage, and ensure the continuity of essential functions during and after an emergency.

This plan applies to all employees of EVREC and its contractors and employees.
When encountering a situation which has not been expressly addressed in this plan, use good judgement to respond safely.

This Emergency Response Plan / Emergency Action Plan (EAP) has been developed based on early-stage engineering and as such many of the necessary design details have not yet been completed that would be needed to underpin detailed emergency response procedures. As design progresses through planned and normal design development, including detailed design and construction, this plan will be updated accordingly.

2. PROJECT DESCRIPTION

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabright's Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two air separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- 1000 MWh of battery storage for critical loads; and
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to achieve the electrolyzer feedwater quality requirements, and that treated discharge water complies with regulatory standards prior to being discharged back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood.
    - Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond.
    - Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

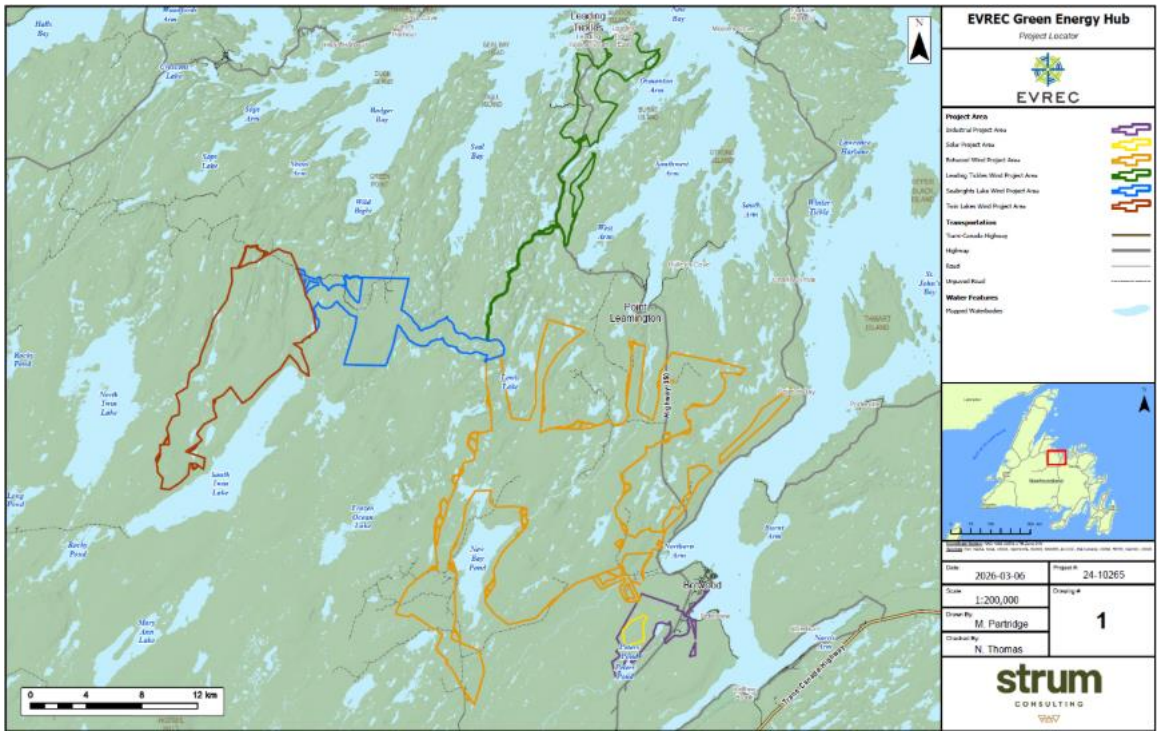

Figure 1: Overview of Project Lands

3. REGULATORY CONTEXT

3.1. Federal Regulatory Requirements

3.1.1. Canada Shipping Act, 2001 (CSA)

The CSA establishes the Port's obligations relating to:

- marine incidents and vessel emergencies;
- pollution prevention and response;
- reporting requirements for spills, casualties, and hazardous occurrences;
- safe vessel-shore interactions during emergency operations.

The Act also mandates coordination with the Canadian Coast Guard (CCG) and Transport Canada Marine Safety for incidents involving vessels, pollution, navigation hazards, or safety of life at sea.

3.1.2. Fisheries Act

Emergency actions must prevent or minimize release of deleterious substances into water frequented by fish.

The Act requires:

- immediate reporting of spills to water;
- mitigation to protect marine habitat;
- enforcement coordination with Fisheries and Oceans Canada (DFO).

3.1.3. Canadian Environmental Protection Act (CEPA)

Relevance includes:

- Environmental Emergency (E2) Regulations, where applicable;
- prohibitions on unauthorized releases of toxic substances;
- management of air emissions, fuel, chemicals, and pollutants during emergencies.

3.1.4. Transportation of Dangerous Goods Act (TDG)

Emergencies involving dangerous goods (e.g., fuels, chemicals, hazardous cargo) must follow TDG requirements for:

- response actions;
- containment;
- documentation;
- reporting to authorities.

3.1.5. Incident Command System (ICS) Guidance

The federal all-hazards ICS framework is the basis for:

- command hierarchy;
- response coordination;
- unified command with external agencies.

The ERP adopts ICS principles for scalable, coordinated emergency response.

3.2. Provincial Regulatory Requirements

3.2.1. Newfoundland and Labrador Environmental Protection Act (NL EPA)

EVREC must:

- prevent environmental harm;
- report any environmental emergency;
- clean up and mitigate contamination;

- cooperate with provincial regulators during incident response.

3.2.2. Water Resources Act

Applies to any emergency involving:

- water contamination;
- impacts to drainage systems;
- releases affecting nearshore marine environments.

3.2.3. Occupational Health and Safety Act and Regulations

Applies to all workers at within the EVREC Project, covering:

- emergency procedures for fire, explosions, chemical exposure, and confined-space incidents;
- first aid, rescue plans, and worker protection;
- hazard communication and control measures.

3.2.4. Emergency Services Act (NL)

Defines expectations for:

- coordinating with municipal emergency services;
- escalating emergencies beyond local capacity;
- integrating with provincial emergency management processes.

3.3. Municipal Regulatory Requirements

Town of Botwood Emergency Services

EVREC must coordinate closely with:

- Botwood Fire Department (primary fire and rescue authority),
- Local EMS and medical responders,
- Municipal officials involved in public communication and incident coordination.

Municipal bylaws also apply to:

- fire prevention;
- building access;
- emergency routes and traffic control during incidents.

4. EMERGENCY RESPONSE PLAN GUIDELINES

Exploits Valley Renewable Energy Corporation is committed to maintaining a safe and healthy workplace for employees, the community, and the environment. Identifying and preventing emergencies, along with preparing for effective response, is a priority for all personnel. Although accidents and emergencies may occur, this Emergency Response Plan (ERP) outlines coordinated procedures to manage such situations.

The ERP has been developed with consideration of both regulatory requirements and site-specific hazards to ensure a comprehensive approach to emergency management. The plan outlines clear procedures for identifying, reporting, and managing emergencies, and assigns responsibilities to trained staff members for prompt and effective action. It serves as a foundational document to guide the site's preparedness and response efforts, supported by ongoing training, drills, and reviews to maintain a high standard of safety and compliance.

The ERP relies on established Incident Command System methods. When necessary, all departments, mutual aid organizations, and municipal agencies work together to respond to emergencies efficiently and safely.

Alongside coordinated efforts, regular communication and joint training with supporting agencies will ensure all stakeholders understand their roles in emergencies. These collaborations improve situational awareness, interagency cooperation, and resource sharing. The ERP supports ongoing improvement and adaptability to protect personnel, the community, and the environment as the site and its risks change.

For this document, an emergency refers to any actual or potential situation that could lead to serious injury, loss of life, property damage, including incidents such as fire, explosion, or equipment damage—or environmental effects like spills or releases of hazardous substances (such as ammonia or fuel).

Such emergencies require immediate assessment and action to mitigate harm and protect both individuals and the environment. In accordance with Section 4 of the National Fire Code, facilities handling or storing flammable and combustible liquids must have an ERP in place, with regular fire drills and plan reviews conducted at least annually. All personnel involved in site operations are expected to be thoroughly familiar with the ERP, participate in ongoing emergency response training, and take part in drills to test the effectiveness of procedures and clarify roles and responsibilities. Specialized teams, such as the Hazardous Material Response Team, receive additional targeted training as needed, while the Emergency Response Team focuses on defensive strategies rather than interior structural fire suppression. Annual training extends to all staff, covering fire extinguisher use, spill response, fire prevention, and facility evacuation procedures, with those assigned firefighting duties receiving further instruction in line with National Fire Protection Association standards. The Training Coordinator is responsible for ensuring that a sufficient number of employees are prepared to assist with safe evacuations, and all staff are trained

regularly on the Incident Command System to support coordinated and efficient emergency response.

Section 4 of the National Fire Code requires facilities storing, handling, or using flammable and combustible liquids to maintain an Emergency Response Plan (ERP) on site. Fire drills must be held at least annually, and the ERP reviewed every 12 months. All operational personnel will be trained in emergency response procedures and participate in yearly drills to ensure familiarity with their roles. The Hazardous Material Response Team trains more frequently as outlined in its plan, while the Emergency Response Team performs only defensive actions, not interior structural fire suppression.

All staff receive annual training on fire extinguisher use, spill responses, fire prevention, and emergency evacuation. Employees with firefighting duties are trained annually in fire suppression methods, prevention, emergency protocols, organizational structure, crew safety, and communications per National Fire Protection Association standards. The Training Coordinator ensures enough employees are prepared for safe evacuations during emergencies. Staff are also trained yearly on the Incident Command System through classroom sessions and spill drills.

4.1. Operations Information

The operations encompass a hydrogen and ammonia production facility located on a brownfield site outside the Town of Botwood, 3 onshore wind farms situated in areas identified as Twin Lakes, Seabright's Lake and Botwood located in central Newfoundland and Labrador.

Upon identification of a hazard, it is essential to thoroughly assess the potential risk of loss of human life, including that of the employee addressing the hazard, as an integral component of incident response procedures. Given that the facility utilizes electrolysis to generate hydrogen, which is subsequently used for ammonia production destined for export, emergency response planning must systematically address the potential risks and hazards associated with these processes. Additional details regarding these two processes and their products are provided below.

Hydrogen:
Hydrogen is generated through an electrolyzer plant, utilizing renewable electricity to separate hydrogen from purified water. An electrical current is applied to water (H_2O), effectively splitting the molecules into hydrogen (H_2) and oxygen (O_2). The resulting hydrogen gas is subsequently captured, purified, and compressed for direct utilization, storage, or distribution. Oxygen may be collected for alternative applications or vented safely to the atmosphere. Hydrogen is conveyed to the ammonia production loop via engineered piping systems. Onsite hydrogen storage serves to buffer the flow between the electrolyzer and ammonia units; it is stored in a gaseous state in stationary aboveground

containers, comprised of multiple cylindrical steel composite pressure vessels, which are mounted within a frame and installed on a concrete foundation.

Flammability and explosion constitute the primary hazards associated with gaseous hydrogen. Its broad flammability range and minimal energy requirement for ignition necessitate specialized handling procedures to mitigate mixing with air. Hydrogen fires may produce nearly invisible flames, complicating flame identification and source detection. Potential ignition sources, such as electrical equipment sparking, static electricity, open flames, and extremely hot surfaces, must be eliminated from the vicinity of hydrogen sources to prevent accidental ignition. Ventilation systems are meticulously designed to exhaust hydrogen to secure locations and to avert backflow.

Ammonia:
Ammonia is produced through the "Haber Bosch" process, in which hydrogen is combined with nitrogen sourced from the air via an air separation unit (ASU). This synthesis occurs under elevated temperatures and pressures in the presence of an iron catalyst to yield ammonia. The resulting ammonia is subsequently liquefied through refrigeration and transported via pipeline to the existing marine facility at the Port of Stephensville for overseas shipment. Prior to export, ammonia is stored in double-walled, insulated, low-pressure tanks equipped with refrigeration to maintain appropriate temperatures.

Ammonia is designated as a liquefied, flammable, and corrosive gas under the International Fire Code (IFC) and the National Fire Protection Association (NFPA) classifications. According to the Globally Harmonized System (GHS), it is categorized as a Category 2 Flammable Gas (with a Lower Explosive Limit exceeding 14 v/v%), a Category 1B Skin Corrosive (for corrosive responses within one hour), and a Category 4 Acute Toxicant based on an inhalation toxicity of approximately 3700 ppm over four hours. Stricter personnel exposure standards are observed; the American Conference of Governmental Industrial Hygienists (ACGIH) stipulates a short-term exposure limit (STEL) of 35 ppm (for periods of 5 to 15 minutes) and a time-weighted average (TWA) limit of 25 ppm. Production and storage practices adhere to applicable codes and standards, specifically NFPA 55 and API 620, which govern the design of storage facilities and the implementation of safety systems to protect both personnel and the environment.

4.2. Emergency Response Organization

4.2.1. Facility Manager

The facility manager outlines the roles of everyone involved and takes charge of defining mission-critical functions and identifying where vulnerabilities might lurk. This process involves coordinating all elements of the preparedness plan, ensuring clear communication with all stakeholders, conducting drills to identify weak points, and continuously refining the plan based on evolving needs, new circumstances, and stakeholder feedback. Following an incident the Facility manager will:

- Reports to the Incident Command Site (ICS).
- In the absence of the Emergency Coordinator (EC) assumes the role of EC
- Receives briefing from the Emergency Management Team personnel on-site.
- Provides process operations managerial and tactical support to the Emergency Coordinator such as product transfer, isolation, and de-pressurization of equipment.
- Provides the Emergency Coordinator with process operational information updates relevant to emergency response activities.
- Provides for the continued safe operation or shutdown of plant process facilities.
- Assists in post emergency re-start-up of the process following Process Safety SOPs

Duties during an emergency:

- Reports to Command Post/Staging area and checks in with Facility Manager.
- Dons 'turnout gear.
- Enters the affected area and performs emergency response duties as directed by the Operations Chief.
- Responds to HAZMAT incidents and participates in HAZMAT operations level activities as directed by the Facility Manager.

Duties Post-Emergency:

- Assists with post emergency operations ensuring that emergency equipment is back in service.
- Participates in formal critique session.

4.2.2. Safety Officer

The Safety Officer is responsible for overseeing incident operations and offering guidance to the Emergency Coordinator regarding operational safety, which includes ensuring the well-being of incident. personnel. The Safety Officer performs the following tasks:

- Establishes direct communication with the Emergency Coordinator.
- Briefs the Emergency Coordinator on relevant information.
- Participates in strategy planning meetings.
- Identifies potential hazards related to the health and safety of the Emergency Response Team.
- Develops an on-site safety and health plan as required.
- Coordinates joint monitoring activities with municipal agencies and activates Odor Patrol as necessary.

- Provides support staff for industrial hygiene as needed.
- Offers qualified relief support for the Emergency Response Team.
- Establishes and oversees on-site medical first aid sites and emergency triage areas as necessary.
- Coordinates emergency medical services, including notifying and alerting local ambulance services.
- Arranges for additional security personnel and directs security efforts.
- Coordinates off-site community air monitoring programs through the Environmental Unit Leader.

4.2.3. Environmental Officer

Oversees environmental compliance issues in conjunction with the emergency response coordinator.

- Reports to the Incident Command Site for a briefing.
- Consults with the Facility Manager on environmental issues.
- Acts as liaison with Federal, Provincial, and Local agencies concerning environmental issues.
- Oversees post emergency clean-up operations including off-site oil spill emergencies.
- Notifies the Provincial Emergency Response Centre and provides all required information including an estimate of the release volume.
- Assesses and documents anticipated environmental impact of the emergency following the Agency Notification Procedure.
- Evaluates the effectiveness of response activities in mitigating potential environmental concerns

4.2.4. Emergency Response Team

The EVREC Emergency Response Team (ERT) will be structured from workers at site. With different work schedules, it will be necessary to have enough team members to maintain team numbers of at least 7. Operations personnel will have to assume duties as an ERT member to handle all site emergencies.

For emergencies such as lost or missing persons, local search and rescue services aboriginal knowledge of surrounding terrain and traditional travel routes will become very valuable.

The ERT assists with the operation of emergency equipment, provides personnel to perform offensive or defensive emergency response tactics.

Members of the ERT are required to undergo specific training for their assigned roles. Failure to meet training requirements for a particular scenario or aspect of the response will result in the exclusion of the team member from that specific task. For instance, if a team member has not yet received training in fire suppression, they will contribute solely to a supportive capacity and not in the fire or hazardous area response.

The initial stage of any emergency is critical. An effective and timely response is essential to prevent an emergency from escalating to a higher level. Therefore, all personnel must be fully aware of their individual duties and responsibilities as they are presented in this plan.

Personnel identified as having key roles in effective emergency response include the Facility Manager, members of the ERT, Security personnel, and other trained medical response professionals. Specific responsibilities and duties inherent to personnel involved in emergency response are outlined below.

4.2.5. Emergency Response Technician

Emergency Response Technician refers to an individual who is trained to provide initial medical assistance and care in emergency situations before more advanced medical help arrives.

Duties During an Emergency:

- Receive initial emergency call and document vital information used to plan response.
- Enters the affected area and performs emergency response duties as directed by the Operations Chief.
- Conduct a rapid primary survey to identify life-threatening conditions such as airway obstruction, breathing difficulties, or circulation problems.
- Prioritize and address immediate life-threatening issues.
- Call for additional medical assistance if needed, providing clear and concise information about the situation.
- Stabilize fractures or dislocations using basic splinting techniques to prevent further injury.
- Package injured worker and handover to advanced primary care responders.

Duties Post-Emergency:

- Assists with post emergency operations ensuring that emergency equipment is back in service.
- Participates in formal critique session.

4.2.6. Security

Security personnel are key in an emergency response in that they will receive an initial notification of an emergency and provide first communications to essential personnel.

Duties During an Emergency:

- Receive initial emergency call and document vital information used to plan response.
- All logged information will be given to the ECC.
- Provide appropriate notification of the Rescue team members, EC, ECC and medical
- response personnel.
- If evacuation is necessary, notify all personnel of emergency evacuation.
- Security will report muster and evacuation status to the EC and await further instruction.
- Provide traffic and crowd control at scene as directed by the EC.
- Assist in controlling access to the emergency area.
- Maintain open radio communication (via radio or telephone intercom system).
- Keep a written record of events throughout incident.
- Assist in the coordination of support and internal services as directed by the ECC.
- Document all actions, decisions, and communications.

Duties Post-Emergency:

- Relay notification of 'Stand Down' order when directed by EC.
- Provide a summary of all documentation to the EC and ECC.
- Maintain Security of the scene as directed by the ECC or SH&E.
- Direct all off-site inquiries regarding the emergency to the ECC or designate.
- Participate in a debriefing session for the emergency response.

4.2.7. Mobile Equipment Operator

- Directed by Emergency Coordinator to proceed to the fire station or designated location, dons turnout gear, and reports to the command post and the Emergency Coordinator.
- Prepares any anticipated mobile firefighting equipment.
- Responds to the staging area with appropriate response equipment as directed by the Emergency Coordinator.
- Works with ERT in deploying firefighting equipment as directed by the Operations Chief.

- Assists the Emergency Coordinator with area atmospheric monitoring as necessary.
- Responds to HAZMAT incident and participates in HAZMAT operation level activities as directed by the Emergency Coordinator.

4.3. Contractors (Construction and Maintenance)

Contractors conducting works at the Project site must comply with this ERP and their contract-specific ERPs.

Responsibilities:

a. Maintain an on-site emergency contact and trained responders. Immediately report incidents and hazards.
b. Cease operations when requested by the IC or external authority.
c. Follow EVREC evacuation routes and muster procedures. Cooperate fully with Emergency Response Team.

4.3.1. Visitors, Vendors, and the General Public

Responsibilities:

- Follow all instructions from Port staff and emergency responders.
- Evacuate when directed and proceed to designated muster points.
- Do not interfere with emergency operations or attempt to re-enter restricted areas.

5. EMERGENCY RESPONSE PLAN DETAILS

5.1. Emergency Categories

The EVREC emergency response is based upon a three-tiered structure. Incidents are identified and categorized into one of three levels depending upon the nature and severity of the incident. Each Level is managed by an escalating degree of management seniority and assistance from outside the company.

The Emergency Action Plan (EAP) provides the flexibility to tailor the size of the response organization to the specifics of the incident and allows for rapid adjustments as the incident evolves. Most incidents are not severe enough to warrant classification beyond a Level I and are handled by local emergency response personnel in the field.

The initial determination of the classification of the event when notified is made by local management with input from field personnel. However, the event could be subsequently reclassified upon further review. It is essential to define as quickly as possible the level of response required always erring on the high side if any uncertainty exists. A project incident is escalated from Level I to II by the On Scene Command and/or by

the Facility Manager in the Emergency Operations Center (EOC). Escalation from Level II to III is decided by the Emergency Coordinator in consultation with the Facility Manager in the EOC.

Always consider the "actual" and/or "perceived" risks / health impacts when responding to public needs. Circumstances or the perspective of a particular stakeholder could cause the incident to be defined at a higher or lower level.

5.2. Classification of Emergencies

5.2.1. Minor Emergency – Level 1

A Level I incident is one in which the potential public and environmental exposure is low to moderate, and the problem can be primarily corrected with on-site resources. Examples of minor emergencies are:

- Small fire.
- Minor oil spill easily contained.
- Minor vehicle accident no injuries.

5.2.2. Serious Emergency – Level 2

If the incident is beyond the control of area response it becomes a Level II incident. A Level II incident is one with potential or actual site implications and potentially significant public and environmental exposure.

A Level II response is managed by the Project ERT who may also call on third party emergency services for assistance if the incident warrants.

Examples of serious emergencies:

- Moderate fire.
- Serious accident.
- Structural failure.
- Moderate chemical spill.
- Multiple casualties.

The Emergency Coordinator is responsible for coordinating logistical support to the affected area. Logistical support includes:

- Overall management of the emergency and coordinating broader support.
- Liaison with government representatives.
- Liaison with contractors.

5.2.3. Crisis – Level 3

A Level III incident is one with national or global implications, where potential public or environmental exposure is significant, and media interest is intense. An employee or third-party fatality and any external leak of ammonia will be considered a Level III. Government involvement and media interest would be moderately high, but primarily at the regional level. The facility manager will report Level III incidents to the Regional Director (RD) and the HS&T Team. In a Level III incident, operational staff will oversee the situation by deploying personnel to keep a vigilant eye on conditions using ammonia detectors

Examples of crisis situation:

- Ammonia/Hydrogen Release
- Major fire (e.g. bush fire).
- Death.
- Bomb threat / extortion.
- Collision – Road accident with multiple fatalities; crisis management shall be directed to manage impact on operability, liability and handling of government and public communication. and monitoring wind speed and direction.

5.2.4. Emergency Equipment

First Aid kits, rescue equipment, HazMat clothing, medical equipment (i.e., O_2 bottle, defibrillator) and portable fire extinguishers etc. shall be installed following local legal requirements. The location of the HSE equipment shall be clearly labelled and marked on the evacuation plan. To ensure the efficiency of the present procedure, the following equipment must be present at all times at its assigned location.

- CSA approved First aid kits are based on the provincial requirement regarding the number of employees at site. A basic first aid kit shall be present in all commercial vehicles registered under EVREC Hydro. An automatic external defibrillator must be in close proximity to the work site.
- Fire extinguisher(s) in sufficient numbers so that an extinguisher can be reached within seconds of an area or job station where fire hazards exist. Consideration must be given to the type and the size of the extinguishers based on potential combustible substances used or present in the workplace.
- Where risks of exposure or potential exposure to chemical exists, an eye wash station with 15 minutes of running water must be reachable within seconds of the work area or job station. Fulfilling this requirement could be facilitated by providing the employees with eye wash bottles so they can use them while moving to reach the central eye wash station.

- Where work in confined space is involved, confined space emergency equipment must be readily accessible, and workers must be trained to respond to such an emergency. This includes but is not limited to:
    - Stretcher or man basket
    - Fire extinguisher (during hot work)
    - First aid kit
    - Means of communication (i.e. telephone, two ways radio, air horn) must be readily available to alert ALL personnel of an emergency.
    - Where work on or near live equipment, a specific emergency rescue procedure must be developed and tested.
    - If using an aerial device or boom truck, an approved bucket evacuation device (control descent device) shall be carried on each aerial device.
    - A synthetic rescue rope or mechanical device approved for rescue purposes shall be conspicuously located and readily available where crews are engaged in overhead or confined space work operations.

As an Industrial site we are susceptible to accidents such as chemical spills, fires, or equipment malfunctions. Emergency equipment, firefighting, confined space rescue, high angle rescue, medical aid kits, and spill response materials, allows for a rapid and effective response to contain and mitigate the impact of such incidents. The availability of this equipment is essential for safeguarding lives, protecting the environment, complying with regulations, and maintaining operational continuity.

5.2.5. Evacuation / Muster Point

A muster point is a designated location where employees gather during an emergency evacuation for accountability. It should be safely distanced and familiar to all staff. Muster points will be arranged to consider wind dispersion of possible ammonia vapor as the project develops.

5.3. Emergency Communication

Emergency communication is vital during all emergency responses. Personnel must be trained in the frequency / channel to be used and the information that must be relayed to the Workers Supervisor. Upon notification of an emergency or rescue situation, the Workers Supervisor / Workers Foreman shall be ready to provide the following information:

EVREC employee(s) will notify Supervision	☒ site radio ☒ cell phone
Emergency Response Team	☒ site radio ☒ cell phone
EVREC Safety Advisor	☒ site radio ☒ cell phone

5.3.1. Radio Communication

During an emergency, the primary communications link between all emergency response personnel is through radio communication. ERT members will be issued radios. Additionally, other individuals involved in emergency response will also carry hand-held radios as part of their regular work requirement.

During an emergency, radio communications should be kept to a minimum. If radio silence is requested on other channels, Security personnel, upon receiving instruction by the Facility Manager or EC, will announce this. This ensures open and free communications among personnel involved in the actual response. For example, if resources have to be requested on any channel other than the designated emergency channel, then this request will be unaffected by other unnecessary conversation.

5.3.2. Telephone Communication

During an emergency, telephone communications will be used to:

- Notify internal personnel and resources.
- Notify external personnel and resources.
- Announce emergency information via telephone or intercom system.

To supplement radio communications, the site telephone or intercom system may be used to alert site personnel during an emergency response.

Maintaining connections through corporate protocols is essential, and in emergency scenarios, personnel presence may be necessary. In such cases, consistent communication will be established via telephone to secure offsite support, involving external resources like medical professionals or law enforcement authorities

Some areas of the site will be equipped with telephone or intercom systems. This system may be used to announce information to assist in evacuation or denote an all clear or stand down.

5.3.3. Alarm Systems

Alarm systems will be used to provide instant notification that an emergency situation has occurred. Plumbed emergency shower/eye wash stations have a local audible alarm to indicate activation in the control room.

5.3.4. Sirens

The control button to activate the sirens for Shelter-In-Place are located in both the Security room and the control room. Security / Control Room operator will only activate and deactivate this alarm with direction of the EC, and/or H&S Management representative

5.4. Coordination With Outside Authorities

Provincial Regulations require that the following types of incidents shall be reported immediately, without delay, by phone to the local Ministry of Labour Office and later in writing:

- Death or critical conditions with a serious risk of death.
- A major structural failure or collapse of a building, tower, crane, hoist, temporary Operations support system, concrete form, false work, or excavation.
- The major release of a harmful material resulting in an injury to a worker who will require immediate medical attention, or which required first aid service for more than one worker.
- Unintended contact with high voltage electrical systems
- The major release of a harmful, i.e. toxic, material resulting in a condition of continuing danger to employees or public.
- Blasting or diving incidents.

5.5. Coordination With Local Authorities

5.5.1. Town Of Botwood

The Town of Botwood, with a population of approximately 2,700 residents in the immediate area. The Town of Botwood Fire Department is responsible for providing emergency services to the Town of Botwood. EVREC will be responsible for keeping residents informed during emergencies or public notices. The Town of Botwood employs an automated phone system called "Everbridge" and utilizes social media platforms. In the case of a Level II or Level III incident, the Emergency Coordinator will recommend to the EVREC ECC the initiation of communication with the Town of Botwood and the Town of Botwood Fire Department to notify them about the nature of the ongoing event.

5.5.2. Emergency Contacts

Municipal

- Town of Botwood
- Town of Northern Arm
- Town of Point Leamington
- Town of Peterview
- Town of Biship Falls
- Town of Grand Falls Windsor

RCMP

- Occupational Health &Safety Division

Provincial

- Ambulance Service
- Emergency Measures Organization
- Environmental Officer
- Regional Health office
- Regional Medical Health Officer
- Works, Services and Transportation
- Oil Spill Response

Federal

- Environment Canada
- Transport Canada
- NavCANADA
- Provincial Forest Fire Communication Center
- Federal Department of Fisheries

5.6. Scenario Specific Emergency Response Procedure

5.6.1. Confined Space Rescue

Confined space rescue in the workplace is a critical procedure that involves the safe retrieval of individuals who are trapped or in distress within a confined space.

In case a worker must be rescued from a confined space EVREC will ensure that emergency response is available to provide the technical rescue requirements for each of these emergencies, below is a summary of confined space rescue procedure.

1. Prevention and Assessment:
    a. Identify and assess all confined spaces in the workplace.
    b. Implement measures to prevent unauthorized access to confined spaces.
    c. Clearly label and communicate the hazards associated with confined spaces.
    d. Conduct a thorough risk assessment before any work is performed in confined spaces.
2. Confined Space Entry Permit:
    a. Develop and implement a confined space entry permit system.
    b. Require a permit for any work inside a confined space, outlining the scope of work, entry conditions, and safety measures.
    c. Designate an entry supervisor responsible for authorizing and overseeing confined space entry.
3. Training and Equipment:
    a. Ensure all personnel involved in confined space rescue are adequately trained.
    b. The ERT will be trained on the use of personal protective equipment (PPE), communication devices, and rescue tools.

    c. ERT will conduct monthly inspections on all rescue equipment, including harnesses, ropes, ventilation equipment, and communication devices, copies of the inspection report will be forwarded to the HSE advisor.

4. Rescue Team Formation:
    a. The rescue team will be familiar with the layout and potential hazards of confined spaces.
    b. ERT will develop and practice rescue scenarios regularly through drills and simulations.
5. Communication Protocols:
    a. Establish clear communication protocols for all personnel involved in confined space work.
    b. Use reliable communication devices such as radios to maintain constant contact.
    c. Implement an effective alarm system to signal emergencies and initiate rescue procedures.
6. Rescue Plan:
    a. Develop a detailed confined space rescue plan, including step-by-step procedures.
    b. Identify primary and secondary means of entry and exit.
    c. Outline the use of ventilation and atmospheric monitoring during rescue operations.
    d. Establish roles and responsibilities for each member of the rescue team.
7. Emergency Response:
    a. In the event of an emergency, activate the confined space rescue team immediately.
    b. Assess the situation from a safe location and determine the appropriate rescue method.
    c. Implement pre-planned rescue procedures, considering the specific hazards present.
8. Post-Rescue Evaluation:
    a. After the rescue, conduct a debriefing session to evaluate the effectiveness of the rescue operation.
    b. Identify any areas for improvement and update the confined space rescue plan accordingly.
9. Documentation:
    a. Maintain detailed records of confined space entry permits, training sessions, and rescue drills.
    b. Document any incidents, near misses, or actual rescues for analysis and improvement.

5.6.2. Ammonia Leak

For the purposes of EAP planning, an ammonia leak is considered an emergency when the instantaneous concentration reaches 150 ppm and the leak is uncontrolled. Strobe lights and audible alarms will engage when the ammonia concentration reaches 150 ppm. Qualified personnel are to be contacted immediately to address the situation.

Each year EVREC will provide the local fire departments with the following information:

- Scale map of the facility.
- Location of suitable staging areas.
- Drainage patterns and sewer or tile inlet location.
- Nurse tank parking areas.
- Ammonia storage tank and line shut off valves.
- Other hazards i.e. Hydrogen tanks, propane, and fuel tanks.
- Location of utility emergency shut offs.
- Day and night telephone numbers (office, home, and cellular numbers) of facility operators.
- Location(s) of material safety data sheets (SDS) for ALL hazardous chemicals stored.
- On site location of facility emergency response plan(s).

5.6.3. Ammonia Leak - Emergency Response

1. Isolate and Shutdown
    a. Radio to control room to shutdown flow
    b. Initiate local stop and manual valves
    c. Press local emergency stop button.
2. Activate Emergency Services:
    a. Activate fire alarm system at nearest pull station.
    b. Advise all staff via radio communication that an uncontrolled ammonia leak condition exists, and that evacuation is required.
    c. Advise neighboring businesses and stakeholders of the risk of ammonia vapour cloud.
    d. Contact Security, advise that there is an ammonia leak, provide the location.
    e. Initiate emergency evacuation and shelter in place procedures
3. Establish Command and Control:
    a. The Emergency Coordinator will take charge of the emergency response.
    b. Set up an Incident Command Centre (ICC) at a safe distance.
4. Evacuation and Safety:
    a. Initiate evacuation procedures for all personnel in the affected and surrounding areas.
    b. Use pre-established evacuation routes and assembly points.
    c. Account for all personnel and visitors to ensure everyone is safely evacuated.
5. Isolate and Secure the Area:
    a. Establish a safety perimeter around the ammonia leak to prevent unauthorized access.
    b. Control traffic and keep bystanders away from the affected area.
    c. If the source is not immediately stopped it should be diverted to a safe or lower impact (distance from people) location if possible.

d. Liquified ammonia and can form a heavy low-lying vapour cloud that stays low to ground and slowly moves down wind and dissipates over time as it warms and natural rises in air.
e. Using site anemometer and nearby weather station data, monitor the wind speed, direction, and ammonia concentrations down wind of the visible vapour cloud.

6. Personal Protective Equipment (PPE):
   a. Ensure that all qualified responders wear appropriate PPE, including self-contained breathing apparatus (SCBA), chemical-resistant suits, gloves, and eye protection.
7. Spill or leak location emergency response:
   a. Initiate appropriate and approved detailed response procedures for ammonia cloud and spill clean-up.
   b. It may be possible to contain the leak through plugging; however, only highly trained personnel with appropriate equipment will be authorized to approach on ongoing leak to attempt to stop the flow. Such an attempt may only be taken in pairs and with the necessary precautions of emergency service standing by to assist.
   c. Ammonia cloud suppression techniques by use of fire hose water spray may be used only by trained responders.
   d. The safest approach is to leave the immediate areas and evacuate all areas downwind and within the potential impact zone as will be monitored and communicated by the ERT.
   e. In the event of an uncontrolled, high level ammonia alarm, evacuation of the facility and nearby businesses will be required.
   f. Review the Emergency Response Guidebook (ERG) 2020.
   g. Liaise with contractors and senior staff as they arrive and debrief on situation. Provide a floor plan of the facility being evacuated.
   h. The Placentia Fire Department in consultation with site management will advise when it is safe to allow re-entry into an evacuated building.

5.6.4. Pipeline Leak

During operations, pipelines are used to carry process chemicals throughout the facility and through a pipe corridor that extends from the Industrial Facility to the Irving Jetty in Botwood Harbour for ship loading.

The pipeline is constructed from high-density polyethylene (HDPE)-lined steel and will be buried adjacent to the heavy haul road. In the event of accidental release, any spill of process-related water must be controlled to minimize potential impacts to the environment.

If an accidental release occurs, designed systems are in place to minimize the leak however, any spilled material to the environment must be contained and remediated. The following is a general guideline that can be followed to minimize and remediate any spilled material to the environment:

1. Emergency Response Activation:
    a. Activate the emergency response system.
    b. Alert all relevant personnel about the leak.
    c. Notify emergency services, including the fire department and hazardous materials (HAZMAT) response teams.
2. Initial Assessment:
    a. Determine the type and quantity of the leaked chemical.
    b. Identify the location and extent of the leak.
    c. Evaluate potential hazards to personnel, the environment, and surrounding areas.
3. Evacuation and Isolation:
    a. If necessary, initiate an immediate evacuation of personnel from the affected area.
    b. Isolate the affected area to prevent the spread of the chemical leak.
4. Personal Protective Equipment (PPE):
    a. Ensure that all personnel involved in the response wear appropriate PPE to protect against exposure to hazardous substances.
5. Control and Containment:
    a. Attempt to shut off or isolate the leaking section of the pipeline, following established emergency shutdown procedures. b. Use containment booms, barriers, or other methods to prevent the spread of the chemical.
6. Mitigation:
    a. Deploy resources to minimize the impact of the leak, such as using absorbents or neutralizing agents.
    b. Implement strategies to reduce the risk of fire or explosion.
7. Decontamination:
    a. Follow decontamination procedures for personnel and equipment.
    b. Decontaminate affected individuals and equipment as they leave the contaminated area.
8. Monitoring:
    a. Implement air and water monitoring to assess the extent of contamination and potential exposure risks.
    b. Continuously monitor the situation to adapt the response as needed.
9. Documentation:
    a. Keep detailed records of the incident, including actions taken, resources deployed, and communications.
    b. Document any injuries, exposures, or environmental impact.
10. Reporting:
    a. Report the incident to Environment Canada 1-800-563-9089.
    b. Provide any necessary documentation and information about the incident.

11. Remediation:
    a. Develop and implement a plan for cleaning up and remediating the affected area.
    b. Comply with regulatory requirements for reporting and cleanup.

5.6.5. Community Notification

Possible sources of ammonia release include the ammonia storage tank, ammonia handling equipment, pipelines, pumps and the ammonia loading arms. In the event of a release, it is extremely important to notify all surrounding neighbors in a timely fashion and to define the extents of the impacted zone should a release occur. Based on the current design details the impact zone has been identified through vapor cloud dispersion modelling using AEGL- 2 and AEGL-3 exposure limits.

Although the impact of an ammonia exposure at these concentrations to surrounding neighbors could be quite extreme, the probability of an event such as a tank rupture, extended full flow from a ruptured pipe or loading arm rupture is extremely remote due to the intended mitigation design features and established prudent industry operating procedures. Some of these mitigations include installation of double wall containment at the ammonia storage tank, auto-isolating emergency valves on pipelines, field and personal gas detection monitors, person-watch during any ship loadings (where operators are in constant communication with each other) and constant on-site weather condition monitoring.

The atmospheric conditions and wind direction play a major role in identifying risk zones, timing of potential ammonia contact and concentration. Risk during an ammonia release is highest during extremely stable atmospheric conditions (such as would occur during a temperature inversion event) and low wind speeds.

A slightly higher potential impact area, which could occur following a pipeline leak is the land area in and immediately surrounding the pipeline route and the EVREC haul road. Any operating entities at the current dock area and land immediately surrounding the plant site are within potential impact zones and will need to have good communication and evacuation protocols in place.

If a significant ammonia leak happens and analysis indicates that an ammonia cloud could potentially reach nearby businesses or communities, all potentially affected parties will be notified about the prevailing situation and advised on necessary actions to be taken.

a. Radio to control room to shutdown flow
b. Initiate local stop and manual valves.
c. Press local emergency stop button.

5.6.6. Ammonia Fire

Responding to an ammonia fire demands a prompt and coordinated emergency reaction to mitigate potential harm to individuals, assets, and surroundings. It's crucial to understand

that tackling ammonia fires poses significant risks, and only adequately trained experts outfitted with suitable protective equipment should engage in managing such emergencies. The subsequent protocol delineates fundamental guidelines and procedures for addressing an ammonia fire:

1. Activate Emergency Services:
    a. Activate fire alarm system at nearest pull station.
    b. Advise all staff via radio communication that an uncontrolled ammonia leak condition exists, and that evacuation is required.
    c. Advise neighboring businesses and stakeholders of the risk of ammonia vapour cloud.
    d. Contact Security, advise that there is an ammonia leak, provide the location.
    e. Initiate emergency evacuation and shelter in place procedures.
2. Establish Command and Control:
    a. The Emergency Coordinator will take charge of the emergency response.
    b. Set up an Incident Command Centre (ICC) at a safe distance.
3. Evacuation and Safety:
    a. Initiate evacuation procedures for all personnel in the affected and surrounding areas.
    b. Use pre-established evacuation routes and assembly points.
    c. Account for all personnel and visitors to ensure everyone is safely evacuated.
4. Isolate and Secure the Area:
    a. Establish a safety perimeter around the ammonia leak to prevent unauthorized access.
    b. Control traffic and keep bystanders away from the affected area.
    c. If the source is not immediately stopped it should be diverted to a safe or lower impact (distance from people) location if possible.
    d. Liquified ammonia can form a heavy low-lying vapour cloud that stays low to ground and slowly moves down wind and dissipates over time as it warms and natural rises in air.
    e. Using site anemometer and nearby weather station data, monitor the wind speed, direction, and ammonia concentrations down wind of the visible vapour cloud.
5. Personal Protective Equipment (PPE):
    a. Ensure that all responders wear appropriate PPE, including self-contained breathing apparatus (SCBA), chemical-resistant suits, gloves, and eye protection.
6. Recommended Fire Suppression:
    a. Use water spray or fog to cool adjacent containers and equipment to prevent further spread of the fire.
    b. Avoid direct water application on the ammonia leak, as it may cause splattering and increase the release of ammonia vapor.
    c. For small fires use dry chemical or carbon dioxide.
    d. For large fires use water spray, fog, or regular foam. Move containers from the fire area, if possible, to do so without risk to personnel. Do not get water inside containers. Damaged cylinders should be handled by a specialist only.

e. For fire involving tanks, fight fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not direct water at source of leak or safety device; icing may occur. Withdraw immediately in case of rising sound from venting safety device or discoloration of tank. Always stay away from tanks engulfed in fire.
f. Below are guidelines for approaching an Ammonia Fire with Fire Hoses;
    i. Fog streams provide a protective curtain for a safe approach to the source.
    ii. Attack using 2, 1½ inch lines. Consider additional lines if available.
    iii. Both lines should apply 95 gallons per minute with 100 psi at each nozzle end.
    iv. Attack crew should consist of 5 members. A crew leader flanked by a nozzle person and hose handler on each of the leader's sides. All on supplied air.
    v. The crew leader should be wearing ammonia rated gloves. All must be on supplied air (SCBAs) and enough air must be available.
    vi. Rotate nozzles applying maximum flow with the widest fog pattern.
    vii. Angle your approach to avoid high downwind concentrations.
    viii. A rapid high and wide rotation is more effective for ammonia absorption.
    ix. Nozzle end holders should rotate in unison like the wheels on a bike.
    x. If a line fails or crew member develops skin irritation evacuate immediately and reassess.
    xi. Narrow sweep when closing in on source.
    xii. Avoid pools of ammonia.
    xiii. Force vapors down to the ground
    xiv. Narrow fog sweep significantly as you close in on source.
    xv. Crew leader reaches to valve and tightens it stopping flow.

7. Specialized Firefighting Agents:
    a. If available, consider using dry powder or specialized firefighting agents designed for ammonia fires.
    b. Follow manufacturer guidelines and recommendations for the use of specific agents.
8. Emergency Ventilation:
    a. Implement emergency ventilation to disperse ammonia vapors away from the fire scene.
    b. Ensure proper airflow direction to prevent the spread of toxic fumes.
9. Medical Assistance:
    a. Provide immediate medical attention to anyone exposed to ammonia, including first aid for inhalation or skin contact.
    b. Set up a medical triage area for assessing and treating casualties.
10. Environmental Monitoring:
    a. Continuously monitor the air quality for ammonia levels and adjust response actions accordingly.
    b. Run-off from fire control may cause pollution.
    c. If the situation allows control and properly dispose of run-off (effluent).
11. Decontamination:
    a. Establish decontamination procedures for responders and affected personnel.

b. Implement decontamination measures for equipment and PPE used during the response.

12. Public Notification:
    a. Communicate with the public and nearby communities about the situation, providing necessary information and instructions.
13. Aftermath Assessment:
    a. Conduct a thorough assessment of the incident aftermath, including damage assessment, air quality monitoring, and potential environmental impacts.
14. Documentation and Lessons Learned:
    a. Document all actions taken during the emergency response.
    b. Conduct a debriefing session to analyze the response and identify areas for improvement.

5.6.7. Flaring / Venting

Flaring is the controlled burning of fuel or waste gas that takes place during production and processing. Fuel or waste gas is ignited at the top of a flare stack, causing the characteristic flame associated with flaring. Some odors may be associated with flaring.

Venting is a controlled release of unburned gases into the atmosphere, such as natural gas or other hydrocarbon vapours, water vapour, or other gases. Venting may occur during operational processes and during maintenance activities. Odours may be associated with venting.

If an uncontrolled event of flaring and/or venting occurs, follow the below procedure:

1. Activate Emergency Services:
    a. Immediately notify Security through the site emergency number.
    b. Security will immediately contact ERT and emergency services (911) if required and provide them with the necessary information about the accident.
    c. Clearly communicate the location of the accident and any other relevant details.
2. Assess the Situation
    a. Ensure your own safety first. Ensure that all rescue team members wear appropriate PPE, including helmets, harnesses, gloves, and eye protection and respiratory protection.
    b. Determine the type and quantity of the leaked chemical.
    c. Identify the location and extent of the leak.
    d. Evaluate potential hazards to personnel, the environment, and surrounding areas.
3. Establish an Incident Command:
    a. The Facility Manager to manage the response efforts.
4. Isolate and Evacuate:
    a. Establish an exclusion zone around the accident site to prevent unauthorized access.
    b. If safe to do so, turn off pumps and close valves to stop product flow.
    c. Eliminate all sources of ignition.
5. Rescue Team Deployment:

a. Deploy trained and equipped rescue team members to be on standby.
b. Follow established communication protocols to coordinate the rescue efforts.

6. Personal Protective Equipment (PPE):
    a. Ensure that all personnel involved in the response wear appropriate PPE to protect against exposure to hazardous substances.
7. Shelter in Place
    a. If required, the shift supervisor should trigger a “shelter in place” alarm, all personnel to follow appropriate protocol(s).
8. Additional resources
    a. Shift supervisor to notify security of any additional resource requirements.
    b. Shift supervisor will give an All Clear when the emergency has been controlled.
9. Monitoring:
    a. Implement air and water monitoring to assess the extent of contamination and potential exposure risks.
    b. Continuously monitor the situation to adapt the response as needed.
10. Documentation:
    a. Keep detailed records of the incident, including actions taken, resources deployed, and communications.
    b. Document any injuries, exposures, or environmental impact.
11. Reporting:
    a. Report the incident to Environment Canada 1-800-563-9089.
    b. Provide any necessary documentation and information about the incident.
12. Remediation:
    a. Develop and implement a plan for cleaning up and remediating the affected area.
    b. Comply with regulatory requirements for reporting and cleanup.
13. Media and Public Relations:
    a. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.
    b. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.

5.6.8. Fire / Explosion

In the Event of a Fire:

a) If you see smoke or flames, use care:

- Contain the fire by closing all doors as you leave.
- Activate the nearest Fire Alarm pull station (Pull stations are located near all building exits)
- Report the fire by dialing 709-227-xxxx.
- Evacuate or extinguish (In most cases, it is best to Evacuate)

b) Use a Fire Extinguisher only if:

- You have been trained.

- You have your back to an unobstructed exit.
- You have a fully charged and proper type unit for the fire you are fighting.
- The fire is contained, and you have reported the fire-by-Fire Alarm or 911 activation.
- Everyone else has left the area.

Never fight a fire if:

- You lack a safe way to escape should your efforts fail.
- It has left its source of origin.
- You are unsure of the type of extinguisher you need or have.
- If you can't control the fire within 30 seconds, abandon your efforts, close the door(s), and evacuate immediately.
- There is little smoke or flames.

5.6.9. Wardens

Wardens play an important role in ensuring each building is prepared for an emergency. Along with the emergency plan, wardens are an important risk control measure to ensure that the site is prepared should an emergency situation, potentially a fire, occur.

Key duties of the fire wardens include:

- To assist in implementing and improving effective emergency procedures in the workplace.
- To help prevent emergencies by monitoring the adequacy of the hazardous risk control measures.
- To raise awareness with other staff about the various hazards that exist.
- To instruct workers/contractors/visitors how to respond in an emergency.
- To lead the fire drills and real evacuation procedures-each appointed warden must be familiar with all escape routes and exits from their designated area.
- To ensure all workers/contractors/visitors are accounted for during an evacuation; and,
- To assist all people on site should an emergency occur, including assisting people with special needs (ex: helping someone in a wheelchair to evacuate).

If the emergency (fire) alarm/siren is sounded, wardens have a duty to assist in the safe evacuation of workers/contractors/visitors from the hazard immediately, and to ensure that their designated area has been cleared.

During an evacuation, wardens need to:

- Direct everyone to leave the building using all the appropriate routes and exits (and not inappropriate exits such as lifts).
- Check all accessible spaces in workspaces, including the bathroom, to make sure everyone as evacuated – this should be done on the way out of the building so that the warden isn't putting themselves at risk by re-entering the evacuated area.
- Close each door upon inspection starting from one end of the building working their way towards the emergency exit. Closing each door will also help isolate the various hazards; and,
- Guide everyone to the assembly area and assist in checking that everyone has arrived safely using the Roll Call form and communicating with the ERT upon arrival.

5.6.10. Vehicle / Equipment Incident Procedure

Responding to a motor vehicle accident on a worksite requires a well-defined and organized procedure to ensure the safety of individuals, the environment, and property. Potential for vehicle incidents or accidents at the project site exist with activities such as:

- Passenger vehicle movement carrying people and freight throughout the project site.
- Travel from site to the port site.
- Heavy equipment travel and transport on access roads throughout the project site.

The potential risk of vehicle incident varies according to changing conditions. These conditions may include:

- Road conditions (including dust, loose roadbed or unstable road shoulders, ice/snow cover).
- Mechanical failure in vehicle systems; and/or
- Operator error in judgment.

Where vehicle upset presents risk of injury and environmental spill, preservation of life and health will be first priority.

In case of an incident involving vehicle and operator, the following steps will be taken after the emergency notification procedure has been initiated:

1. Activate Emergency Services:
    a. Immediately notify Security through the site emergency number.
    b. Security will immediately contact ERT and emergency services (911) if required and provide them with the necessary information about the accident and if dangerous goods involved.
    c. Clearly communicate the location of the accident, the types of dangerous goods, and any other relevant details.

2. Assess the Situation
    a. Ensure your own safety first. Wear appropriate personal protective equipment (PPE).
    b. Assess the severity of the accident and determine the types and quantities of dangerous goods involved.
    c. Identify potential hazards, such as fire, leaks, or spills.
3. Establish an Incident Command:
    a. Designate a competent person as the Facility Manager to manage the response efforts.
4. Isolate and Evacuate:
    a. Establish an exclusion zone around the accident site to prevent unauthorized access.
    b. If dangerous goods are involved, evacuate personnel from the immediate vicinity, considering wind direction and potential hazards.
5. Control Ignition Sources:
    a. Eliminate or control ignition sources, such as turning off engines, prohibiting smoking, and avoiding the use of electronic devices.
6. Containment and Mitigation:
    a. Implement measures to contain and control spills, leaks, or releases of dangerous goods.
    b. Use appropriate containment devices, absorbent materials, or barriers to prevent the spread of hazardous substances.
    c. If the vehicle is stable determine if personnel can be immediately extricated from the vehicle without injury or immediate first aid requirements.
    d. If the vehicle is unstable the ERT must secure it with blocking for stability if required.
7. Provide First Aid and Medical Assistance:
    a. If there are injured persons, provide first aid as necessary.
    b. Coordinate with emergency medical services to ensure prompt medical attention.
8. Notify Relevant Authorities:
    a. Inform relevant regulatory authorities about the accident as required and if required national reporting requirements for dangerous goods incidents.
9. Communicate with Stakeholders:
    a. Establish a communication plan to keep workers, emergency responders, and other stakeholders informed about the situation and any necessary actions.
10. Decontamination:
    a. If dangerous goods are involved implement decontamination procedures for affected individuals, equipment, and the environment.
11. Clean-Up and Remediation:
    a. Develop and implement a plan for the safe clean-up and remediation of the accident site.
    b. Dispose of contaminated materials in accordance with applicable regulations

5.6.11. Wind Tower/Turbine Blade

Early detection is the best mitigation to prevent catastrophic failures by completing routine inspections. However, catastrophic failures can occur due to natural weather events.

In the event that a turbine or turbine blade suffers a catastrophic failure that piece of equipment is to be isolated and de-energized. The area must be cordoned off to prevent entry from untrained personnel and all stakeholders and local authorities notified.

Due to the size and weight of turbines/turbine blades, mobile cranes will be required to either repair or remove the damaged equipment.

The following are steps to be taken when dealing with this type of emergency:

1. Notification and Coordination:
    a. Notify relevant authorities, including local emergency services and utility companies, about the dislodging operation.
    b. Coordinate with all stakeholders, such as landowners, maintenance teams, and regulatory agencies.
2. Isolation and Lockout:
    a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.
    b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the dislodging process.
3. Equipment and Tools:
    a. Gather the necessary equipment and tools required for the dislodging operation. This may include cranes, winches, rigging equipment, and specialized tools.
    b. Ensure that all equipment is in good working condition and properly certified.
4. Safety Briefing:
    a. Conduct a comprehensive safety briefing for all personnel involved in the dislodging operation.
    b. Emphasize the importance of following safety protocols, using personal protective equipment (PPE), and communicating effectively.
5. Preparation of the Site:
    a. Clear the area around the wind turbine to create a safe working zone.
    b. Erect safety barriers and warning signs to restrict access to the dislodging site.
6. Secure the Blade or Tower:
    a. Use appropriate rigging equipment to secure the damaged blade or tower in place.
    b. If dealing with a tower, ensure that it is properly supported to prevent any collapse.
7. Disassembly and Removal:
    a. If applicable, disassemble components of the turbine or blade to facilitate removal.

b. Use cranes or other lifting equipment to carefully lift and dislodge the blade or tower from its mounting.

8. Transportation and Storage:
    a. Safely transport the dislodged component to a designated storage area.
    b. Ensure proper documentation and labeling for identification purposes.
9. Site Cleanup and Restoration:
    a. Remove any debris or materials from the dislodging site.
    b. Conduct a final safety check to ensure that the area is secure.
10. Inspection and Documentation:
    a. Inspect the dislodged component for further damage and document any findings.
    b. Provide a detailed report of the dislodging operation, including photographs and observations.
11. Inspection and Documentation:
    a. Inspect the dislodged component for further damage and document any findings.
    b. Provide a detailed report of the dislodging operation, including photographs and observations.

5.6.12. Wind Turbine – Fire/Explosion

When working in the nacelle, technicians shall always wear the appropriate PPE and carry an AED and self-rescue gear. If either one or both wind technicians are up tower when a fire or explosion occurs, they should only contact emergency services through security. If there are no technicians at the bottom of the turbine, the technician up tower should report the location of the fire, potential cause, and any injuries to the Site Manager.

If the fire is small and at the beginning phase and if the technician is trained in using a fire extinguisher, they should attempt to extinguish the fire for as long as it is safe to do so. If the fire is growing rapidly, the technician should exit the nacelle immediately using the ladder. If the ladder is inaccessible, they should exit onto the roof of the nacelle and use an approved (Tractel or equivalent) safety harness or personal self-rescue device to rappel off the turbine; they shall not use the hoist to evacuate the tower during a fire or explosion. When evacuating, the technician should close all doors and hatches if safe to do so.

Dealing with a fire or explosion in a wind turbine requires a systematic and well-coordinated response to ensure the safety of personnel and the surrounding environment. The following procedure outlines general steps to be taken in the event of a fire or explosion in a wind turbine.

Immediate Response:

1. Notification and Coordination:
    a. Notify security to activate ERT. Security will activate 911 services upon request by Facility Manager.

2. Evacuation:
    a. Evacuation Plan: Implement the pre-established evacuation plan, ensuring that all personnel are aware of escape routes and assembly points.
    b. Assembly Points: Designate assembly points at a safe distance (minimum 250m) from the wind turbine to account for all personnel.
3. Isolation and Lockout:
    a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.
    b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the dislodging process.
4. Equipment and Tools:
    a. Gather the necessary equipment and tools required for the fire/explosion operation. This may include cranes, winches, rigging equipment, and specialized tools.
    b. Ensure that all equipment is in good working condition and properly certified.
5. Safety Briefing:
    a. Conduct a comprehensive safety briefing for all personnel involved in the fire/explosion operation.
    b. Emphasize the importance of following safety protocols, using personal protective equipment (PPE), and communicating effectively.
6. Preparation of the Site:
    a. Clear the area around the wind turbine to create a safe working zone.
    b. Erect safety barriers and warning signs to restrict access to the fire/explosion site.
7. Fire Suppression:
    a. Fire Extinguishers: If the fire is small and manageable, attempt to use portable fire extinguishers that are appropriate for the type of fire (e.g., electrical, chemical).
    b. Fire Suppression Systems: Activate any built-in fire suppression systems that may be installed in the turbine.
8. External Assistance:
    a. Emergency Services: Provide emergency services with detailed information about the location, size, and nature of the incident.
    b. Fire Department Liaison: Establish communication with the local fire department to guide them to the turbine site.
9. Monitoring:
    a. Remote Monitoring: Utilize remote monitoring systems to assess the situation and provide real-time information to emergency responders.
    b. Wind Direction Monitoring: Monitor wind direction to predict the potential spread of smoke or fire.
10. Media and Public Relations:
    a. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.
    b. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.

11. Investigation and Analysis:
    a. Post-Incident Analysis: Conduct a thorough investigation to determine the cause of the fire or explosion.
    b. Lessons Learned: Identify lessons learned from the incident and incorporate them into safety protocols and training.
12. Documentation:
    a. Incident Report: Document the incident thoroughly, including actions taken, lessons learned, and recommendations for future improvements.
    b. Regulatory Reporting: Comply with any regulatory requirements for reporting incidents.
13. Recovery:
    a. Recovery Plan: Develop a recovery plan to assess the damage, repair or replace equipment, and restore the wind turbine to normal operations.
    b. Post-Incident Training: Conduct training sessions based on the lessons learned to enhance the preparedness of personnel for future incidents.

5.6.13. Wind Tower Rescue

Rescuing someone from a wind tower is a complex and potentially dangerous operation that requires specialized training and equipment. It is crucial to follow safety protocols and work with trained professionals.

The following is a general outline for a wind tower rescue procedure:

1. Activate Emergency Services:
    a. Immediately notify Security through the site emergency number.
    b. Security will immediately contact ERT and emergency services (911) if required and provide them with the necessary information about the accident / incident.
    c. Clearly communicate the location of the accident and any other relevant details.
2. Risk Assessment and Planning:
    a. Conduct a thorough risk assessment to identify potential hazards associated with the wind tower rescue.
    b. Develop a detailed plan that includes safety measures, equipment requirements, and a timeline for the wind tower rescue operation.
    c. Immediately notify Security through the site emergency number.
    d. Security will immediately contact ERT and emergency services (911) if required and provide them with the necessary information about the accident.
    e. Clearly communicate the location of the accident and any other relevant details.
3. Scene Assessment:
    a. Ensure the safety of the rescue team by assessing the wind conditions, weather, and other potential hazards.
    b. Establish communication with the person in distress if possible.
    c. Identify the location of the person on the wind tower and assess the condition of the tower structure.

4. Notification and Coordination:
    a. Designate a competent person as the Facility Manager to manage the response efforts.
    b. Notify relevant authorities, including local emergency services and utility companies, about the wind tower rescue operation.
    c. Coordinate with all stakeholders, such as landowners, maintenance teams, and regulatory agencies.
5. Isolation and Lockout:
    a. Isolate the wind turbine or tower from the power grid to prevent electrical accidents.
    b. Implement lockout/tagout procedures to ensure that the turbine is de-energized and cannot be accidentally restarted during the rescue process.
6. Equipment and Tools:
    a. Gather the necessary equipment and tools required for the wind tower rescue operation. This may include cranes, winches, rigging equipment, and specialized tools.
    b. Ensure that all equipment is in good working condition and properly certified.
7. Personal Protective Equipment (PPE):
    a. Ensure that all rescue team members are equipped with appropriate PPE, including fall protection gear, helmets, gloves, and safety glasses.
8. Rescue Team Deployment:
    a. Deploy trained and equipped rescue team members to the location of the victim.
    b. Follow established communication protocols to coordinate the rescue efforts.
9. Victim Stabilization:
    a. Assess the condition of the victim and provide immediate medical attention if necessary.
    b. Stabilize the victim to prevent further injury during the rescue process.
    c. If the emergency is a fall in which the victim is suspended by his/her harness from the hub or top of the nacelle, the technician up-tower with the victim will assist according to their training. The Tractel device (or equivalent) will be anchored to the nacelle and connected to the lanyard of the victim. The victim will be raised with the Tractel until tension is released from the lanyard so that the lanyard can be disconnected from its anchor point on the nacelle or hub. The lanyard will still be connected to the Tractel. The victim will then be lowered to the ground by the up-tower technician. The down-tower rescue crew will assist the victim as he or she reaches the ground.
    d. An injured person inside the nacelle may be lowered down the tower ladder using the Tractel according to training procedures. If the victim needs to be stabilized, wait until the Fire Department or Emergency Medical Services arrives to stabilize the victim with a backboard. The backboard will be lowered with the Tractel. The technician or emergency personnel will go down below the backboard to make sure it does not hang up on obstructions on the way down. Upon reaching the first deck, assistance will be required from ground personnel to lower the victim to the control deck and stable structures.

e. Rig anchor systems using certified equipment, ensuring redundancy for added safety.

11. Rescue Equipment:
    a. Use specialized rescue equipment such as ropes, pulleys, harnesses, and descenders.
    b. Ensure that all equipment is in good working order and has been inspected regularly.
    c. Rigging and Lowering Systems:
    d. Set up rigging systems for lowering or raising the victim, depending on the situation.
    e. Use controlled descent devices to ensure a safe and controlled lowering process.
12. Rescue Operation:
    a. Execute the planned rescue operation with precision and caution.
    b. Maintain constant communication between team members and the victim during the rescue.
13. When lowering / raising the injured:
    a. Wherever possible a stretcher should be used.
    b. A suspected injury should be treated as an actual injury.
    c. Injured will remain on stretcher until at hospital.
    d. If treatment required during raising / lowering, secure injured against movement to provide first aid.
14. Rescuers going aloft should:
    a. Wear hard hats (with chin stays down).
    b. Safety Harness.
    c. Self-Contained Breathing Apparatus (SCBA) (if environment requires).
    d. Take a coiled rope of sufficient length to reach the ground.
    e. Resuscitation equipment.
    f. Equipment should be attached to the rescuer freeing both hands for climbing.
    g. Two rescuers aloft at one time, at the most three.
15. To raise / lower a patient where a stretcher cannot be utilized:
    a. Tie a rescue knot onto the patient.
    b. Using two or three men on the lifeline, raise or lower the patient to a safe level.
    c. Use of a pulley directly above the opening will simplify the operation.
    d. Guy ropes can be used to provide a safer and more comfortable lift.
16. Breathing Air Required
    a. Due to air limitations of Self-Contained Breathing Apparatus (SCBA) all participants must be in
    b. a safe area within fifteen minutes.
    c. Once air to injured is accomplished, a secondary air supply must be in place within seven minutes as dictated by two people breathing on one twenty-minute Air Pak.
    d. Raising a SCBA for the injured will provide him with an air supply while being transferred.
17. Safety Briefing:
    a. Conduct a comprehensive safety briefing for all personnel involved in the rescue operation.

b. Emphasize the importance of following safety protocols, using personal protective equipment (PPE), and communicating effectively.

18. Post-Rescue Evaluation:
    a. Conduct a debriefing session after the rescue to evaluate the effectiveness of the operation.
    b. Identify any areas for improvement and update the high angle rescue plan accordingly.
19. Preparation of the Site:
    a. Clear the area around the wind turbine to create a safe working zone.
    b. Erect safety barriers and warning signs to restrict access to the rescue site.
20. Rope Access Systems:
    a. Establish a secure rope access system, using specialized equipment designed for high angle rescue operations.
    b. Ensure that all ropes, harnesses, and anchor points are inspected and meet safety standards.
21. Ascend to the Person in Distress:
    a. Ascend/descend the wind tower using proper climbing techniques and equipment.
    b. Communicate with the person in distress to provide reassurance and gathering information about their condition.
22. Casualty Assessment and Stabilization:
    a. Assess the condition of the person in distress and provide any necessary first aid.
    b. Stabilize the person using specialized rescue techniques.
23. Evacuation:
    a. Determine the most appropriate method of evacuation, considering the person's condition, the tower's structure, and the available equipment.
    b. Lower the person safely to the ground using the established rope access system.
24. Post-Rescue Procedures:
    a. Provide medical attention to the rescued person on the ground.
    b. Debrief the rescue team to discuss the operation, identify any issues, and implement improvements for future rescues.
25. Media and Public Relations:
    a. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.
    b. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.
26. Investigation and Analysis:
    a. Post-Incident Analysis: Conduct a thorough investigation to determine the cause of the fire or explosion.
    b. Lessons Learned: Identify lessons learned from the incident and incorporate them into safety protocols and training.

The Emergency Response Team Coordinator, or designate ground leader, while directing the operation from the ground must be constantly aware of all signals from all Team Members and must coordinate these signals to ensure a safe rescue. If unable to respond to the

injured person in position medical responder will advise treatment advice until injured is brought to elevation and turned over to the medical responder.

As soon as the stretcher (with patient) has started its descent completely in control of the ground crew, the rescue crew aloft should be headed for a safe area, not waiting to retrieve the equipment left at the rescue level.

At the completion of the rescue (actual or practice) all of the equipment used must be inspected, cleaned, and restored to a serviceable condition. Care is to be taken that all hazards have been corrected before retrieving any equipment.

- A post-incident debriefing will take place following all incidents and exercises to assess the response and determine learnings for continual performance improvement

5.6.14. Bomb Threats

The purpose of this procedure is to provide guidelines for employees and management to follow in the event of a bomb threat, ensuring the safety and security of all personnel and assets within the workplace.

1. Immediate Response:
    a. Stay Calm:
        i. In the event of a bomb threat, remain calm and focused.
        ii. Avoid spreading panic among colleagues.
    b. Notification:
        i. If you receive a bomb threat, call emergency services immediately (911) and inform them of the threat.
    c. Notify Management:
        i. Supervisor or manager about the bomb threat.
    d. Evacuation:
        i. If instructed to evacuate by emergency services or management, follow the designated evacuation routes.
        ii. Assist colleagues with disabilities or special needs during the evacuation.
2. Recognition of a Bomb Threat:
    a. Employees who receive a bomb threat via phone call, email, or any other means should stay calm and avoid engaging the caller in unnecessary conversation.
    b. If a bomb threat is received via phone call, the recipient should follow a predefined set of questions to gather essential information while remaining calm and courteous. Questions may include:
        i. Have the person taking the call write down exactly what was said.
        ii. When is the bomb supposed to explode?
        iii. Where is the bomb located?
        iv. What does the bomb look like?
        v. Why was the bomb placed?

vi. Take note of details such as the caller's voice, background noises, and any specific information provided by the caller.

c. If a bomb threat is received in a Written Threats:
   i. If a written bomb threat is discovered, employees should avoid handling the document unnecessarily. Preserve it for law enforcement analysis and notify management immediately.
   ii. Promptly report the threat to the designated authority or security personnel.
   iii. If the threat is written, put the letter and envelope in a plastic cover before copying, faxing or further handling.

3. Evacuation Procedures:
   a. Follow Evacuation Routes.
   b. Evacuate using the designated emergency exits and assembly points.
   c. Avoid using elevators during evacuation.
   d. Account for Personnel.
   e. Managers and designated personnel must ensure a headcount at the assembly point to account for all employees.
   f. Do Not Return Until Cleared:
   g. Do not re-enter the building until emergency services or management declares it safe.
4. Search and Inspection:
   a. Security personnel, in coordination with law enforcement, will conduct a thorough search of the premises.
   b. Employees should not attempt to search for suspicious items on their own.
   c. If a suspicious object is discovered, maintain a safe distance, and report it to the authorities immediately.
5. Communication Protocols:
   a. Information Sharing:
      i. Avoid spreading rumors or unverified information.
      ii. Only share information from official sources.
   b. Media Relations:
      i. Designate a spokesperson for communicating with the media.
      ii. Refrain from providing details that could compromise security.
6. Suspicious Packages:
   a. Do Not Touch
      i. Do not touch or tamper with any suspicious packages or objects
      ii. Report any such items to management or security personnel immediately.
   b. Isolate the Area:
      i. If possible, cordon off the area around a suspicious package and keep others away.
   c. Wait for Experts:
      i. Allow bomb disposal experts or law enforcement to assess and handle the situation.
7. Post-Incident Actions:
   a. Debriefing:

i. Conduct a debriefing session to discuss the incident and identify areas for improvement.

b. Review Procedures:
   i. Regularly review and update bomb threat response procedures to address any gaps or changes in the workplace environment.
c. Counseling and Support:
   i. Provide counseling and support services for employees affected by the incident.
d. Documentation:
   1. Document the details of the incident, response actions taken, and lessons learned for future reference.

5.7. Inclement Weather

Conditions of heavy and sustained precipitation, high winds and blizzard-whiteout conditions have the potential to affect normal operating conditions and systems. Potential disruption of primary services such as communications and electricity require consideration for contingency planning and recognition of contingency resources. Additionally, if conditions persist, potential consequences causing property damage, evacuation may be necessary.

During times of inclement weather, the following actions may be considered through consultation between the Safety Department, and departmental managers:

- suspension of operations.
- ensuring status and stand-by of emergency back-up systems (water management system pumps, communications, electricity); and
- consideration for evacuation and mustering including alternate areas and temporary sources of heat.

5.7.1. Floods / Storm Surge

Minor or area flooding on site could occur because of a water main break, loss of power to sump pumps, or major multiple rainstorms. For imminent or actual flooding, and only if you can safely do so:

- Secure vital equipment, records, and other important papers.
- If present in your area, report all hazardous materials (chemical, biological, and/or radioactive) to Supervision.
- Move to higher, safer ground.
- Shut off all electrical equipment.
- Do not attempt to drive or walk-through flooded areas.
- Wait for further instructions on immediate action.
- If the building must be evacuated, follow the instructions on Building Evacuation.

- Do not return to your building if you have been evacuated by flooding until you have been instructed to do so.
- Take a product inventory reading of all aboveground tanks including water level readings.
- Above ground tanks should be filled to a level at least 25% above the estimated/predicted floodwater elevation.

5.7.2. Tornado

Experts have estimated that around 230 tornadoes occur in Canada each year, though only around 60 are formally confirmed with most occurring in Southern Ontario, the southern Canadian Prairies and southern Quebec.

Site management shall monitor the weather to provide advanced warnings of potential Tornado generating conditions to employees and contractors.

If a Tornado Watch is issued, then a Tornado is possible. Site management shall issue a Tornado Watch to employees and contractors in the field and provide further instructions. At minimum, crews should prepare to seek shelter.

Tornadoes can occur with little or no warning. To ensure everyone stays safe if a tornado occurs in the area workers can take precautionary actions, including:

- Review and understand the emergency action plan.
- Actively participate in emergency drills
- Know the on-site shelter-in-place location.
- Learn the warning signs of a tornado.
- Pay attention to news of thunderstorms.
- Review response and recovery plans.

Weather forecasting alone cannot guarantee an accurate prediction of a Tornado, and some Tornadoes do occur without a Tornado Warning. During the storm season, employees, contractors, and visitors shall use the following guidance to identify the potential for Tornado Hazards in their vicinity and should contact site management if any of the indicators below are observed.

Early indicators of Tornadoes in the immediate area may include:

- Strong, persistent rotation in the cloud base.
- Whirling dust or debris on the ground under a cloud base – Tornadoes may not have a funnel.

- Hail or heavy rain followed by either a dead calm or a fast, intense wind shift. Many Tornadoes are wrapped in heavy precipitation, and therefore not visible.
- Loud, continuous roar or rumble as this does not fade in a few seconds like thunder.
- At night, small, bright, blue green to white flashes at ground level near a thunderstorm (as opposed to silvery lightning up in the clouds). These mean power lines are being snapped by very strong winds, as it may be a Tornado, and
- At night, persistent lowering from the cloud base, illuminated or silhouetted by Lightning, especially if it is on the ground or there is a blue-green-white power flash underneath.

5.7.3. Hurricane

Hurricane season officially runs from June through November when the waters of the Atlantic Ocean are warm enough to produce a tropical cyclone, a category of weather systems that includes tropical depressions, tropical storms, and hurricanes. These systems bring mild temperatures, high winds, and often heavy rain.

Hurricanes are a form of tropical cyclones that are capable of causing devastating damage to communities and infrastructure. Hurricanes are storm systems with circulating air and sustained wind speeds of 74 miles per hour or higher. The strongest hurricanes can have wind speeds exceeding 155 miles per hour. The Atlantic hurricane season lasts from June to November and peaks between August and October.

Below are activities that will be conducted when hurricanes are forecasted:

- Clear drains and basins
- Trim branches and cut down dead trees.
- Secure all loose items outdoors to prevent them from becoming flying debris.
- If possible non-essential workers should be permitted to work remotely
- Ensure all bunded areas are drained of water. Check before pumping to ensure that no contaminants are present.
- Coordinate all deliveries to site.
- Have an emergency kit available and be prepared for at least 72 hours, with food, water, batteries, a portable radio, and prescription medications.
- Stay up to date by monitoring forecast information and local news.

5.7.4. Thunderstorm And Lightning

Weather can have an adverse effect on the work to be done as well as the safety of everyone involved. Lightning, specifically, can have serious, even fatal outcomes if not monitored and mitigated efficiently. The Security Team will monitor all reports of lightning near to and on the EVREC site.

The primary methods of obtaining the information regarding lightning will be to check the lightning radar website (https://weather.gc.ca/lightning), the SkyScan or equivalent handheld lightning meters as well as field observations. This document will focus on how the Security Team will monitor the lightning activities and communicate this information site-wide.

The Security Team will provide verbal or email updates to all parties at the EVREC Ammonia Plant on approaching lightning conditions to supervision to help prepare the work force during impending lightning events. The Security Team members will be tasked with monitoring lightning using the SkyScan lightning monitors from different vantage points on site and communicating relevant information.

As soon as any lightning has been reported or detected, the Security Team will closely monitor the lightning with the SkyScan handheld units. The Security Team will monitor the lightning until there is no more evidence of lightning for a period of 30 minutes.

If lightning is detected security will communicate by radio that lightning has been detected. There are three different messages that will be passed depending on the range of lighting:

1. **15-30 km** – "This is a lightning advisory that lightning has been detected in the area. (Employees should be prepared to stop work and seek shelter as the storm moves closer). Please follow your respective work procedure and standby for updates." Employees working at the wind farm should prepare to leave the turbine and seek shelter.
2. **5-15 km** – "This is a lightning warning. Lightning has been detected within 5-15 km. Please follow your specific lightning protocol and standby for updates." For workers working in the windfarm if safe to do so they should exit he farm to a safer location. For workers not evacuated and inside tower, sit or stand at the center of the platform and do not touch the tower wall. Contact your immediate supervisor using radio to provide them with turbine number.
3. **0-5 km** – This is a lightning warning. Lightning has been detected within 5 km. All outside workers should be inside a building or vehicle, or safe zone inside tower.
4. **All Clear** – "There has been NO Lightning detected for a period of 30 minutes, the Lightning Advisory/Warning is ended." (This message will also go out as an ALL CALL on site radio system.)

If the SkyScan system is not operating Security will inform all workers of this and workers are to use the Flash/Bang method for lightning protection:

To get an estimate of the distance to the lightning strike; count the seconds between the flash and the thunder, then divide by 5. This rough calculation will give you an estimate of distance from you to the strike, in miles. (Kilometers = miles x 1.609). (Example: 31 seconds between flash and thunder; 31 / 5 = 6.2).

5.7.5. Winter Weather

This Winter Weather Operations Policy is established to ensure the safety and well-being of all employees during adverse winter weather conditions. The primary objective during winter weather is the safety of all employees. Employees are encouraged to use their best judgment and prioritize personal safety when commuting to and from work. The policy aims to ensure the continuity of essential operations while adapting to and mitigating the impact of winter weather conditions. If a storm watch is issued by Environment Canada, the following steps shall be taken:

1. Monitoring Weather Conditions:
    a. Security will be assigned to monitor weather forecasts and conditions to anticipate potential disruptions.
    b. Security upon becoming aware of severe winter weather will collect all applicable information from Environment Canada and provide a summary to site management who are responsible for assessing the severity of the weather and making decisions regarding office closures or changes to operations.
2. Communication:
    a. Employees will be informed of changes in office hours or closures via email, text message, or other designated communication channels.
    b. Close all shed and building doors and windows.
    c. Turn off all non-essential utilities.
    d. Regular updates will be provided to keep employees informed about the evolving weather situation.
3. Remote Work:
    a. Remote Work Option:
        i. Employees may be encouraged or required to work remotely during severe winter weather conditions to ensure their safety.
        ii. Guidelines for remote work, including expectations for communication and productivity, will be provided.
    b. Equipment and Connectivity:
        i. Employees are responsible for ensuring they have the necessary equipment and a stable internet connection to work remotely.
        ii. In case of technical difficulties, employees should promptly communicate with their supervisors
    c. Office Operations:
        i. Delayed Opening or Closure:
        ii. If a decision is made to delay the office opening or close it entirely, employees will be informed of the new schedule.

iii. Essential personnel may be required to report to the office even in case of closure.

5. Flexible Work Hours:
    a. Employees may be allowed to adjust their work hours during winter weather conditions to accommodate commuting challenges.
    b. Flexible hours must be communicated and agreed upon with supervisors.
6. Commuting:
    a. Employees are responsible for assessing their own safety when commuting during winter weather and should use their judgment in deciding whether it is safe to travel.
    b. Use of public transportation or carpooling may be promoted to reduce individual risk.
7. Safety Measures
    a. Employees should dress appropriately for winter weather and use caution when walking in icy or snowy conditions.
    b. EVREC will take measures to maintain safe and clear pathways on the premises during winter weather.
8. Leave and Absences:
    a. Employees facing commuting challenges may request time off, use paid time off, or explore alternative work arrangements.
    b. Supervisors will consider individual circumstances and make accommodations as appropriate.

5.7.6. Icing

Icing refers to any type of accumulation of ice or snow on a structure. Icing occurs when water present in the air freezes after it comes in contact with a surface. This can either occur within clouds (in-cloud icing) or result from precipitation (precipitation icing). In-cloud icing usually forms rime, while precipitation icing forms glaze, drizzle, or wet snow.

If icing occurs, it may affect wind turbine operations and maintenance in different ways. For instance, if ice accretes on rotor blades, it reduces the aerodynamic performance of the turbine and is likely to induce production losses. Also, rotor blade icing increases vibrations and fatigue loads and can reduce turbine lifespan. Icing on a wind turbine may also lead to measurement and control errors as well as mechanical and/or electrical failures.

After an icing event, icing related hazards such as ice throw or ice fall are most likely to occur when temperatures rise and are close to or above 0°C. Ice tends to shed because of small vibrations or blade bending.

It should be noted that ice fall is not only limited to wind turbines, but as accumulated ice may also fall from any iced structure on a wind farm.

Icing conditions may be present if one or more of the following is true:

a. Freezing rain occurred in the last 24 hours.
b. The temperature has hovered at or around freezing during Precipitation.
c. Ice or compacted snow is visible on any part of the turbine.
d. Ice or compacted snow has fallen off the turbine in the last 24 hours.
e. Ice or compacted snow formations are present within the vicinity of the turbine.
f. The temperature was above 32°F / 0°C after Icing conditions were present; or
g. The current temperature is between -2 and +2 degrees Celsius (28.4 and 35.6 F).

In the event of any of these conditions, site management will issue an Ice Watch and instructions to workers to remain clear of areas where there is an icefall potential. In addition, EVREC will post on social media that an Ice Watch is in effect and to take precaution if traveling within the WPA

5.7.7. Earthquakes

The following advice is adapted from the information on earthquakes that can be obtained from Emergency Preparedness Canada at its Internet site: http://www.ocipep-bpiepc.gc.ca.

Whether you are in a house, a high-rise, a mobile home, etc., these are some suggestions for protecting your employees and the property of your company or employer during an earthquake.

5.7.8. After An Alert Of A Possible Earthquake

a. Move or firmly attach objects that could fall and injure you, such as books, plants, or pottery.
b. Ensure that hot-water tanks are well secured to prevent them from falling over and rupturing gas lines or electric wires.
c. Show personnel how to turn off the water, electricity, and gas.
d. Always have a battery-powered radio handy, a flashlight, and spare batteries. The radio could be the only source of information after an earthquake.
e. Have a survival kit containing food, water, sleeping bags, medications, and a first aid kit. Periodically refresh the provisions of food and water. You may have to stay in your house or apartment for several days if it is impossible or very difficult to move around and communicate.
f. Plan and conduct regular rehearsals to ensure that all employees know what to do in the event of an emergency.
g. Identify all emergency exits, alarms and extinguishers.
h. Stay away from windows.
i. Stay in the apartment, office, or house during the earthquake. In multi-storied building, avoid elevators because they could become stuck or damaged if the electricity goes out during or after the earthquake.
j. Stay away from heavy furniture, shelves, and anything else that could fall over.
k. Take shelter beneath a desk, table or piece of solid furniture and hold on to it. If the furniture moves, move along with it.

l. If it is impossible to take refuge beneath some furniture, stay along an inside wall and protect yourself as much as possible.
m. In a high-rise, the alarm bells and water sprinklers could turn on.
n. If an earthquake occurs while driving, personnel should:
   I. Stop as quickly and as safely as possible;
   II. Move the vehicle to the shoulder or curb, away from utility poles, overhead wires, and out from under overpasses; and iii.
   III. Stay in the car and set the parking brake. Turn on the radio for emergency broadcast information. A car may jiggle violently on its springs, but it is a good place to stay until the shaking stops. If a power line falls on the car, stay inside until a trained person removes the wire.
o. If an earthquake occurs while up tower, personnel should:
   I. Remain in the location that they are in until the shaking stops, and
   II. Once shaking stops, monitor alerts for known aftershocks, and once it is safe, put on harness and other fall protection equipment and start to climb down tower. In the event of aftershocks, personnel should stop climbing and hold on to the ladder, and then continue climbing down. Personnel should not use lifts to climb down directly after an earthquake.

5.7.9. After An Earthquake

a. Expect secondary shocks that often follow an earthquake.
b. Inspect your immediate area for hazards (fires, spills, hanging debris, etc.).
c. Do not use matches, lighters, electric switches, or any source of ignition until you are certain that there are no gas leaks.
d. Wear good shoes and protective clothing because the ground might be littered with splinters of glass and other debris.
e. Help to locate the injured and provide first aid.
f. Listen to the radio to hear instructions from emergency services.
g. Check whether the building or house has been damaged. If the damage is serious, do not hesitate to evacuate it.

5.7.10. Forest Fire

The purpose of the Forest Fire procedure is to establish an emergency response procedure for forest fire(s) incident situations that could develop on and off site during the development and construction of the EVREC Renewables Project.

EVREC Renewables mandates that contractors engaged in clear-cutting operations as part of the project construction must possess a comprehensive plan for forest fire prevention and response. All individuals working in, or around wooded areas are required to have a 20 lb dry chemical extinguisher readily available for immediate use in the event of a fire.

When reporting, the following information will be provided:

- Name.

- Telephone or mobile number.
- Location, in as much detail as possible.
- Size of fire.
- Fuel type fire is burning in (i.e., timber, slash grass, etc.).
- Observed weather details.
- Wind direction and presence of gusts.
- Time of discovery.
- Distance to water supply.
- Potential danger to personnel and equipment.
- Action being taken.
- Additional resources required.

In the event the cause of fire may be suspicious, note any people or vehicles in the area. The RCMP may require specific measures to be taken to preserve the scene for further investigation.

If there is a crew on site, the supervisor or most qualified person will ensure the safety of all personnel and will direct and supervise suppression activities until relieved by Forestry personnel. This person will:

- Ensure the rest of the crew is notified and cease operations.
- Maintain contact with emergency services and the Department of Forestry.
- Designate someone to document.
- How and when the fire originated (preserve the scene if arson is suspected).
- Time of discovery.
- Time initial suppression action was taken.
- Time remainder of crew arrived at the fire.
- Time equipment arrived or was set up (i.e., cats, pumps, etc.).

The crew must continue fire suppression action until no longer safe to do so or other assigned duties until relieved by DNR personnel.

Below is the suggested guideline for dealing with a forest fire:

1. Early Detection and Monitoring:
    a. Establish a robust fire detection system that includes lookout towers, aerial surveillance, and remote sensing technologies.
    b. Monitor weather conditions, including wind speed and direction, humidity, and temperature, to predict fire behavior.
2. Emergency Communication:

a. Develop a comprehensive communication plan involving local authority, emergency services, and the public.

3. Establish an emergency hotline for reporting fires promptly.
    a. Utilize public notification systems, such as sirens, text alerts, and social media, to disseminate information quickly.
4. Activate Emergency Response Team:
    a. As soon as a fire is detected, activate the emergency response team, including firefighters, law enforcement, and emergency medical services.
    b. Ensure that all responders are well-trained in wildfire response and have the necessary personal protective equipment (PPE).
5. Incident Command System (ICS):
    a. Implement the Incident Command System to establish a clear chain of command and coordination among responding agencies.
6. Evacuation Planning:
    a. Develop evacuation plans for at-risk communities and communicate evacuation orders early.
    b. Coordinate with law enforcement for traffic control and public safety during evacuations.
7. Resource Mobilization:
    a. Request additional firefighting resources, including personnel, equipment, and aircraft, based on the severity of the fire.
    b. Collaborate with neighboring jurisdictions and agencies for mutual aid.
8. Establish Fireline and Control Measures:
    a. Identify and create firebreaks and containment lines to control the fire's spread.
    b. Use aerial resources, such as water-dropping helicopters and air tankers, to support ground operations.
9. Community Outreach:
    a. Keep the public informed about the fire's status, evacuation orders, and safety measures.
    b. Provide information on shelters, emergency services, and support for those affected.
10. Recovery Planning:
    a. Develop a recovery plan to address the aftermath of the fire, including rehabilitation of affected areas and support for displaced residents.
    b. Collaborate with local, state, and federal agencies to access resources for recovery efforts.
11. Media and Public Relations:
    a. Designated Spokesperson: Designate a spokesperson to communicate with the media and address concerns from the public.
    b. Regular Updates: Provide regular updates to stakeholders, the public, and the media to ensure accurate information dissemination.
12. Investigation and Analysis:
    a. Post-Incident Analysis: Conduct a thorough investigation to determine the cause of the fire or explosion.

b. Lessons Learned: Identify lessons learned from the incident and incorporate them into safety protocols and training.

5.7.11. On-Site Power Failure

A power failure may occur as a result of electrical outages, plumbing failure/flooding, gas leaks, steam line breaks, ventilation problems, elevator failures, etc. For your personal safety, in the event of a utility failure:

a. Immediately notify Supervision.
b. If the building must be evacuated, follow the building evacuation instructions.
c. Unplug all electrical equipment (including computers) and turn off light switches.
d. Use a flashlight: Do not light candles or use other kinds of flames for lighting.
e. Elevators:
    i. If passengers are trapped in an elevator, advise them to stay calm and tell them you are getting help.
    ii. If it is safe for you to stay in the building, stay near the passengers until assistance arrives.
    iii. If you are trapped in an elevator, help will be there soon:
    iv. Use the Call Button of Phone to call for help.
    v. Do not try to climb out or exit the elevator without assistance.

When power is lost;

- Power Company must be contacted immediately to determine the length of time required for restoring power.
- Turn off all electrical.
- Operations 'personnel will execute standard operating procedure for shutting down ammonia process.
- Operators should continue to make rounds in the process areas. The equipment must continue to be monitored for leaks and any potential problems that may occur in an extended power outage.
- Operators will give special attention to sumps, drains and any other systems that can gravity fill.
- Keep people in your area calm. Tell them to wait for instructions. Supervisors shall ensure all workers under their Control are accounted for.
- In the event of an evacuation, remind people to be extra cautious if conditions along the evacuation route to the Muster Station are dark.
- Assess the situation and determine if the power outage was caused by an emergency or an incident.
- If the situation poses a risk to workers in the facility decide whether an evacuation is warranted.

- Ensure someone has been assigned to check / repair the generators such that they are ready to operate when needed.
- Before starting the generator plant, ensure all safeguards are in place and all work permits re-issued.
- Assess any damage to site, equipment, or environment.

Maintain the following preparations in advance:

- Make sure all emergency lighting is working.
- Make sure the radio communications are kept in good repair.
- Make sure you have access to working flashlights in each area.

For an extended power outage, the following time constraints have been identified:

- After one (1) hour, the Main Construction Office and the computer systems will not be functional.
- After four (4) hours, the phone systems will not be functional.
- Critical Operations
- Operations Shutdown/Termination
- Shelter in Place
- Building Evacuation

5.8. Wildlife Incidents

Since EVREC operates in areas with many wildlife habitats it is possible that different typesof animals may be encountered during normal working activities. EVREC has prepared a Wildlife Response Plan (Appendix A) to outline mitigations and procedures for how to respond to wildlife emergencies (e.g. injury, mortality), or incidents.

6. OTHER INFORMATION

6.1. Local Community Liaison

EVREC will establish a Liaison Committee that will involve local stakeholders. The purpose of this committee will be to streamline communication strategies for ensuring the safety and well-being of area residents and businesses during emergencies.

EVREC will conduct regular public awareness campaigns to educate the community about emergency procedures, communication channels, and the importance of staying informed. EVREC will also establish a feedback mechanism to gather input from the community and industry stakeholders, allowing for continuous improvement of the communication strategy.

EVREC will implement the following systems:

- Invest in an integrated alert system that can send alerts via text messages, phone calls, and emails to residents and industry personnel.
- Utilize social media for real-time updates and to disseminate information quickly. Establish official accounts for emergency communications.
- Install sirens and public address systems in critical locations to broadcast emergency alerts.

6.2. Emergency Communications

- Telephone
- Siren
- Emergency Contact
- Nearby communities
- Additional Resources
- Local Community Liaison
- Communications with the Public
- External Emergency and Regulatory Agencies

6.3. Hazard Recognition And Assessment

To ensure successful EAP planning, EVREC recognize and evaluate all potential hazards impacting plant operations. This involves assessing the risks associated with each hazard to identify those most likely to lead to emergencies. It is crucial to clearly identify contributing factors, potential emergency scenarios, and conduct a comprehensive risk assessment for each identified hazard.

In addition to identifying high-priority hazards, this proactive approach to emergency management can result in a more disaster-resilient environment. Success in meeting this challenge can be found by answering the following questions:

a. What hazards exist within or surrounding the EVREC site?
b. How frequently do they occur?
c. How severe can their impact be on the employees, public, environment, finances, and reputation?
d. Which hazards pose the overall greatest threat to the organization?

In order to properly address the above questions a series of planned and structure risk assessment will be undertaken with increasing level of design scrutiny designed to match level of engineering complete at the time of assessment.

The project will follow established good engineering practices throughout its development, with a focus on identifying and addressing risks and hazards at each stage of design, construction, and operation. Early decisions in engineering have a substantial impact on both process and operational risks. Recognizing and mitigating process risks is primarily achieved through the application of the PHA process (Process Hazards Analysis). This approach includes various techniques like What-If, HAZID (Hazard Identification), and HAZOP (Hazard and Operability Analysis). HAZOP, in particular, provides a systematic and structured method for identifying potential hazards during both operation and maintenance.

Engineering documents, specifically Piping and Instrument Diagrams (P&IDs), are routinely released by the engineering contractor and undergo thorough reviews involving representatives from diverse parties and disciplines. The aim is to detect potential issues at an early stage, enabling swift corrections and reducing their impact on the project's cost and schedule. The Hazard and Operability (HAZOP) analysis is performed once the design stabilizes, usually towards the conclusion of the Front-End Engineering Design (FEED) phase.

Any changes occurring after the HAZOP analysis are formally documented and subjected to review and approval processes to ensure they do not contradict HAZOP recommendations or introduce new risks. The project team is dedicated to incorporating safety measures into the overall facility design, anticipating situations that may pose hazards to personnel, the environment, or the facility itself. Recognizing the dynamic nature of project development, this emergency response plan is subject to periodic reviews and updates as the design progresses and additional information becomes available. This proactive approach aims to enhance the effectiveness of the emergency response plan by dressing emerging concerns and maintaining alignment with evolving project conditions.

6.3.1. Emergency Equipment

- Local Emergency Response Equipment
- Environmental
- Confined Space
- Motor Vehicle
- High Angle

6.3.2. HSE Training

EVREC will train Employees and Emergency Responders for each facility and shift, following legislative requirements, and industry best practices. Any modifications to the procedure or any of the appendices also require re-training. Thereafter, annual training is required. Updates to EVREC Emergency Preparedness and Response Procedure will be communicated via email to all applicable personnel and training acknowledgements records will be requested by and retained within the company Learning Management Software.

6.3.3. Employee Training

All employees and visitors will receive specific emergency awareness training during their orientation training, which consists of but not limited to:

- Emergency contacts and muster points
- Crisis Management procedure / Emergency Evacuation Plan including emergency routes and assembly areas to be used.
- Ammonia Exposure Control Plan
- Respiratory Protection & Fit Testing (as required)
- Accident reporting procedures.
- Location of first-aid kits and identification of first-aid providers.
- Chemical spill on-site reporting procedures.
- In the case of specific rescue procedure (i.e. confined space, working at height, Shelter-in-Place),
- training of workers on the procedure is done prior to performing the task.
- Hydrogen properties and behavior
- Safety requirements for working with or around Ammonia/Hydrogen.
- Procedures for handling ammonia/hydrogen leaks and spills, and the appropriate actions to be taken in case of fire.
- Operational employees will receive annual fire extinguisher and spill response training and instruction in fire prevention and emergency evacuation procedures for the facility.
- Alarms and other emergency communication systems to be used both at the work area and from the operations department.

An annual review of the above topics will be conducted with all employees at the beginning of each year.

6.3.4. ERT Training

A trained emergency response team will be available 24 hours per day to respond to site emergencies such as medical, fire and emergency releases. Members of ERT will be at a minimum of 3 firefighters and one fire officer (Facility Manager) per shift. Off duty members can be called in at the discretion of the Facility Manager. For additional information on ERT training refer to EVREC Hazardous Materials Training Plan.

All members of the ERT will be trained in the following areas:

- Standard First Aid
- High Angle / Confined Space Rescue
- Fire Training

- Mock-up Drills
- Spill Response Training
- Ammonia / Hydrogen emergencies
- Wind Tower emergencies
- All members will be trained to the National Fire Protection Association (NFPA) 1072 standard “Hazmat Awareness & Hazmat Operations”

All members will be required to participate in an eight-hour ERT training session each month in order to maintain efficiency. Training sessions will include theory and practical evolutions. Other HSE trainings will be given based on specific work requirements.

6.4. Emergency Response Plan Holders

On a yearly basis, Document Control will distribute a regulated version of the EVREC Emergency Response Plan to the following entities:

- Facility Manager
- Emergency Response Team
- Health & Safety Coordinator
- Security
- Main Gate access box
- Town of Botwood
- Town of Botwood Fire Department

7. PERIODIC REVIEW / AUDIT

Planning emergency procedures is an ongoing activity that requires constant corrections and revisions for a number of reasons, including changes in operations, in the Corporation, in personnel, in the regulations, and in community standards.

The HSE Officer or designate conducts a review of the overall emergency response plan on an annual basis. Site-specific plan elements are reviewed during these site audits. During the annual review the HSE Officer will review the Emergency Response Plan with the Occupational Health & Safety Committee for their input and review. The HSE Officer or designate shall conduct a periodic (at least quarterly) assessment of the emergency evacuation plan at the site level to ensure that changes in the project site are accounted for in the plan.

EVREC is responsible for testing the various parts of the emergency response procedures plan at least once a year to ensure that it is complete, effective, and up to date. The HSE Officer or designate must also inspect emergency response equipment on a monthly basis at a minimum and ensure that:

- Minimum one drill performing a rescue scenario within a wind turbine,

- Minimum one emergency fire drill in the O&M building.
- Additional drill examples could include Hurricane Preparation Preparedness review, loss
- of communications, tornado, local emergency or other natural disaster.

When local Emergency First Responder personnel are available and their presence is applicable to the scenario, they will be included in the drills.

8. COMPANY INFORMATION

Contact information for EVREC is provided below:

Exploits Valley Renewable Energy Corporation
Contact: Dean Comand

Mailing Address:
181 Bay Street
Toronto, ON M5J 2V1
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Email: info@evrec.ca

9. REFERENCES

Documents

10. LIST OF ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
AED	Automated External Defibrillator
ASU	Air Separation Unit
CEPA	Canadian Environmental Protection Act
CNWA	Canadian Navigable Waters Act
CSA	Canada Shipping Act
EAP	Emergency Action Plan
EC	Emergency Coordinator
ECC	Emergency Control Centre
EIS	Environmental Impact Statement
EOC	Emergency Operations Center
EPA	Environmental Protection Act
ERP	Emergency Response Plan
ERT	Emergency Response Team
EVREC	Exploits Valley Renewable Energy Corporation

GHG	Greenhouse Gas
GHS	Globally Harmonized System
GW	Gigawatt
HAZMAT	Hazardous Materials
IC	Incident Commander
ICS	Incident Command System
IFC	International Fire Code
MW	Megawatt
NFPA	National Fire Protection Association
NL	Newfoundland and Labrador
PPE	Personal Protective Equipment
PPV	Peak Particle Velocity
RFNBO	Renewable Fuels of Non-Biological Origin
ROW	Right-of-Way
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets
STEL	Short-Term Exposure Limit
TOG	Transportation of Dangerous Goods Act
TWA	Time-Weighted Average
TWh	Terawatt-hour

Appendix A

Wildlife Response Plan

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CONSULTING

WILDLIFE RESPONSE PLAN
EVREC Green Energy Hub
Near Botwood, NL

May 11, 2026

TABLE OF CONTENTS

page

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Scope 1
1.3 Revision & Document Control 2
1.4 Spatial Boundaries 2
2.0 ROLES AND RESPONSIBILITIES 3
2.1 Site Manager or Equivalent Role 3
2.2 Environmental Coordinator or Equivalent Role 3
2.3 Construction Manager or Equivalent Role 4
3.0 SUMMARY OF PRIORITY SPECIES 4
4.0 REGULATORY CONTEXT 5
4.1 Responsible Authorities 6
4.2 Sensitive Timing Windows 7
5.0 Wildlife Response 7
5.1 Wildlife Sightings or Mortalities 7
5.2 Nuisance & Aggressive Wildlife Encounters 8
5.2.1 Bear Encounter 8
5.2.2 Ungulate Encounter 8
5.2.3 Coyote or Lynx Encounter 9
5.3 Wildlife Mortality or Injured Wildlife 10
6.0 PRIORITY SPECIES SPECIFIC RESPONSE PROCEDURES 10
6.1 Bats 10
6.2 Caribou 11
6.3 American Marten 11
6.4 Moose 11
6.5 Muskrat 11
6.6 Invertebrates 12
7.0 REPORTING AND RECORD KEEPING REQUIREMENTS 12
7.1 Reporting Procedures 12
7.2 Record Keeping Requirements 12
8.0 COMMUNICATIONS 12
8.1 Key Contacts 12
8.2 Training Requirements 13
9.0 STATEMENT OF QUALIFICATIONS AND LIMITATIONS 15
10.0 REFERENCES 17

LIST OF TABLES

Table 3.1: Wildlife and Terrestrial Priority Species Considered Under the Plan[1] 5
Table 4.1: Summary of Sensitive Timing Windows for Priority Species 7
Table 8.1: Communication Protocol 13

LIST OF APPENDICES

Appendix A: Wildlife Response Plan Mitigations

LIST OF ACRONYMS

BWPA	Botwood Wind Project Area
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
EARD	Environmental Assessment Registration Document
ECCC	Environment and Climate Change Canada
EIS	Environmental Impact Statement
ECCC-CWS	Environment and Climate Change Canada – Canadian Wildlife Service
ESA	*Endangered Species Act*
IPA	Industrial Project Area
LTWPA	Leading Tickles Wind Project Area
NLECCC	Newfoundland and Labrador Environment, Conservation and Climate Change
NLWD	Newfoundland and Labrador Department of Forestry, Agriculture, and Lands: Wildlife Division
PA	Project Area
SAR	Species at Risk
SARA	*Species at Risk Act*
SLWPA	Seabrights Lake Wind Project Area
SOCI	Species of Conservation Concern
SPA	Solar Project Area
S-Rank	Subnational Rank
TLWPA	Twin Lakes Wind Project Area.
WPA	Wind Project Area
WRP	Wildlife Response Plan

1.0 INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC, the "Proponent") is proposing to develop, construct, and operate a large-scale wind-to-green ammonia project on the former Abitibi lands near Botwood, in central Newfoundland and Labrador, Canada (the "Project"). The Proponent prepared and submitted the Project's Environmental Assessment Registration Document (EARD) in October 2024. Subsequently, Newfoundland and Labrador Environment, Conservation and Climate Change (NLECCC) determined that the Project requires an Environmental Impact Statement (EIS) and provided guidelines for the completion of the EIS.

The EIS guidelines for this Project (NLECC, 2025) requires the development of a Wildlife Response Plan (WRP) to be submitted as part of an Emergency Response/Contingency Plan with the Project EIS. This is a preliminary plan that will be finalized following consultation with NLECCC, Newfoundland and Labrador Department of Forestry, Agriculture, and Lands: Wildlife Division (NLWD), and Environment and Climate Change Canada – Canadian Wildlife Service (ECCC-CWS).

The focus of this WRP is to outline mitigations and procedures for how to respond to wildlife emergencies (e.g. injury, mortality), or incidents. Avifauna are not discussed in this WRP, because they are discussed separately in the preliminary Avifauna Management Plan. Management of fish and fish habitat is also excluded from this plan.

1.1 Purpose

The purpose of this WRP is to outline procedures for site personnel throughout all phases of the Project (site preparation, construction, operations and maintenance, and decommissioning) for how to respond to wildlife emergencies (e.g. injury, mortality), or incidents to ensure compliance with the *Endangered Species Act,* SNL 2001, c E-10.1 (ESA) and *Species at Risk Act* (SARA). Protections and mitigations for Project related impacts to wildlife and their associated habitats will also be outlined for all phases of the Project.

1.2 Scope

This WRP has been developed to satisfy the requirements outlined in the EIS guidelines and commitments made within the EIS regarding the development of species-specific procedures to respond to wildlife emergencies and incidents for the following species:

- Little brown myotis (*Myotis lucifigus*)
- Northern myotis (*Myotis septentrionalis)*
- American marten (*Martes americana)*
- Woodland caribou (*Rangifer tarundus)*
- Moose (*Alces alces)*
- Muskrat (*Ondatra zibethicus)*
- Gypsy cuckoo bumble bee (*Bombus bohemicus*)
- Suckleys cuckoo bumble bee (*Bombus suckleyi*)
- Yellow-banded bumble bee (*Bombus terricola)*

- Transverse Lady Beetle (*Coccinella transversoguttata)*

The following species that are known to occur within the PA based on observations documented in the EIS will also be considered in the WRP:

- Snowshoe hare (*Lepus americanus*)
- Black bear (*Ursus americanus*)
- American mink (*Neogale vison*)
- Red squirrel (*Sciurus vulgaris*)
- Canada lynx (*Lynx canadensis*)
- Norway rat (*Rattus norvegicus*)
- Eastern coyote (*Canis latrans x Canis Lycaon*)
- Red fox (*Vulpes vulpes)*
- American beaver (*Castor canadensis*)
- Meadow vole (*Microtus pennsylvanicus*)
- Northern river otter (*Lontra canadensis*)

1.3 Revision & Document Control

This is a 'living' document and will be revised and updated, as necessary, to account for the changing Project activities and/or additional assessments completed as part of post-approval work. At a minimum, this document will be reviewed and revised, if necessary, on an annual basis. Revisions will be completed by the Proponent based on detailed design considerations, conditions from pending permitting, and construction and operational considerations and input where appropriate from specialist consultants.

1.4 Spatial Boundaries

The WRP applies to the immediate area in which the Project activities may occur and are likely to cause direct and indirect effects to habitat and wildlife within the Project Area (PA), which includes the following components:

- Wind Project Area (WPA) – the sum of all wind project areas
    - Botwood Wind Project Area (BWPA) – the individual Botwood Wind Project Area.
    - Leading Tickles Wind Project Area (LTWPA) – the individual Leading Tickles Wind Project Area.
    - Twin Lakes Wind Project Area (TLWPA) – the individual Twin Lakes Wind Project Area.
    - Seabrights Lake Wind Project Area (SLWPA) – the individual Seabrights Lake Wind Project Area.
- Industrial Project Area (IPA) – the industrial Project component Project Area.
- Solar Project Area (SPA) – the solar Project component Project Area.

Habitat loss, fragmentation, and potential wildlife mortality risks are highest within the PA. Wildlife most affected within this boundary include smaller terrestrial species and species with

limited mobility, which may be at greater risk of direct interactions with infrastructure and equipment (e.g. vehicles and wind turbines).

2.0 ROLES AND RESPONSIBILITIES

The following roles and responsibilities will apply to personnel working on the Project and will require them to:

- Ensure that all wildlife and dwelling measures are in place and are adhered to during work activities as described in this WRP and as applicable to their scope of work.
- Complete site orientation, including wildlife awareness training.
- Report all Species at Risk (SAR) wildlife observations and/or individuals in distress, to the Environmental Coordinator for assessment, tracking, reporting, and/or monitoring purposes.

2.1 Site Manager or Equivalent Role

The Site Manager or equivalent role will be a Proponent representative and will oversee the planning and execution of Project activities. The Site Manager will be responsible for the following tasks under the WRP:

- Ensure Project activities comply with applicable federal, provincial, and municipal standards or regulations.
- Retain all environmental incident forms, including all spills and any health and safety related incidents.
- Work closely with the Environmental Coordinator to implement mitigations outlined in this Plan and complete any external reporting.
- Implement corrective actions that may be a result of environmental matters including non-routine regulatory agency inspections or investigations, regulatory violations, and any assessed fines and penalties associated with adverse effects to habitat/wildlife.
- Maintain communication with regulatory agencies concerning biodiversity or environmental updates resulting from Project activities.

2.2 Environmental Coordinator or Equivalent Role

The Environmental Coordinator or equivalent role will be a Proponent representative and will implement the planning and execution of Project activities. The Environmental Coordinator will be responsible for the following tasks under the WRP:

- Work closely with the Site Manager to implement actions and mitigation measures outlined in this Plan.
- Advise Site Manager and Construction Manager on appropriate buffer zones and ensure they are flagged (as appropriate), established, and maintained for SAR and dwelling locations.

- Assist with the submission of updates and reports, as necessary, to the appropriate provincial and federal authorities regarding wildlife injury, mortality, SAR, and dwellings.
- Support the Site Manager regarding communication with regulatory agencies concerning biodiversity or environmental related updates resulting from Project activities.
- Conduct routine inspection, monitoring, and reporting to ensure compliance.
- Assist or implement with deployment and installation of controls and protection measures, as applicable.
- Assist the Site Manager and Construction Manager in education activities to ensure Project personnel are aware of requirements outlined in this Plan.
- Maintain a record of wildlife sightings, including reports of nuisance or aggressive wildlife.

2.3 Construction Manager or Equivalent Role

The Construction Manager or equivalent role will ensure that all on-site personnel hired to support Project construction are adequately trained and oriented to the wildlife and species protection procedures described in this WRP. This may be an external party if the Proponent sub-contracts all or portions of the site development/construction work to a third party. They will also be responsible to:

- Support the Environmental Coordinator with procurement of wildlife mitigation and control measures applicable to their scope of work.
- Communicate all wildlife sightings to the Environmental Coordinator in the event of a nest/den/burrow being encountered or a SAR being observed.
- Implement and enforce any Stop Work Orders and ensure that activities do not proceed until proper mitigation measures are in place.
- Maintain a list of wildlife sightings reported from Project personnel to provide to the Environmental Coordinator.
- Review any non-compliance events and support the Environmental Coordinator with implementation of corrective actions.
- Promote best management practices.
- Promote health and safety of personnel and wildlife.
- Ensure that the following are on-site:
    - Up-to-date design drawings including areas to be avoided (e.g., wetlands, watercourses, old-growth forest, SAR etc.).
    - Copy of any required approvals and permits.

3.0 SUMMARY OF PRIORITY SPECIES

Wildlife SAR present in the PA were identified and assessed within the EIS through both desktop reviews and field studies. The identified SAR that will be the focus of this WRP are summarized in Table 3.1. Also included are specific species/SOCC that were observed or identified as requiring additional management in the EIS. Other priority species include those

without a conservation rank but were selected to be discussed in more detail in the assessment of project impacts in the EIS

Table 3.1: Wildlife and Terrestrial Priority Species Considered Under the Plan[1]

Common Name	Scientific Name	COSEWIC Status	SARA Status	NLESA Status	NF S-Rank
Fauna					
Woodland caribou	*Rangifer tarundus*	Special Concern	Special Concern	N/A	S3S4
American marten	*Martes americana*	Special Concern	Threatened	Vulnerable	S3
Moose	*Alces alces*	N/A	N/A	N/A	--
Muskrat	*Ondatra zibethicus*	N/A	N/A	N/A	--
Bats					
Little brown myotis	*Myotis lucifigus*	Endangered	Endangered	Endangered	--
Northern myotis	*Myotis septentrionalis*	Endangered	Endangered	Endangered	--
Invertebrates					
Gypsy cuckoo bumble bee	*Bombus bohemicus*	Endangered	Endangered	Endangered	--
Suckleys cuckoo bumble bee	*Bombus suckleyi*	Threatened	Not Listed	Threatened	--
Yellow-banded bumble bee	*Bombus terricola*	Special Concern	Special Concern	Vulnerable	--
Transverse lady beetle	*Coccinella transversoguttata*	Special Concern	Special Concern	Vulnerable	--

Source: [1]Government of Canada 2023, [2]Government of NL 2023, [3]ACCDC 2023

-- indicates that the species was not identified in the Atlantic Canada Conservation Data Centre report, therefore the S-Rank is unknown

This table will be reviewed and updated during annual document revisions; additional species may be added to this table. More detailed information on the locations of these SAR and other SOCC identified in the PA can be found in the EIS.

4.0 REGULATORY CONTEXT

Several laws and regulations provide protection for fauna, bats, and their habitats in Newfoundland and Labrador. Legislation such as those listed in this section provide guidance

on the treatment of wildlife species. The WRP complies with the following legislation:

Federal Legislation

- SARA*, S.C. 2002, c. 29*
- *Canada National Marine Conservation Areas Act*
    - Designates National Marine Conservation Areas
- *Canada Wildlife Act*
    - Designates National Wildlife Areas
- *Canada National Parks Act*

Provincial Legislation

- *Wild Life Act, RSNL 1990, c W-8*
    - Designates wildlife reserves.
- *Water Resources Act,* SNL 2002 cW-4.011
- *Endangered Species Act, SNL 2001, c E-10.1*
- *Environmental Protection Act*
- *Wilderness and Ecological Reserves Act, RSNL 1990, c W-9*
- *Lands Act, SNL 1991, c36 s1*

For the purposes of the WRP, a SAR is defined as a species that is:

- Listed under SARA as “Endangered”, “Threatened”, or “Special Concern” (Canada, 2002)
- Listed under the NL ESA as “Endangered”, “Threatened”, or “Vulnerable” (Newfoundland and Labrador, 2001)

Throughout this report, SOCC are defined as a species that is:

- Listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) but not SARA as “Endangered”, “Threatened”, or “Special Concern” (Government of Canada, 2022).
- Species having a subnational (provincial) rank (S-Rank) of “S1”, “S2”,“S1S2”or “S2S3”.

4.1 Responsible Authorities

There are several federal and provincial departments that govern land-use and acceptable practices regarding wildlife and habitat protection. Any communication with external regulators will be completed by the Site Manager or delegate (Environmental Coordinator). Key departments include (list not exhaustive):

- Environment and Climate Change Canada
- ECCC-Canadian Wildlife Service
- Department of Forestry, Agriculture and Lands (NLFAL)
- Newfoundland and Labrador Wildlife Division
- Newfoundland and Labrador Environment, Conservation and Climate Change

4.2 Sensitive Timing Windows

Sensitive timing windows have been established for priority species identified in the EIS (i.e. known and potential SAR/SOCC and other species that were selected to be discussed in more detail in the assessment of project impacts in the EIS). The purpose of providing sensitive timing windows for priority species is to guide environmental awareness measures (i.e. safety talks, training, etc.) for site personnel related to vulnerable life stages such as breeding, birthing, and overwintering periods when wildlife are more active or more vulnerable (Table 4.1).

Table 4.1: Summary of Sensitive Timing Windows for Priority Species

Species/Group	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bat (breeding)												
Bat (overwinter)												
Caribou												
American Marten												
Moose*												
Muskrat*												
Gypsy Cuckoo Bumble Bee												
Suckleys Cuckoo Bumble Bee												
Yellow-banded Bumble Bee												
Transverse Lady Beetle												

*Moose and muskrat are not listed species in Newfoundland but were selected for a more detailed analysis in the EIS.

For caribou, calving is a very sensitive time period, which occurs from April 5 to July 15 (Williams, 2021). During this time, if caribou or signs of caribou are observed within 1 km of construction activity, work will be put on hold, and the observation will be reported to the Environmental Coordinator.

For American marten, the natal den site and occupied maternal dens should be protected as residences from April 1 to June 30 (ECCC, 2019). Therefore, if a den is observed, nearby project related activities should be put on hold and reported to the Environmental Coordinator.

Vegetation clearing will not occur within 30 m of a surface watercourse and/or a wetland.

5.0 WILDLIFE RESPONSE

The WRP will follow the procedures outlined in the following sections for wildlife sightings or mortalities, nuisance and aggressive encounters, and wildlife mortality or injured wildlife. Mitigation measures are provided in Appendix A.

5.1 Wildlife Sightings or Mortalities

Wildlife sightings of priority species or large/dangerous animals must be reported to the Environmental Coordinator.

In the event that an injured, sick, or deceased animal is identified, the Environmental Coordinator must be immediately notified. If large wildlife (e.g., bear or moose) or priority species are struck by Project vehicles or equipment or found injured or dead, then the Site Manager or delegate (Environmental Coordinator) shall report this to NLWD and be involved in any follow-up investigation or corrective action.

5.2 Nuisance & Aggressive Wildlife Encounters

To prevent attracting nuisance wildlife, good housekeeping will be maintained to reduce wildlife attractants (e.g., no littering, no feeding wildlife, storing food and general waste in covered bins).

The NLWD will be contacted by the Site Manager or delegate (Environmental Coordinator) for all incidents involving aggressive and injured wildlife. Guidance, with respect to these species, shall be given by these authorities.

Species-specific procedures for encounters with aggressive wildlife are provided in the sections that follow.

5.2.1 Bear Encounter

If one were to encounter a bear from a distance, remain calm and watch to see how the bear reacts to your presence, giving the bear plenty of space. Bears have an excellent olfactory system (sense of smell), so the animal will likely be aware of your presence. In this instance, the bear may not be interested in you, if this is the case, detour away quickly and quietly. Use bear spray if available. Black bears commonly bluff charge, pound their front feet on the ground, and pop their jaws when agitated. These are not necessarily signs of aggression, but they may indicate that the bear is aware of your presence.

Bear awareness training should be completed by identified personnel completing certain tasks or working in areas where a bear encounter may occur. Report all wildlife encounters to the Environmental Coordinator. Wildlife Observation Forms and Reference Guides will be developed in consultation with regulators.

5.2.2 Ungulate Encounter

If an ungulate (e.g. caribou or moose) is encountered, remain calm and maintain a safe distance (at least 100 m away). This is particularly important for caribou, because human presence could cause caribou to abandon sources of food or push them closer to predators (Parks Canada, 2023). Additionally, caribou and moose may become aggressive if threatened. Do not approach or follow the animal, and back away slowly. Make sure to keep your eyes on the animal, but do not make direct eye contact.

Warning signs that the animal may attack include:

- The animal will lower its head, flatten its ears and raise the hair on its neck before charging.

- Stomping the ground and head swaying may also indicate the animal is about to charge.
- Antler display behaviours are intended to intimidate and may indicate aggression.
- Vocalizations, such as lip smacking and teeth clicking for moose and huffing for caribou are also warning signs.

If a moose or caribou displays behaviours that suggest they may attack, make sure there is a solid object between you and the animal (e.g. a rock or a tree). If you get knocked down, curl in a ball and protect your head. Use bear spray if available.

Report all wildlife encounters to the Environmental Coordinator.

5.2.3 Coyote or Lynx Encounter

Coyotes and lynx typically avoid humans and although the likelihood of an attack is relatively rare, caution is still required:

- It is recommended to always carry a walking stick, or something that can be used to fend off a coyote or lynx. If you are attacked, this is often the only way to fight back.
- If you encounter a coyote or lynx, try to make yourself appear as large and intimidating as possible. Make eye contact and wait to see what the coyote or lynx does next. In most cases, it will leave you alone.
- If you see one coyote, be aware that there may be more present, out of sight.
- If the coyote or lynx approaches you, make lots of loud, aggressive noises. Remember, these animals are looking for a meal, not a challenge.
- DO NOT turn your back to the animal and DO NOT run away, it is an instinct to chase (like a dog).
- One common tactic is for one coyote to distract its prey from the front, while others sneak up and attack from behind. If you sense an aggressive situation is imminent, try to back up against a tree, large boulder, or anything that will protect you from behind. Even a narrow tree can provide some protection in this situation.
- Do what you can to fend off the coyote(s) or lynx, including using air horns or whistles, bear bangers, and your walking stick. Always try to keep the walking stick between yourself and the coyote lynx, extending it out or using your foot to keep the animal at a distance from the rest of your body.
- If you have bear spray available, be prepared to discharge it.
- Keep in mind that you may have to strike the animal repeatedly with the stick before it will give up and leave you alone.

Leave the area where you encountered the coyote or lynx as quickly as possible, without running, and keep a lookout for other coyotes as you depart.

Report all wildlife encounters to the Environmental Coordinator.

5.3 Wildlife Mortality or Injured Wildlife

If you encounter an injured or deceased animal, or if a Project activity has resulted in the injury or mortality of an animal, report to the Environmental Coordinator. The Site Manager or delegate (Environmental Coordinator) will then:

- Contact NLWD immediately.
- Arrange for the documentation and assist with determining removal of the injured/deceased animal and will complete any required regulatory notifications.
- Wildlife injury or mortality response will be handled on a case-by-case basis depending on the species of deceased animal and circumstances resulting in its death.
- Potentially be involved in any follow-up investigation or corrective action depending on the species and circumstances.

The Site Manager or delegate (Environmental Coordinator) will ultimately be responsible for all external communications.

It should be noted that there is a risk of exposure to wildlife diseases such as rabies, and parasites.

6.0 PRIORITY SPECIES SPECIFIC RESPONSE PROCEDURES

The following sections describe species-specific response procedures in the event of an encounter, injury, mortality, or incident with a priority species. Species-specific mitigations are provided in Appendix A.

6.1 Bats

Any bat observations, injuries, or mortalities will be reported to the Environmental Coordinator, who will maintain a record of the observations and update the Site Manager to report to ECCC-CWS and NLWD. The Environmental Coordinator will be trained to support staff with bat and roost identification.

Observations of active bat roosts, colonies, potential hibernacula sites, or sick or dead bats during construction and operations will be reported to the Environmental Coordinator. The Site Manager will then consult with the NLWD. Activities in the immediate vicinity of an active roost, colony or hibernaculum are to be put on hold until further notice. Appropriate action or follow-up will be guided by consultation with regulators.

Any bat collisions with Project infrastructure (e.g. turbines, flares) or vehicles will be reported to the Environmental Coordinator, who will maintain a record of all resulting injuries/mortalities. No injured/deceased bats are to be handled by staff without specialized training to reduce the risk of rabies. No deceased bats are to be removed from the turbine pads during periods of the mortality monitoring program (carcass searches), in which case the surveyor(s) conducting the carcass searches will be notified immediately.

Bat injuries and/or mortalities associated with vegetation removal and blasting will be reported to the Environmental Coordinator who will maintain a record of all resulting injuries/mortalities.

If a bat colony is found to exist within Project infrastructure, it will be reported to the Environmental Coordinator. Bats can remain in place if there is no chance of contact with people. However, if it is not safe for bats to remain, the Site Manager will contact NLWD to develop an approved removal plan.

6.2 Caribou

All caribou observations or encounters will be reported to the Environmental Coordinator, who will maintain a record of the observations and update the Site Manager to report to NLWD.

Caribou observations within 1 km of blasting or other construction activity must be reported to the Environmental Coordinator and work will be paused until the Caribou leave the area. The Site Manager will notify the NLWD and determine (in consultation with NLWD, as applicable) if additional mitigations are required.

Caribou injuries and/or mortalities associated with the Project (e.g. vehicle collision) will be reported to the Environmental Coordinator, who will maintain a record of injuries and mortalities and reported to NLWD by the Site Manager. Injuries and mortalities must be reported to NLWD within 24 hours.

6.3 American Marten

Any marten encounters, observations, injuries and/or mortalities (e.g. vehicle collisions) will be reported to the Environmental Coordinator, who will maintain a record of the interaction/emergency and update the Site Manager to report to NLWD.

If marten or suspected denning locations are encountered during construction activities, with identification support from the Environmental Coordinator, work in the area is to be stopped. The Environmental Coordinator will be notified, and the Site Manager will contact NLWD. Any applicable mitigations determined through consultation with NLWD will be implemented prior to construction beginning again.

6.4 Moose

Any moose encounters, observations, injuries and/or mortalities (e.g. vehicle collisions will be reported to the Environmental Coordinator, who will maintain a record of the interaction/emergency and update the Site Manager to report to NLWD in the event of an aggressive encounter, injury, or mortality.

6.5 Muskrat

Any muskrat encounters or observations will be reported to the Environmental Coordinator, who will maintain a record of the observations.

Muskrat injuries and/or mortalities associated with the Project (e.g. vehicle collision) will be

reported to the Environmental Coordinator, who will maintain a record of the interaction/emergency and update the Site Manager to report to NLWD in the event of an injury, or mortality.

6.6 Invertebrates

Any observations of SAR invertebrates (gypsy cuckoo bumble bee, Suckleys cuckoo bumble bee, yellow-banded bumble bee, and transverse lady beetle) must be reported to the Environmental Coordinator, who will maintain a record of the observations.

Invertebrate injuries and/or mortalities associated with the Project (e.g. vegetation clearing and grading) must be reported to the Environmental Coordinator, who will maintain a record of injuries/mortalities and update the Site Manager to report to NLWD.

If nests are observed, with identification support from the Environment Coordinator, work in the area is to be stopped. The Environmental Coordinator will be notified and will contact NLWD, and any applicable mitigations will be implemented prior to construction beginning again.

7.0 REPORTING AND RECORD KEEPING REQUIREMENTS

7.1 Reporting Procedures

The Site Manager is responsible for maintaining record of and conducting all external communications and reporting for the Project.

The Site Manager, with support from the Environmental Coordinator, will maintain records of all wildlife-related sightings, issues, and incidents. All wildlife sightings and encounters must be reported to the Environmental Coordinator.

NLWD will be consulted on issues relating to SAR.

All incidents related to priority species and/or their dwellings, identified with support from the Environmental Coordinator, will be reported to NLWD by the Site Manager (or delegate).

7.2 Record Keeping Requirements

All records associated with this WRP will be kept on file under the care and control of the Site Manager. The records will be kept in hardcopy and/or electronic versions and stored in such a way as to provide ease of access as well as ensure that deterioration, damage, and loss is prevented.

8.0 COMMUNICATIONS

8.1 Key Contacts

Contact details and information regarding everyone's role will be prepared and updated during annual revisions, at the beginning of each phase of the Project, or when there is a personnel

change for the following roles:

- Site Manager
- Environmental Coordinator
- Construction Manager

NLWD is the key contact for wildlife related issues, concerns, or SAR sightings.

Table 8.1 outlines the communication pathways and timing for all communication relating to wildlife and SAR. The Site Manager will be responsible for all external communications regarding the Project (or to delegate external communications as necessary to the Environmental Coordinator).

Table 8.1: Communication Protocol

Species	Type of Observation	Regulatory Agencies (Personnel) to be Notified	Communication Type and Timing
SAR	Bats	ECCC-CWS	Report (phone & email) within 24 hours
		NLWD	Report (phone & email) within 24 hours
	Caribou	NLWD	Report (phone & email) within 24 hours
	Marten	NLWD	Report (phone & email) within 24 hours
	Dead SAR wildlife	Report dead SAR wildlife to the same agency as live observations; dependent on species as listed above.	Report (phone & email) within 24 hours
All	Harassment (any form) from Project personnel	NLWD	Immediate phone call
All	Dead wildlife (other than SAR)	NLWD	Phone call within 24 hours
All	Injured or sick wildlife	NLWD	Immediate phone call
All	Potential or confirmed poaching incident	NLWD	Immediate phone call
		Local RCMP detachment	Immediate phone call
All	Nuisance/aggressive wildlife	NLWD	Consult as needed

8.2 Training Requirements

All personnel working on-site will receive orientation specific to the WRP and education and wildlife awareness training, which will include a review of the WRP, the Priority Species Identification Guide, which will be developed following the finalization of the WRP, sensitive periods for wildlife, and commitments made to minimize impacts to wildlife.

The Environmental Coordinator will be trained to identify priority species and their dwellings (e.g. bat roosts, marten dens, and priority invertebrate species nests) that have the potential to occur on/near the Project and will support staff training and identification of key considerations in the field. This will facilitate routine monitoring and reporting to authorities, and the

investigation of any wildlife-related incidents. The Site Manager and Environmental Coordinator will also be oriented to all areas of avoidance identified in this WRP and will be trained on all aspects of monitoring activities specific to this WRP.

If additional training is required, specialized practitioners (i.e., professional biologist or equivalent) may be employed or consulted to support the Environmental Coordinator if/as needed.

9.0 STATEMENT OF QUALIFICATIONS AND LIMITATIONS

This Report (the "Report") has been prepared by Strum Consulting ("Consultant") for the benefit of EVREC (the "Client") in accordance with the agreement between the Consultant and the Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- Is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
- Represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- May be based on information provided to the Consultant which has not been independently verified.
- Has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- Must be read as a whole and sections thereof should not be read out of such context.
- Was prepared for the specific purposes described in the Report and the Agreement.
- In the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

The Consultant shall be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. The Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

The Consultant agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but the Consultant makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information, or any part thereof.

The Report is to be treated as confidential and may not be used or relied upon by third parties, except:

- As agreed in writing by the Consultant and the Client
- As required by law
- For use by governmental reviewing agencies

The Consultant accepts no responsibility and denies any liability whatsoever, to parties other than the Client who may obtain access to the Report or the Information for any injury, loss, or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of the Consultant to use and rely upon the Report and the Information. Any damages arising from improper use of the Report or parts thereof shall be borne by the party making such use.

This Statement of Qualifications and Limitations forms part of the Report and any use of the Report is subject to the terms hereof.

Should additional information become available, Strum requests that this information be brought to our attention immediately so that we can reassess the conclusions presented in this report. This report was prepared by Emily MacLean, BASc, Environmental Scientist and Mark MacDonald, MSc. F., Terrestrial Lead, and reviewed by Meghan Johnston, MES, Vice President, Environmental Assessment & Approvals.

10.0 REFERENCES

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APPENDIX A
WILDLIFE RESPONSE PLAN MITIGATIONS

1.0 GENERAL WILDLIFE MITIGATIONS

Potential environmental effects and associated pathways of the Project in relation to wildlife are grouped into three major categories:

- Habitat Loss, Alteration, and Fragmentation
- Injury and/or Mortality
- Sensory Disturbance

Habitat loss and alteration is expected to primarily occur during construction through vegetation clearing and grubbing, road development, and infrastructure placement. Habitat fragmentation has been mitigated to the extent possible during the detailed design phase. Mortality and injury may occur throughout all phases of the Project and is primarily associated with wildlife and vehicle collisions. Sensory disturbance such as noise and light occurs during all phases of the Project, particularly during construction when heavy machinery and equipment is being used.

The following sections present general wildlife mitigations for the pathways of effects identified in the EIS for the Project. Species specific mitigations are discussed separately.

1.1 Habitat Loss and Alteration

- Site remediation activities shall be executed to promote natural vegetation by recovering and distributing overburden and organic material and decompacting soils where possible.
- Revegetate cleared areas with native species, to the extent possible.
- Maintain a minimum 30 m vegetated buffer surrounding watercourses, where possible.
- Wherever possible, avoid gating culverts and minimize culvert length.

1.2 Injury and/or Mortality

- Install fencing surrounding the solar facility and main industrial facility, substations, high voltage areas, pump house and critical port and pipeline areas.
- Feeding, hunting or harassment of wildlife by onsite Project personnel will be prohibited.
- Install anti-reflective coating on panels to reduce reflection, if feasible.
- Inform all Project-related staff working on the site of dangers to wildlife and create awareness around wildlife hotspots on the site.
- Establish and implement speed limits to minimize dust and potential collisions.
- Project personnel will always yield right of way to wildlife.
- Multi-passenger vehicles will be prioritized to reduce collision risk.
- Fencing will be installed to exclude wildlife from higher risk areas such as substations.
- Install signage where specific wildlife concerns have been identified.
- If SAR species are observed in the area during blasting, blasting shall be paused, until animal has left the area.
- Store hazardous and non-hazardous waste in designated areas, in appropriate containers to reduce potential for spills and to avoid attracting wildlife.

- Provide wildlife awareness training to all site personnel to reduce interactions between personnel and wildlife.

1.3 Sensory Disturbance

- Conduct regular maintenance of machinery and equipment to ensure they are in good working order to minimize potential noise and air emissions and increase fuel efficiency.
- Require that fuel storage areas, refueling and equipment lubrication are located a minimum of 30 m from any surface water feature. Implement a hazardous substances management and spill prevention plan, which outlines the requirement for spill kits on all equipment as needed.
- Use noise controls (e.g., mufflers) on machinery and equipment, where applicable, to limit disturbance.
- Limit unnecessary lighting as much as possible, especially at night.

2.0 SPECIES SPECIFIC MITIGATIONS

The following sections discuss the pathways of effects of the Project identified in the EIS on wildlife species selected to be assessed in more detail and identifies mitigations to address those effects. Species specific mitigations were identified for the following species:

- Bats (little brown myotis and northern myotis)
- caribou
- American marten
- moose
- muskrat
- SAR invertebrates (gypsy cuckoo bumble bee, Suckleys cuckoo bumble bee, yellow-banded bumble bee, and transverse lady beetle)

2.1 Bat Mitigation Measures

Potential impacts of the Project on bats may occur throughout all phases of the Project and include habitat fragmentation or loss associated with vegetation clearing, injury and mortality associated with wind turbines, solar panels, and Industrial Facility infrastructure (e.g. flares and buildings), and sensory disturbance from noise and light generated by the Project. To address effects to bats, the general mitigations discussed above will be implemented, along with the following species-specific mitigation measures:

- Maintain avoidance of potential bat habitat (i.e., mature forests, riparian areas, and wetlands) to the greatest extent possible.
- Install motion activated lights on-site infrastructure to reduce insect attraction.
- Develop and implement an Adaptive Management Plan to reduce any observed bat mortalities during monitoring, including use of deterrents and targeted data-driven curtailment if and when needed.
- Retain snags and suitable roosting trees to the extent possible.

- Ensure surface water management systems are designed according to regulatory specifications and are capable of receiving and managing sufficient volume during precipitation events.
- Develop and implement an Adaptive Management Plan to reduce any observed bat mortalities during monitoring, including use of deterrents and targeted data-driven curtailment if and when needed.
- Maintain avoidance of potential bat habitat (i.e., mature forests, riparian areas, and wetlands) to the greatest extent possible. .

2.2 Caribou Mitigation Measures

Potential impacts of the Project on caribou may occur throughout all phases of the Project and include loss, alteration, and fragmentation of habitat from clearing and grubbing and infrastructure placement, injury and mortality due to wildlife-vehicle collisions, and sensory disturbance from heavy machinery and equipment. To address the effects to caribou, the general mitigations discussed above will be implemented, along with the following species-specific mitigation measures:

- Provide wildlife awareness training to all site personnel to reduce interactions between personnel and wildlife, including a review of any protection and mitigation plans developed specifically for caribou.
- The extent of land clearing and grubbing will be restricted such that naturally vegetated areas between the site and surrounding properties and thoroughfares are maintained.
- Disturbance to ground-level vegetation, e.g., herbs, shrubs, and lichens, will be minimized, where possible and as practical.
- Complete visual surveys for wildlife (moose and caribou) prior to blasting.
- Minimize use of road salt to minimize attraction of ungulates to roadsides during the winter.
- Personnel will be made aware of caribou potential in the Wind Project Area (WPA) and on roads especially for Project traffic/transportation. Specifically, signage will be posted to indicate caribou presence where previously identified and at any future observation locations.
- Monitor for caribou injuries and fatalities frequently within the facility area during construction and operation within the Project Area . NL Department of Forestry, Agriculture and Lands- Wildlife Division (NLWD) will be notified within 24 hours in the event of the mortality or injury of an individual caribou.

2.3 American Marten Mitigation Measures

Potential impacts of the Project on American marten may occur throughout all phases of the Project and include loss and fragmentation of habitat from vegetation clearing and grubbing, road development, and infrastructure placement, and injury and mortality due to wildlife-vehicle collisions. To address the effects to American marten, the general mitigations discussed above will be implemented, along with the following species-specific mitigation measures:

- If SAR species, are observed in the area during blasting, blasting shall be paused, until

animal has left the area.
- Pause work if suspected denning locations are observed during construction activities. Contact the Environmental Coordinator and consult with NLWD to determine additional mitigations.

2.4 Moose Mitigation Measures

Potential impacts of the Project on moose may occur throughout all phases of the Project and include loss, alteration, and fragmentation of habitat from clearing and grubbing and infrastructure placement, injury and mortality due to wildlife-vehicle collisions, and sensory disturbance from heavy machinery and equipment. To address the effects to moose, the general mitigations discussed above will be implemented and any moose encounters, observations, injuries and/or mortalities (e.g. vehicle collisions) will be reported to the Environmental Coordinator, who will maintain a record of the interaction/emergency and update the Site Manager to report to NLWD.

2.5 Muskrat Mitigation Measures

Potential impacts of the Project on muskrat may occur throughout all phases of the Project and include loss and fragmentation of habitat from new roads, vegetation clearing and grubbing, and infrastructure placement and injury and mortality due to wildlife-vehicle collisions. To address effects to muskrat, the general mitigations discussed above will be implemented, along with the following species-specific mitigation measures:

- Wherever possible, install open span, natural bottom culverts or oversize pipe culverts to support safe wildlife passage and preserve ecological connectivity to prevent obstacles for muskrat movement.

2.6 Invertebrate Mitigation Measures

Potential impacts of the Project on invertebrates may occur throughout all phases of the Project and include sensory disturbance through light pollution during all phases, the introduction of invasive species, habitat loss, and destruction of nests during vegetation clearing and grubbing, and injury and mortality from collisions with wind turbines. To address the effects to invertebrates, the general mitigations discussed above will be implemented, along with the following species-specific mitigation measures:

- Pause work if nests are observed and notify the Environmental Coordinator. NLWD will be contacted and any applicable mitigations will be implemented prior to construction beginning again.

APPENDIX Q.3
Project Public Participation Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

PROJECT PUBLIC PARTICIPATION PLAN

May 2026

Disclaimer

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TABLE OF CONTENTS

1 Introduction 3
1.1 Purpose and Objectives 3
2 Engagement Overview 4
2.1 Project Overview 4
2.2 Stakeholder Engagement 6
3 Engagement Strategy 9
3.1 Stakeholder Identification 10
3.2 Engagement Mechanisms 10
3.3 Instruments and Supporting Materials 11
3.3.1 Implementation Plan 11
4 Who is EVREC? 14
4.1 What is the EVREC Project? 15
4.2 Impact and Opportunities with the Project 16
5 Reporting and Evaluation 17
5.1 Record-Keeping and Stakeholder Database 17
5.2 Evaluation 17

1 INTRODUCTION

This Public Participation Plan (PPP) is an essential document that outlines how EVREC will interact with and engage various stakeholders, including the local community, government authorities, environmental groups, employees, investors, and the media. The primary goal, of this document is to ensure EVREC and its representatives foster transparency, build trust, address concerns, and ensure smooth project execution while minimizing conflicts and disruptions. This plan ensures that stakeholders are informed, involved, and onsulted in a manner that aligns with both EVREC's objectives and social responsibility goals.

EVREC's public participation activities are aimed at building trust and confidence between the local community and the project. This plan will be active throughout the development, construction, and operational phases of the project. Activities covered include project-related definition, environmental assessment review, engagement in community-based agreements and commitments, and, ultimately, the daily operations of the facility.

EVREC has committed to early and continuous engagement, allowing all groups with an active interest in or who are impacted by the Project to engage, ask questions, express opinions, and contribute meaningful dialogue throughout the project's lifecycle.

By implementing this plan, EVREC expects to build strong, long-term relationships with stakeholders and rights holders, reduce risks associated with misunderstandings or protests, and ensure that the project contributes positively to both the local community and the environment. Transparent, inclusive, bi-directional, and consistent communication will be key throughout the project's lifecycle.

1.1 Purpose and Objectives

The purpose of the PPP is to outline the approach and strategy for public participation across all phases of the Project. EVREC's PPP is designed to provide respectful, inclusive, and meaningful engagement throughout the project lifecycle. The core objectives are as follows:

1. Transparent, in which the EVREC will provide clear, timely, and accurate information to stakeholders about the project's scope, timeline, and impacts (fact-based).
2. Relationship Based in which EVREC desires to build and maintain positive relationships with local communities, government agencies, and other stakeholders and rights holders.
3. Risk Balanced where risks are identified and communicated early and addressed within the risk appetite of the organization.
4. Beneficial to all parties, to the point that positive impacts of the project (e.g., jobs, infrastructure development, etc.) are measured, communicated and shared with the local community.
5. Respectful in which two-way communication channels are established where stakeholders can raise concerns, provide input, ask questions feel inclusive, and ensure meaningful engagement is achieved as a fundamental principal. EVREC will limit its engagement on hearsay comments.

As the PPP is a key component of the project, it is designed to accomplish the following objectives through the engagement strategy:

- To identify those who will be impacted by the project and attempt to quantify the impacts (positive and negative).
- To ensure those potentially affected by a project understand the project and how it will affect them.
- To understand the interests that people have and how impacts may be experienced (from their perspective).
- To consider the views of people in a meaningful way and use these insights to inform project planning and design.
- To provide opportunities for people to collaborate on project design matters and input to preferred solutions to address impacts.
- To confirm data, assumptions, findings, and recommendations.
- To ensure people know how their input has been considered, and what strategies will be put in place to address their concerns.
- To respect people's privacy, allowing them to communicate their views anonymously if requested.
- To ensure that data, assumptions, findings, and recommendations are confirmed through stakeholder input.

2 ENGAGEMENT OVERVIEW

This Project information will provide the foundation for key messages and information to be shared throughout all engagement, consultation, and publicity events. The information will be summarized, developed with plain language, and used for audio visual and graphic displays. Information that is deemed confidential or sensitive information and that is not required by law to be disclosed will not be shared unless approved by Executive Management.

It is important to note that during the development cycle, project details may evolve. Therefore, only fact-based information will be released during these periods, and speculative comments will be minimized to avoid reputational risks. Prior to the release of any public information, it will require review and approval by the Project Sponsor or Director of Communication.

Information related to the project will be updated as necessary to reflect the latest developments, with final designs being incorporated into the public materials when confirmed

2.1 Project Overview

The EVREC Project is a large-scale power to X (P2X) project in the Central Newfoundland region that will generate clean electricity for its own use from an onshore wind farm to produce zero-carbon hydrogen and ammonia at scale. The Project will contribute to positioning Canada as a global leader in clean hydrogen production, use, and export.

The project components include: an onshore wind farm with a targeted capacity of +3GW and associated infrastructure; molecular and energy storage; a hydrogen and ammonia production

facility and integrated port infrastructure. The EVREC project will produce ammonia by utilizing green hydrogen as feedstock for an electrified Haber-Bosch process, powered by renewable electricity, instead of natural gas, resulting in near to zero CO_2 emissions.

In the development of the Project and the associated model, the proponents have taken a realistic view in all assumptions and have attempted to mitigate any risks by implementing proven technology and conservative approaches in assumptions and risk mitigation practices.

Project is located in Central Newfoundland (Figure 1), on one of the shortest shipping routes from the North America to Europe.

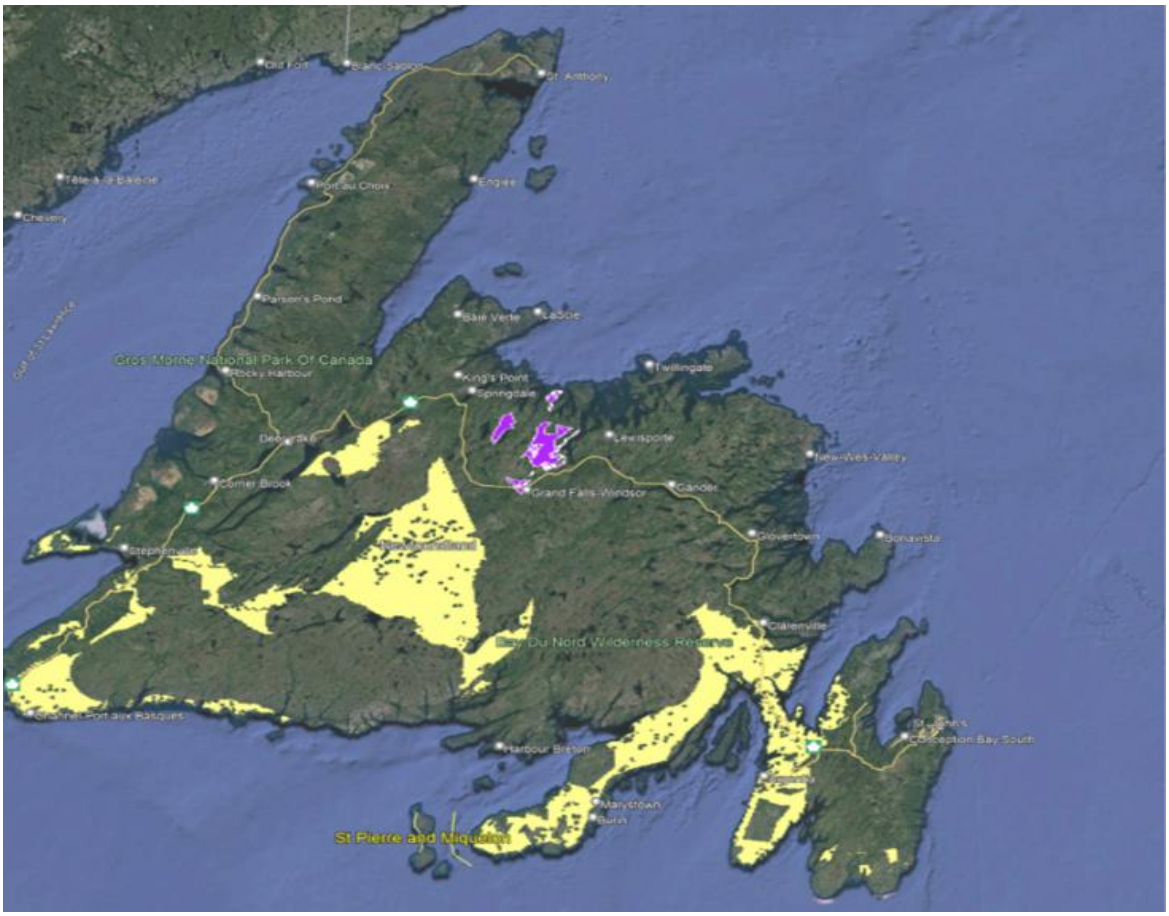

Figure 1: Nominated Project Lands

It is in a G7 Jurisdiction with known permitting pathway and government support. There is an approved Federal and Provincial Fiscal Framework in place. The Wind Land Nomination Map has been made public by the Department of Industry Energy and Technology (IET).

The EVREC SITE (~300 sq. km) benefits include:

- Historical brownfield forestry site commercially logged since the 1800s and targeted for redevelopment under a governmental mandate in 2010, “Central Newfoundland Task Force”.
- Access to an existing deep-water Port with over 100 Years of Industrial Traffic.
- Enhancement of the electrical infrastructure to support the projected growth within the Town of Botwood.

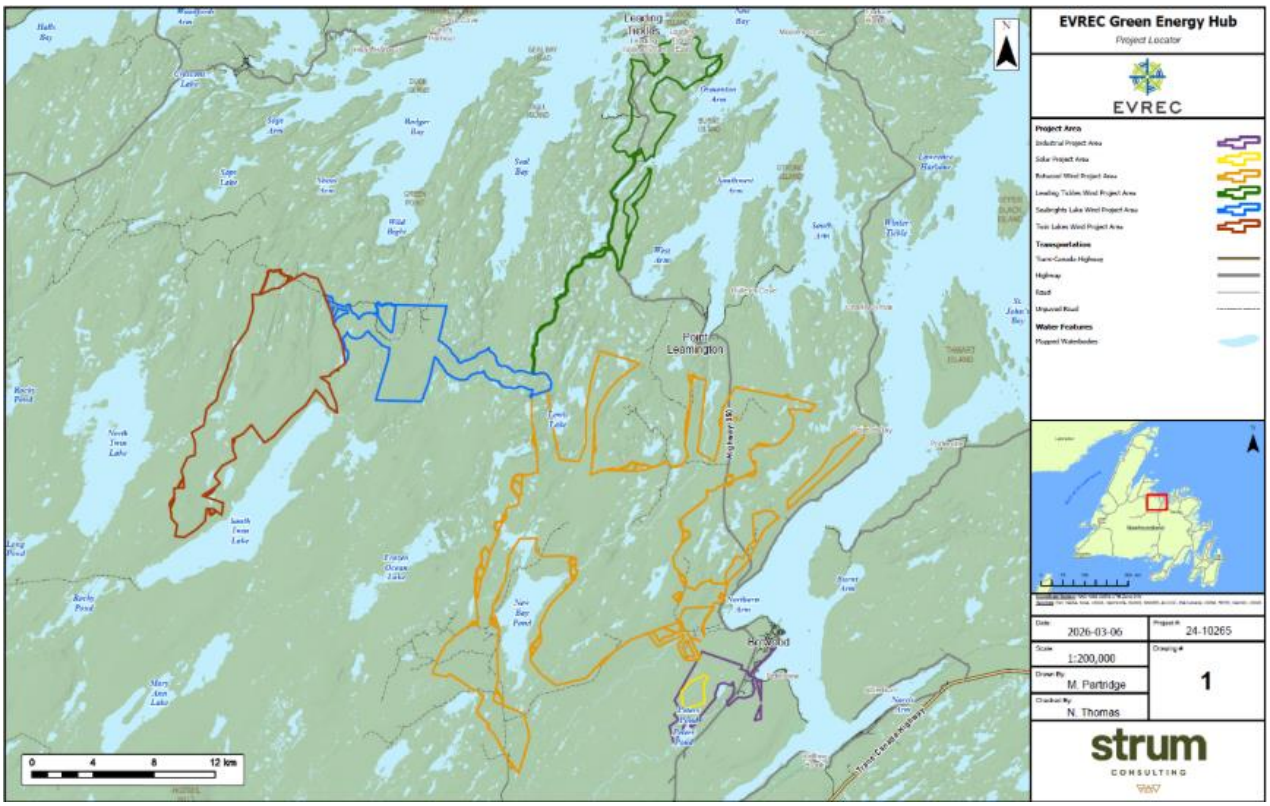

Figure 2: EVREC Green Energy Hub

2.2 Stakeholder Engagement

Engagement with our stakeholders is essential to achieving our Corporate Social Responsibility (CSR) goals. Our commitment to two-way engagement ensures that we not only share our initiatives and progress but also actively listen to and incorporate feedback from our communities, employees, customers, and partners.

In doing so, EVREC will actively manage the sociodynamics of the stakeholders with the particular focus on the identification on the project proponents and the management of transformation strategies to ensure that the projects allies remain supporters and that potential allies are actively engaged to provide ongoing supports. The project will be respectful of its opponents and critics but will limit interaction to avoid escalation and negative attention.

To effectively manage these dynamics, internal and external communication, relationship-building, and adaptability will be implemented through including but not limited to the following strategies:

- **Stakeholder Mapping and Analysis**: identifying and classifying the different types of stakeholders (supporters, neutral parties, opponents) and designing tailored engagement strategies.
- **Transparent Communication**: providing regular, clear, and fact-based information. Providing updates, addressing concerns, and offering platforms in a timely manner in order to show transparency and build trust.
- **Conflict Resolution Framework**: Implementing a structured approach to handle criticism or opposition and maintaining a respectful space for dialogue for critics to feel heard, without necessarily escalating conflicts.
- **Building Strong Partnerships**: Strengthening ties with key allies and supporters through collaborative actions or shared goals reinforces commitment, including he the implementation of benefit agreements and impact agreements.
- **Demonstrating Results and Impact**: Disclosing the benefit of the project publicly and through third party independent analysis.
- **Monitoring and Feedback Loops**: establishing Key Performance Indicators (KPIs) and monitoring sentiment to ensure engagement is effective and the project remains agile in addressing concerns before they escalate.

Based on the principals above the following table defines the level of engagement and types of engagement actions to be considered to manage risks and matters of concern to relevant stakeholder groups, as well to inform on the Project's social assessment process.

Table 2.1 Stakeholder Engagement

Stakeholders	Level of Engagement and Consultation		
	Priority 1: Involve	**Priority 2: Consult**	**Priority 3: Inform**
Types of Stakeholders, Rights Holders, Authorities, or Communities	Stakeholders who have a high-level of engagement with the Project and are involved in the decision-making. They will have influence in the regulating and permitting process and will be engaged in community or development agreements. They have high influence on the Project and show high or moderate interest. EVREC will work with these stakeholders on an ongoing basis to ensure that their ideas, expectations. and concerns are considered at a project design level and will provide approvals or feedback on EVREC's decisions.	Stakeholders who need to have a good understanding of the Project will be invited to provide input at some point. They show moderate or high interest on the Project and have moderate or high influence. In engagement with these stakeholders EVREC will listen to them, consider their ideas, expectations. and concerns at a project planning level and keep them informed.	Stakeholders who require a broad level of awareness of the Project. They show low or moderate interest on the Project and have low influence. In engagement with these stakeholders EVREC will keep them informed.
	Transformational Partnership, joint decision-making, two-way communication and dialogue, frequent interaction, sharing of benefits and outcomes with local communities and governments.	**Transitional** Largely controlled by EVREC, includes two-way communication, consultation, and collaboration.	**Transactional** EVREC-led Information exchange, community investment
Types of Engagement and Consultation	Community agreements, development agreements, traditional knowledge studies, specific projects e.g., restoration, local capital or social programs.	Public meetings, meetings with special interest and community groups, advisory committees, community liaison officer, site visits to project areas, local and industry publicity e.g., radio shows, local employment and procurement, local employees, contractors and service providers, socio-economic and land use studies, tradeshows and conferences.	Project newsletters, community posters, social media, website, information booths, community donations, local office, advertisements, distribution of information and materials, media coverage Provide information on project plans and progress, business integrity, social and environmental responsibility, planning for positive legacies

3 ENGAGEMENT STRATEGY

Community engagement will initially focus on the Exploits electoral district (Figure 3) and will be used to identify community's values and aspirations in relation to the project, and to focus the on key issues of concern for relevant stakeholders and local communities, including opportunities to consider stakeholder feedback in the final design to optimize benefits in the region.

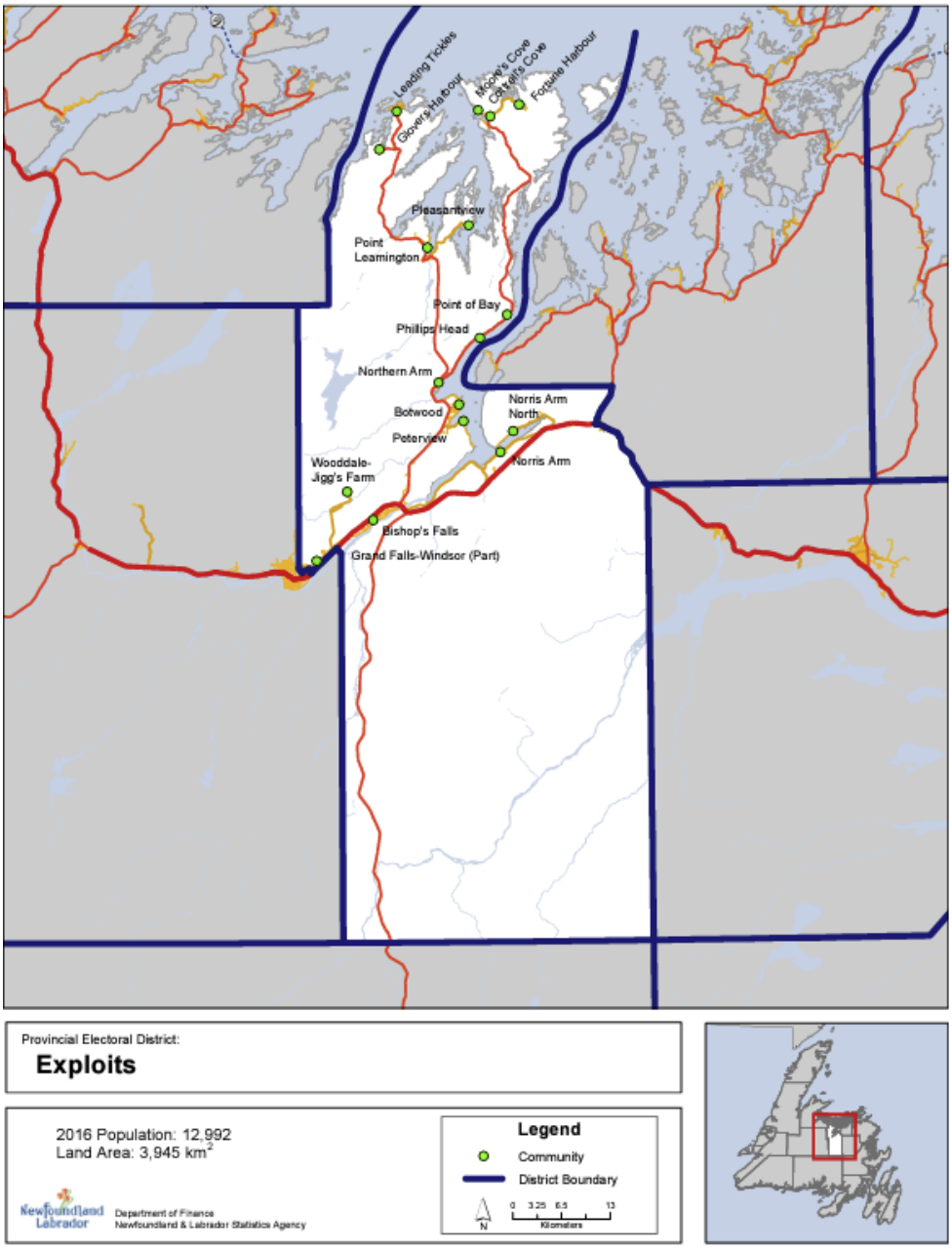

Figure 3: Exploits Electoral District

The basic principles of effective public participation will also be applied, to ensure that engagement is:

- relevant to the context
- informative and proactive
- adaptative and communicative
- inclusive and equitable
- educative
- cooperative.

3.1 Stakeholder Identification

Stakeholder engagement and identification involve the participation and collaboration of people who have an interest in, or those that are affected by a project. Stakeholders may be affected groups or individuals that:

- live, work, or recreate near the Project
- have an interest in the proposed action or change
- use or value a resource associated with the Project
- are affected by the Project e.g., may be required to relocate because of the project.

A stakeholder identification process was undertaken to support the planning and delivery of community and stakeholder consultation to inform the Environmental Assessment Registration (EAR). This process has involved identifying stakeholders with an interest in the Project, or those that may be directly or indirectly affected by the Project, including any potentially vulnerable or marginalised groups. (The stakeholder list is maintained internally, and regularly updated).

3.2 Engagement Mechanisms

The engagement of stakeholders and community groups will include a combination of information provision (inform) and engagement (consult, involve) mechanisms to:

- Improve knowledge and awareness of the proponents and their activities, the project, and key issues/impacts as they arise.
- Facilitate stakeholder involvement in the identification of issues/impacts, areas of interest/concern and strategies to address the issues raised. Table 3.1 Engagement and Communication Mechanisms.

Table 3.1 Engagement and Communication Mechanisms

Mechanism	Engagement Objective	Description
Website	Inform	A dedicated project website page to provide project information and updates
Email	Inform	A dedicated project community email address to enable the community to contact the project team for information or to provide feedback on the project.
Project Information Sheets	Inform	Distribution of project updates and information on project technology throughout the proximal community.

Mechanism	Engagement Objective	Description
Information Session	Consult	A drop-in information session(s) to present information and updates on the project with invites distributed to the broader community through several mediums.
Online Survey	Consult	An online survey to gain feedback from key stakeholders and the broader community on the project and community needs and values, to be advertised and distributed through various mechanisms.
Project Briefing	Involve	Formal briefings to key stakeholders and government agencies, with slide deck to formally introduce or provide updates on the Project.
Personal Meeting/ Interview	Involve	Telephone, online or in-person meetings with individual key stakeholders or small groups.
Service Provider Survey	Involve	Surveys undertaken via telephone by Strum to understand the capacity and demand for services in the area e.g. housing/accommodation, health, recreational, employment etc.

3.3 Instruments and Supporting Materials

The project will utilize materials and tools to support engagement in accordance with the PPP which will include the following:

1. **Interview discussion guides** – a suite of discussion guides including a standard discussion template/survey question set, as well as targeted guides for specific stakeholders or community groups. Each guide will likely include up to 5 open ended questions.
2. **FAQ summary** – FAQ database will be developed and maintained to answer forecasted industry and project specific issues.
3. **Stakeholder engagement database** – set up of a stakeholder engagement register template in Excel or a related package. Discussion points for engagement activities are likely to include:
    - knowledge and awareness of the project
    - positive and negative social impacts of the project
    - measures to mitigate and increase project benefits
    - preferred engagement mechanisms and information requirements
    - community values, needs and aspirations.

3.3.1 Implementation Plan

The following table outlines several of the initial engagements that occurred early in the process.

Table 3.2 – Implementation Plan

Mechanism	Target Stakeholder Group	Objectives	Tasks	Responsibility
Project Briefing	Local Council	Provide project overview and update, understand interests and concerns	Organize briefings	EVREC
			Develop briefing presentation	EVREC
			Attend briefings	EVREC
			Analyse/report on outcomes	EVREC
Information Sheet #1	Proximal landholders Broader community	Introduce the project and the proponents	Draft information sheet content	Strum
			Review and approve content	EVREC
			Design information sheet	Strum
			Review and approve	EVREC
			Print information sheet	Strum
			Distribute information sheet	Strum
Information Session #1	Proximal landholders Broader community First Nations (Indigenous) stakeholders, Community and development groups, Environmental groups	Provide project overview, understand interests and concerns, community needs and values. Facilitate understanding of project in community	Organise session and supporting materials	Strum
			Advertise session	Strum
			Attend session	Strum EVREC
			Analyse/ report on outcomes	Strum
Key Stakeholder Interviews	Proximal landholders First Nations (Indigenous) stakeholders	Provide project overview, understand interests and concerns, community needs and values. Facilitate understanding of project in community	Organise meetings	Strum
			Undertake meetings	Strum
			Analyse/ report on outcomes	Strum
Online Survey	Broader community	Understand interests and concerns, community needs and values from the broader community	Develop survey instrument	Strum
			Review & approve survey instrument	EVREC
			Post survey online	Strum
			Advertise survey	Strum
			Analyse/ report on outcomes	Strum
Information Sheet #2	Proximal landholders	Answer key questions raised in	Draft information sheet content	Strum

Mechanism	Target Stakeholder Group	Objectives	Tasks	Responsibility
	Broader community	consultation and address uncertainties. dDstribute link for online survey	Review and approve content	EVREC
			Design information sheet	Strum
			Review and approve	EVREC
			Distribute information sheet	Strum
Information Sheet #3	Proximal landholders Broader community	Validate outcomes of the scoping phase engagement	Draft information sheet content	Strum
			Review and approve content	EVREC
			Design information sheet	Strum
			Review and approve	EVREC
			Distribute information sheet	Strum
Service Provider Surveys	Service providers	Provide project overview, understand existing capacity, supply and demand trends, community needs and priorities	Develop survey instrument	Strum
			Review and approve survey instrument	EVREC
			Undertake interviews	Strum
			Analyse/ report on outcomes	Strum/ EVREC
Key Stakeholder Interviews	Proximal landholders, Indigenous stakeholders, Community and development groups, Environmental groups	Validate interests and concerns, community needs and values	Organise meetings	Strum
			Undertake meetings	Strum/ EVREC
			Analyse/ report on outcomes	Strum
Information Session #2	Proximal landholders. Broader community. Indigenous stakeholders, Community and development groups,, Environmental groups	Provide a summary of EAR outcomes. Validate interests and concerns, community needs and values.	Organise session and supporting materials	Strum
			Advertise session	Strum
			Attend session	Strum/EVREC
			Analyse/ report on outcomes	Strum
Information Sheet #4	Proximal landholders Broader community	Provide a summary of EAR outcomes	Draft information sheet content	Strum
			Review and approve content	EVREC
			Design information sheet	Strum
			Review and approve	EVREC
			Distribute information sheet	Strum

Key messages have been developed and refined around four message categories as outlined below. These will be used to inform engagement and associated material development.

The proponent – who is EVREC?

The Project – what is the Project? Including details on the Project, quick facts, and project description

The process – the development planning, and EAR and EIS processes, including key milestones and opportunities for engagement and the broader SIA process

Impacts and opportunities – key issues in relation to the Project i.e., social and environmental impacts, stakeholder issues/concerns, opportunities and benefits, engagement preferences and information requirements.

4 WHO IS EVREC?

Question	Message
Who is developing the project?	The project is being proposed by Exploits Valley Renewable Energy Corporation. EVREC is a wholly owned subsidiary of Abraxas Power.
Who is EVREC?	EVREC, is a subsidiary of Abraxas Power, which is incorporated under the laws of the Province of Ontario. Abraxas is a renewable energy solution provider with projects in development across Canada, USA, Europe, UK, Asia.
Where do they have project interests and what is their track record?	Abraxas Power team has developed renewable energy assets in various global markets. Currently, the main projects that are being developed are in Romania, Sri Lanka, Maldives and Newfoundland. Prior to these projects, the Abraxas Power team has successfully developed, built and operated projects in Canada, USA, and Romania.
How many people will they employ?	The Project peak, full-time employment in the area is expected to be approximately 11,500 jobs.
How do their projects benefit communities?	Local communities benefit from the direct and in-direct investments that are made by the project. Direct benefits from the Community Benefits Agreement that are executed with local municipalities, which include increased tax revenue, increased safety and medical services and contributions to local schools to name just a few. Indirectly through all the goods and services that are required to support the construction and operation of the facility. The EVREC project is projected to increase the annual GDP of the province of Newfoundland and Labrador by over 5%, offset over 1.5 million tonnes of C02 globally every year, and contribute over CAD$5 billion to Newfoundlanders through remittances to the provincial budget as well as various community benefit agreements.

4.1 What is the EVREC Project?

Question	Message
What is the project?	The EVREC Project is a large-scale power to X (P2X) project in Central Newfoundland that will generate clean electricity to produce zero-carbon hydrogen and ammonia at scale. The project components include an onshore wind farm with a targeted capacity of +3GW and associated infrastructure; molecular and energy storage; a hydrogen and ammonia production facility and an integrated port infrastructure. The EVREC project will produce ammonia by utilizing green hydrogen as feedstock for an electrified Haber-Bosch process, powered by renewable electricity, instead of natural gas, resulting in no CO_2 emissions.
How does the technology work?	The project uses renewable generation (wind solar, BESS) to operate electrolyzers to create hydrogen will then be used to create liquid ammonia, that will be exported to commercial markets in Europe. Excess power generated from this facility will be offered into the Provincial grid when renewable energy generation is surplus, and facility consumption is low.
Where is the project?	The project is located in Botwood, Newfoundland off Highway 350, just past the quarry.
How will the wind generation connect with the main facility?	A collection system is being designed that will gather the power generated by the WTGs into a substation(s). This collection system will operate at 66kV. From the collection substations, a gathering system will transmit the power to the main facility for use by the project. The gathering system will operate at 230kV. These two voltages are common within the province. The transmission collection and gathering systems will be designed to reduce impact to the local area.
How much land will it take up?	The Project is proposed on land parcels totalling 32,633 hectares (ha) (consisting of 30,712 of nominated Crown land and 2,174 ha under Crown land application, with a 251-ha overlap).
What will the project produce?	The Project will produce 925,000-1,000,000 metric tons per year of certified green ammonia utilizing green hydrogen as feedstock in a Haber-Bosch process, powered by renewable electricity, resulting in no CO_2 emissions.
What's the timing of the project?	Operational in 2030
How long will it take to construct?	Total design and construction timeframe is approximately 5 years
Where will construction workers live?	Locally in the Botwood area.
How long will it be operational?	Estimates show project lifespans can be as long as 50 years from construction completion through decommissioning.

4.2 Impact and Opportunities with the Project

Question	Message
How will I be affected?	Positioning the facility outside of the town of Botwood provides for separation between the majority of the proposed infrastructure and reduces the majority of the potential impacts. The proponents recognise that the siting of the project may still result in some community impacts (both positive and negative) and that impacts may be experienced differently across stakeholder groups. The proponents are committed to working with the community and key stakeholders to identify potential environmental and social impacts associated with their proposed project and to explore relevant strategies to mitigate any negative impacts and enhance positive impacts. The proponents will work to ensure that through the EAR and associated community engagement process, that community issues are well understood and are addressed, where possible, in project design and planning.
What is the project going to do for residents and the community? How will we benefit?	EVREC is committed to building strong local relationships with key stakeholders and communities as part of their planning and understands the importance of ensuring local participation and community input, to achieve positive local and regional community benefits.
How will the project influence climate change?	The Project goals aligned to those of the Canadian Government to set the country on a path to meet climate change goals of net-zero greenhouse gas emissions by 2050 (Government of Canada 2023).
What are the safety and health risks associated with the project?	Green ammonia, that will be produced through our process is considered environmentally friendly, however it can still pose certain risks. Accidental releases during production, transportation, or storage could pose risks. The project will be implementing best available technologically to mitigate these releases and will ensure that proper safety measures and emergency response plans will be implemented to mitigate these risks. It should be noted that ammonia production units and the transportation of ammonia is very common, with accidental releases causing harm being very rare. Industry, regulators, and the Project will work collaboratively to ensure that robust safety measures, emergency response plans, and sustainable practices are implemented and maintained.
What is the impact on fauna and flora?	Impacts to fauna and flora may occur as a result of ground disturbance associated with the construction and operation of the proposed infrastructure. A detailed environmental assessment report has been developed for the Project and has been filed with the Province of Newfoundland Environmental and Climate Change and determine appropriate offset requirements applicable to the Project.
What happens to the infrastructure when it is no longer used?	The infrastructure would be decommissioned and removed should the facility no longer be required. A decommissioning and rehabilitation management plan would be developed and implemented prior to closure to manage this process.

5 REPORTING AND EVALUATION

5.1 Record-Keeping and Stakeholder Database

A database through ICI Innovations (ICI) has been established to record stakeholder interactions and related information throughout the Project's planning and approvals phase. This will include an engagement register, where team members will record the contact details of stakeholders, summaries of each consultation undertaken, and any actions that arise from these meetings. This database will be established by EVREC/STRUM on an interactive and accessible platform for live sharing with the project team (e.g., SharePoint).

Outcomes and records of each engagement activity will be documented by the team member(s) in attendance. The engagement register will be maintained throughout the delivery of the Implementation Plan to ensure consistent tracking and recording of all public participation activities and outcomes. Information to be recorded will include:

- stakeholders contact details
- consultation activity (including stakeholder engaged, attendees, time, place, mechanism used)
- discussion points
- summary of key outcomes, including any actions arising
- preferences for future engagement.

Following completion of engagement for each phase, outcomes and data obtained will be collated and analysed to identify key impact themes and impact prioritisation. Identified issues or impacts may also be mapped to identify any spatial/geographic patterns in the data obtained.

5.2 Evaluation

The implementation of the PPP will be monitored and evaluated on an ongoing basis to ensure the effectiveness of the PPP in achieving the objectives outlined in Section 1.1**.** The evaluation will be based on ensuring that:

- All key stakeholders and communities relevant to the project have been identified vulnerable and at-risk groups.
- All identified and interested stakeholders are provided the opportunity to participate in the engagement program.
- Relevant project information will be provided to all stakeholders and all questions and queries received will be followed up in a timely manner by Strum and/or the proponents.
- Regular project team meetings will be held between Strum and the proponents to provide required updates and ensure a collaborative and consistent approach to engagement across the project.
- Engagement outcomes and community feedback is meaningfully and adequately considered in the development of the EAR, and where possible, is used to inform project

design and refinements, including the development of local community benefit sharing programs.
- All regulatory requirements relating to community engagement are met.
- Engagement is timely, open/transparent, inclusive, and meaningful.

Mechanisms/methods such as those outlined below, will be used to ensure that the engagement program is on track and is responsive to any changing project issues:

- Proactive contact made with identified stakeholders identified.
- Prompt project team response and inclusion of stakeholders interested in being involved in the project.
- Fortnightly project meetings to discuss outcomes of engagement progress.
- Fortnightly media monitoring to identify any emerging community issues and concerns.
- Evaluation items utilised in relevant survey instruments and discussion guides to facilitate process improvement.
- Outcomes of the engagement program communicated to project team members.
- Transparent summary of community issues and impacts associated with the project reported in the EAR.

Revisions and updates to the PPP will be made as required, to address any issues raised or ideas for improvement, in collaboration with the proponents.

The effectiveness of the engagement activities will be regularly monitored and evaluated to ensure the objectives of the PPP are being met. Key metrics include:

- Number of engagement activities held.
- Stakeholder feedback quality and quantity.
- Issues raised and actions taken in response.
- Stakeholder satisfaction surveys.

APPENDIX Q.4
Domestic and Commercial Woodcutting Consultation Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

DOMESTIC AND COMMERICAL WOODCUTTING CONSULTATION PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, its professional advisers and contract staff engaged on the project that is specificically engaged in the project.

TABLE OF CONTENTS

TABLE OF CONTENTS 2
1. Introduction 4
1.1. Scope, Boundaries and Exclusions 4
1.2. Guideline Requirement 6
1.3. Purpose of this Document 6
1.4. Aims and Objectives 6
2. Regulatory Context 7
2.1. Provincial 7
3. Project Description 8
3.1. Site Location 9
3.2. Local Baseline for the Project Area 10
3.3. Baseline Setting and Domestic Woodcutting Context 10
4. Domestic Woodcutting in NL 12
4.1. Overview 12
5. Roles and Responsibilities 15
5.1. EVREC 15
5.2. Department of Forestry, Agriculture and Lands (NLFAL) 15
5.3. Domestic Woodcutting Permit Holders 16
5.4. Construction Contractors / EPC / Site Supervisors 16
6. Engagement Process and Methodology 17
6.1. Identification of Domestic Cutting Permits and Verification of Potential Overlaps 17
6.2. Engagement Strategy 19
6.3. Engagement Methods 19
6.4. Documentation and Reporting 21
6.5. Continuous Improvement 22
6.6. Engagement Completed To-Date 22
6.7. Engagement Outputs, Notice Periods, and Triggers by Project Phase 23
7. Mitigation and Conflict Resolution Measures 25
7.1. Typical Interaction Scenarios 26

7.2. Mitigation Hierarchy and Decision Path....26
7.3. Mitigation Measures Toolbox....27
7.4. Access & Co-existence Protocols Template....28
7.5. Access Management Plan....29
7.6. Information Sharing and Confidentiality....30
7.7. Dispute Resolution....30
7.8. Documentation and Verification....32
8. Monitoring Reporting and Evaluation....33
8.1. Monitoring Activities....33
8.2. KPIs....33
8.3. Adaptive Management and Trigger Points....34
8.4. Reporting....35
9. Data Management and Record Keeping....35
9.1. Engagement Register and Confidentiality....35
9.2. Data Retention and Integration....36
9.3. Privacy, Consent, and Public Disclosure....36
10. Monitoring, Revisions and Continuous Improvement....37
11. Company Information....37
12. List of Abbreviations....38
13. References....39

1. INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt (GW) green hydrogen project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3.5 gigawatt (GW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. Scope, Boundaries and Exclusions

1.1.1. Scope

This Domestic and Commercial Wood Cutting Consultation Plan (DCWCCP) applies to engagement and coordination with Domestic and Commercial Cutting Permit holders and other domestic wood harvesting users whose authorized cutting areas, access routes, or customary harvesting locations may interact with the EVREC Project footprint and associated activities. The Plan covers the full life of the Project, including construction, operations, decommissioning, and rehabilitation, and is intended to support safe coexistence between Project activities and domestic wood harvesting.

1.1.2. Geographic Boundaries

The primary engagement focus area is the Twin Lakes, Leading Tickles, and Botwood area, as required by the Environmental Impact Statement (EIS) Guidelines. Engagement boundaries for the Plan include:

- EVREC's proposed Project components and supporting infrastructure (e.g., wind farm sites, solar PV, roads, substations, transmission corridors, staging/laydown areas, quarries/borrow pits, and water infrastructure); and
- Any domestic and commercial cutting blocks or permitted harvesting areas within or adjacent to Project areas where interactions are reasonably foreseeable (including

through shared access, temporary closures, traffic/safety constraints, or vegetation clearing).

1.1.3. Project Activities Covered by this Plan

This Plan addresses domestic and commercial woodcutting engagement needs associated with activities such as:

- vegetation clearing and grubbing;
- construction or upgrading of access roads and water crossings;
- installation and operation of transmission/collector lines and substations;
- construction traffic management and safety controls on shared routes;
- use of quarries/borrow pits and laydown/staging areas; and
- ongoing operations and maintenance activities that may affect access and safe use of lands.

1.1.4. Temporal Boundaries and Engagement by Phase

- Pre-construction / design development: identify domestic/commercial cutting permits/blocks, verify overlaps, and initiate early coordination.
- Construction: highest engagement intensity due to active clearing, road works, and traffic/safety constraints.
- Operations: regular communication focused on access, maintenance scheduling, signage, and safe coexistence.
- Decommissioning / rehabilitation: engagement focused on temporary work activites, access changes, and closure/rehabilitation outcomes.

1.1.5. Exclusions

This DCWCCP is focused on domestic and commercial woodcutting and does not replace or duplicate:

- the Project's broader Engagement Participation Plan (EPP) for general public/stakeholder engagement (the DCWCCP is a specialized sub-plan that feeds into overall consultation reporting);
- regulatory permitting processes unrelated to domestic woodcutting (e.g., commercial forestry authorizations, quarry permitting, or other non-domestic harvesting approvals);
- compensation frameworks outside the domestic and commercial cutting permitting regime (any potential compensation discussions, if required, would be addressed under applicable provincial processes and EVREC policies); or
- emergency response procedures (handled under the Project Emergency Response / Contingency planning), except where interface points are needed for woodcutter safety and communications.

1.1.6. Assumptions

This Plan assumes that EVREC will work with the Department of Forestry, Agriculture and Lands (NLFAL) to obtain appropriate and up-to-date information on domestic cutting blocks and permits in the Project area, and that personal information will be handled in accordance with applicable privacy requirements and EVREC data management controls. EVREC is also engaged with Kruger who retains cutting rights within the PA

1.2. Guideline Requirement

The EIS shall include a Domestic and Commercial Woodcutting Engagement Plan that shall describe the methods by which EVREC will engage with regional commercial and local domestic wood cutters in the Twin Lakes, Leading Tickles, and Botwood area throughout the life of the Project (construction, operation, decommissioning and rehabilitation).

1.3. Purpose of this Document

This DCWCCP has been developed to address the requirements of the EIS Guidelines and to fulfill commitments made during Project development to engage with wood cutting permit holders, provincial wood harvesting, and the Province of Newfoundland and Labrador.

The purpose of this Plan is to:

- Identify existing wood cutting claims and their respective permit owners within the proposed project boundaries;
- Summarize the engagement efforts completed to date with wood cutting permit holders in the vicinity of the Project;
- Describe future engagement activities that will occur as Project design progresses;
- Identify and evaluate potential interactions between the Project footprint and existing domestic wood cutting permit holders; and
- Outline preliminary mitigation measures to avoid or minimize potential conflicts with ongoing or planned wood cutting/harvesting activities.

1.4. Aims and Objectives

The overarching aim of this Plan is to ensure that the EVREC Project is developed in a manner that is compatible with ongoing and future woodcutting activities through early communication, proactive mitigation, and transparent coordination with permit holders and government authorities.

Specifically, the DCWCCP will:

- Identify all active wood cutting permits within the Project boundaries and adjacent lands through consultation with NLFAL and review of the provincial wood cutting tenure database;

- Engage directly with cutting permit holders to inform them of Project activities, discuss potential overlap, and gather feedback on potential operational or access-related concerns;
- Record and address stakeholder input, including cutting/harvesting timing, access routes, water use, and future work programs;
- Develop preliminary mitigation measures to reduce land-use conflicts including micro-siting adjustments, access agreements, and shared-use protocols in consultation with NLFAL and affected permit holders;
- Facilitate coordination with other land users, including mineral, and recreational users, where overlapping interests occur;
- Provide a transparent record of communications and engagement outcomes to ensure accountability to both NLFAL and stakeholders; and
- Define a process for ongoing engagement throughout the Project's construction, operation, and decommissioning phases to maintain open communication and address issues as they arise.

Through the implementation of this Plan, EVREC aims to:

- Strengthen collaboration with and the wood cutting permit holders;
- Minimize potential interference between Project infrastructure and wood cutting activities;
- Ensure equitable and respectful treatment of all rights holders; and
- Support the sustainable and responsible use of Crown land in alignment with the Province's domestic wood cutting and harvesting development policies.

2. REGULATORY CONTEXT

Domestic woodcutting in Newfoundland and Labrador is a regulated activity, administered by the Province. Under *the Forestry Act* (1990) and associated Cutting of Timber Regulations, a cutting permit is required to cut timber on or remove timber from Crown lands or public lands. Permits for cutting timber are for personal use, and not for sale or barter, and are referred to as Domestic Cutting Permits.

2.1. Provincial

NLFAL is the primary provincial regulator overseeing domestic wood cutting activities. In the context of this Plan, NLFAL's administrative role includes maintaining domestic cutting information (e.g., permits and blocks), supporting communication with permit holders where needed, and providing input on mitigation approaches where domestic cutting permits or domestic harvesting interests may be affected by Project activities.

Within Forest Management Districts (FMDs, domestic fuelwood and sawlogs may be sourced from designated domestic cutting blocks and other recognized sources (e.g., clean-up areas on Crown and industry limits), and domestic permit allocations vary within the district (noting that domestic cutting is commonly undertaken during winter months and often involves chainsaw harvesting with ATV or snowmobile access).

To support orderly engagement and minimize conflicts, EVREC will coordinate with NLFAL to:

- obtain and refresh up-to-date data on active and historical domestic wood cutting permits within and adjacent to the Project Area;
- confirm the locations of domestic cutting blocks relevant to the Project (e.g., in the vicinity of Twin Lakes, Leading Tickles, and Botwood);
- identify where Project components or activities (e.g., access roads, corridors, vegetation clearing, traffic controls) could create interaction points with domestic cutting access and operations; and
- review proposed mitigation and coordination measures in collaboration with affected permit holders.

EVREC will maintain regular contact with NLFAL as Project design and scheduling evolves, and will share updated mapping, stakeholder feedback, and mitigation commitments at key milestones to support alignment between domestic cutting interests and Crown land management processes.

With regards to commercial cutting, EVREC has coordinated with Kruger regarding activity in the greater Botwood area.

3. PROJECT DESCRIPTION

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across 4 sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used

to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two (2) 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two (2) Air Separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- a 1,000 MWh of battery storage for critical loads; and,
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to achieve the electrolyzer feedwater quality requirements and that treated discharge water complies with regulatory standards prior to being discharged back into the natural environment.

Liquified ammonia will be stored in two (2) 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below-ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

3.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood.
    - Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond.
    - Approximate coordinates: Lat 49.088° Long: -55.4268°.

- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

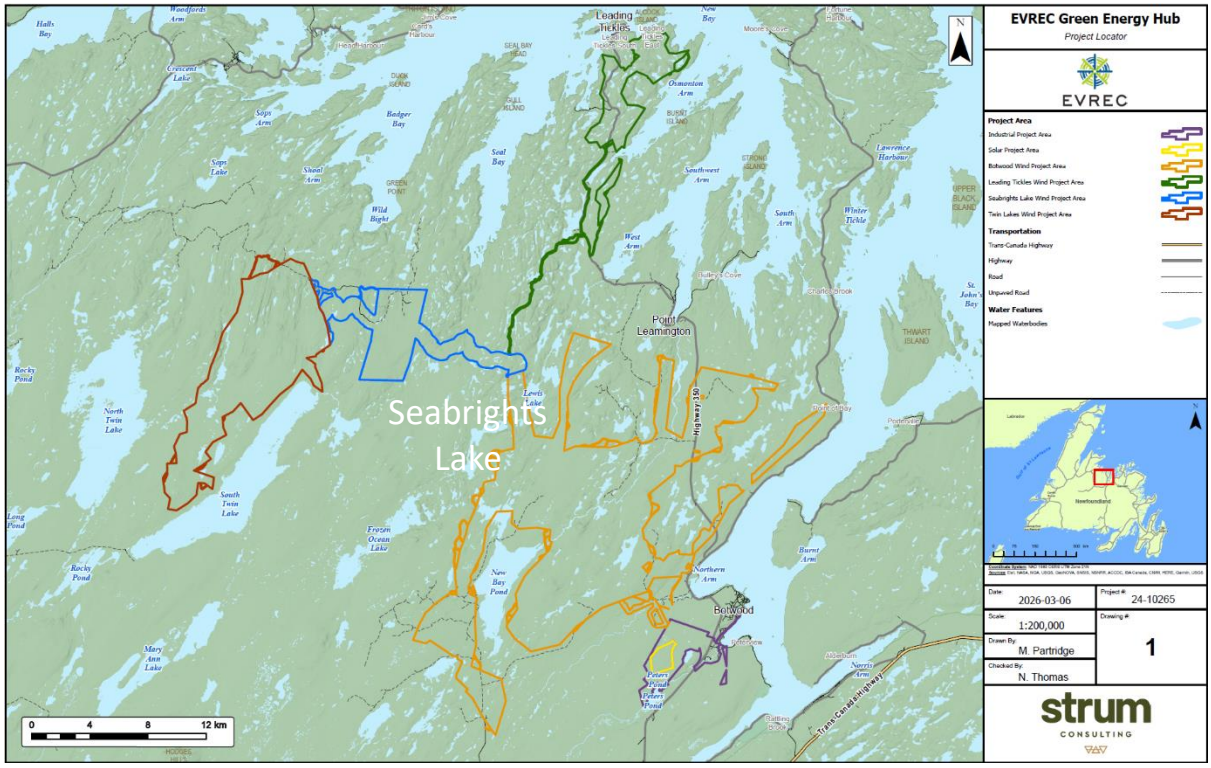

Figure 1: Overview of Project Lands

3.2. Local Baseline for the Project Area

This section summarizes the local domestic woodcutting context in and around the EVREC Project Area and establishes a baseline to support identification of potential interactions and appropriate engagement and mitigation measures.

3.3. Baseline Setting and Domestic Woodcutting Context

The EVREC Project is located within the broader FMDs 8, 9, and 10, where domestic cutting is a common land use and where domestic cutting blocks are designated to support domestic fuelwood and sawlog harvesting on Crown lands. Domestic cutting in the region typically occurs in the winter, with harvesting conducted by chainsaw and access for extraction commonly achieved using an ATV or snowmobile.

Domestic cutting blocks relevant to the EVREC Project include those in the vicinity of the proposed project areas (Twin Lakes, Leading Tickles, and the broader Botwood area), where Project infrastructure (e.g., access roads, transmission/collector corridors, staging areas) may create potential points of interaction through shared access or overlapping land use.

3.3.1. Baseline Information Sources

The local baseline will be developed and maintained using multiple sources, including:

- NLFAL domestic cutting permit and block information (active permits, historic use patterns where available, and domestic cutting block boundaries) to identify where domestic cutting activity is authorized within or adjacent to the Project Area;
- NLFAL commercial cutting permits and block information (active permits, historic use patterns where available
- Spatial review (mapping/GIS overlay) of domestic cutting blocks and known/available permit locations against the evolving Project footprint and infrastructure corridors, to identify areas of potential interaction;
- Project engagement inputs, including information gathered through EVREC's land and resource use (LRU) Survey (which include questions related to domestic wood cutting activities in or around Twin Lakes, Botwood, and Leading Tickles), plus feedback received through meetings, calls, and submissions;
- Field knowledge and local access information, including known access routes/trails and seasonal access patterns that influence how permit holders reach domestic cutting areas (to be confirmed through engagement and, where appropriate, joint site visits).

3.3.2. Local Domestic Woodcutting Patterns and Sensitivities

Based on the regional context and local engagement inputs, the following characteristics are expected to be particularly relevant to domestic woodcutting in the Project Area:

- **Seasonality**: Concentration of domestic cutting and hauling in winter months, when frozen ground and snow/ice conditions can support access and timber extraction.
- **Access dependence**: Reliance on existing woods roads, trails, and informal access points that may intersect or align with planned Project roads and corridors, creating potential safety and access-management considerations.
- **Allocation expectations**: Domestic cutting permits and allocations are managed within the district framework, and permit holders may depend on predictable access and continuity of domestic cutting opportunities within established blocks.
- **Potential interaction points**: Access road construction/upgrades, vegetation clearing, traffic management, and any temporary closures or controlled access points are the most likely pathways for interaction between the Project and domestic cutting activities.

3.3.3. Baseline Limitations and Updating

Domestic woodcutting is dispersed and can vary year-to-year based on permit issuance, harvest timing, and access conditions. As a result, this local baseline will be treated as a living dataset and refreshed as Project design evolves and as updated permit/block information becomes available through NLFAL and engagement. Updates to baseline mapping and the list of potentially affected permit holders will be incorporated into the Woodcutting Engagement Register and used to refine engagement priorities and mitigation planning.

4. DOMESTIC WOODCUTTING IN NL

4.1. Overview

Domestic wood harvesting activity undertaken within FMDs 8-10 (Figure 4.1) within the last plan period (2014-2018) included approximately 181,945 m3 of wood on Crown land. This Crown land harvest included approximately 143,902 m3 of softwood, approximately 21,734 m^3 of hardwood, and approximately 16,309 m3 of non-Annual Allowable Cut (AAC) wood harvested as birch or landing and cutover clean-up on Corner Brook Pulp and Paper Limited (CBPPL).

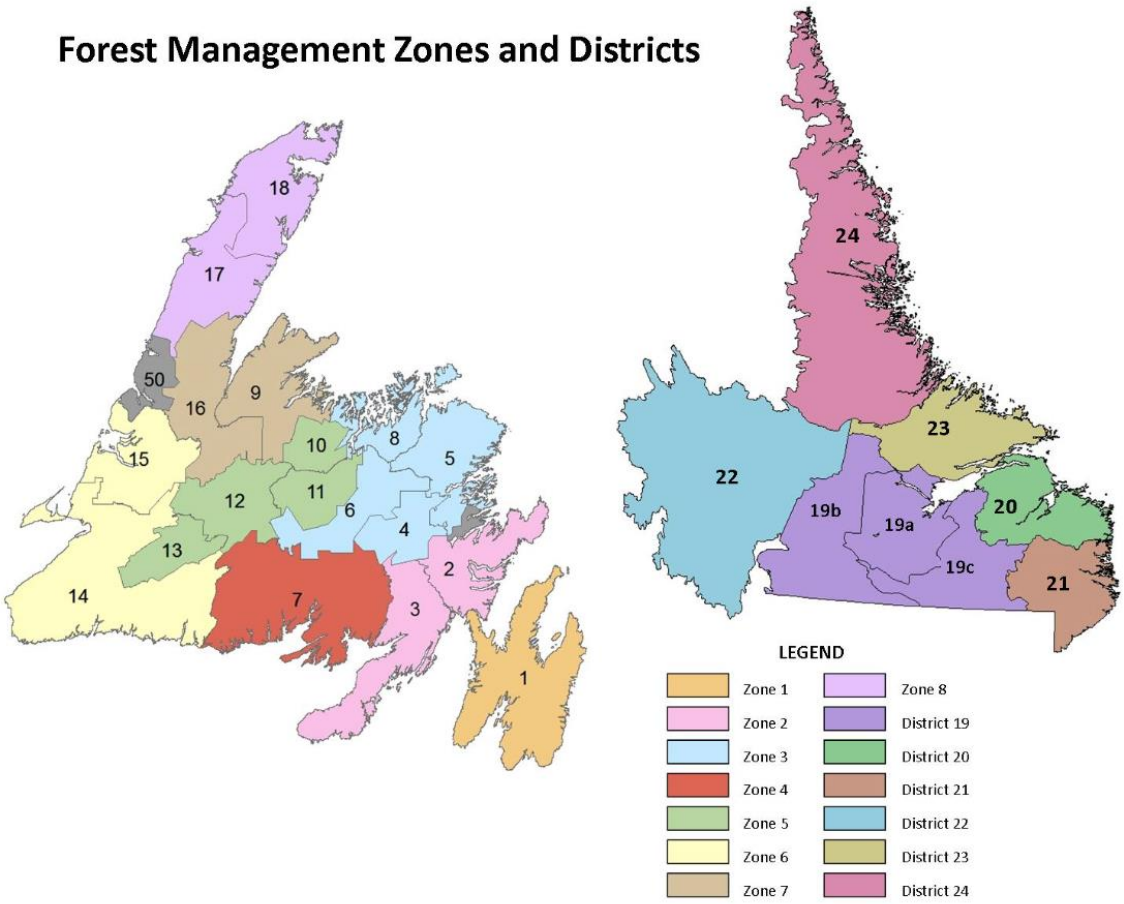

Figure 2: Forest Management Zones and Districts

Approximately 25,000 m^3 of wood was harvested domestically on CBPPL exchange areas (i.e., areas transferred to the Crown by CBPPL) in Districts 8-10 over the last plan period (2014-2018) (NLFAL 2018). There were also 108 ha silviculturally treated on Crown land, and 4.5 km of access roads constructed / reconstructed on Crown land during this period (NLFAL 2018). Commercial harvesting is carried out manually and with shortwood harvesters and forwarders; access roads are constructed using excavators and/or bulldozers; and silvicultural activities are carried out using brush saws, pottiputkis, and shovels (NLFAL 2018).

Figure 3: Designated Domestic Wood Harvesting Areas

Under the *Forestry Act* and associated Cutting of Timber Regulations, a cutting permit is required to cut timber on or remove timber from Crown lands or public lands. Permits for cutting timber are for personal use, and not for sale or barter, and are referred to as Domestic Cutting Permits (NLFAL n.d.). Domestic fuelwood and sawlogs are harvested from seven sources in District 8/9/10: designated domestic cutting blocks on land; cutover clean-up on Crown and industry limits; landing and roadside clean-up on Crown and industry limits; and hardwood harvest on industry limits (Figure 3).

5. ROLES AND RESPONSIBILITIES

The effective implementation of the DCWCCP is founded on collaboration, transparency, and accountability among EVREC, NLFAL, and permit holders.

Each party's responsibilities are outlined below to ensure that engagement is well-coordinated, consistent with regulatory expectations, and responsive to stakeholder input.

5.1. EVREC

EVREC is the Plan Owner and is ultimately responsible for ensuring that all wood cutting engagement activities are undertaken in accordance with this DCWCCP, the EIS Guidelines, and relevant legislation.

Responsibilities:

- Maintain open and proactive communication with wood cutting permit holders and NLFAL to identify potential conflicts or overlaps.
- Establish and maintain a Domestic Wood Cutting Engagement Register to record all correspondence, meeting outcomes, and mitigation measures.
- Coordinate with project engineers and planners to incorporate avoidance and mitigation measures into Project design where wood harvesting tenure overlaps exist.
- Provide advance notification of Project schedules, access development, and earthworks to rights holders and NLEM.
- Respond promptly and factually to stakeholder inquiries and maintain consistent messaging across Project teams.
- Integrate wood cutting engagement outcomes into the broader EPP and Commitments Register.
- Update this DCWCCP as Project design, permitting, or woodcutting permit status changes.

5.2. Department of Forestry, Agriculture and Lands (NLFAL)

NLFAL is the primary provincial regulator overseeing the issuance of domestic wood cutting activities in Newfoundland and Labrador.

Responsibilities:

- Provide EVREC with up-to-date data on active and historical wood cutting permits within and adjacent to the Project Area.
- Facilitate communication between EVREC and wood cutting permit holders as needed.

- Review and provide input on proposed Project mitigation measures where wood cutting permits/licenses/leases are affected.
- Participate in or observe meetings between EVREC and rights holders, when requested.
- Advise on best practices for maintaining safe, equitable coexistence between renewable energy development and wood cutting/harvesting activities.
- Support conflict-resolution processes when competing land uses are identified.

5.3. Domestic Woodcutting Permit Holders

Wood cutting rights holders within or adjacent to the Project Area are key stakeholders with legal rights to undertake woodcutting activities under license or lease agreements with the Province.

Responsibilities:

- Review Project information provided by EVREC and identify potential conflicts, concerns, or overlapping areas of activity.
- Provide relevant information to EVREC regarding current or planned woodcutting activities, work schedules, and access routes.
- Participate in bilateral or group meetings to discuss mitigation measures or coexistence arrangements.
- Respect confidentiality and proprietary data boundaries during consultation.
- Communicate updates to NLFAL and EVREC if permit ownership, boundaries, or activity levels change.

5.4. Construction Contractors / EPC / Site Supervisors

Construction contractors and site supervisors play a central role in implementing the commitments of this DCWCCP in the field. EVREC will require contractors to comply with the Project's engagement commitments and to support safe coexistence with domestic woodcutting activities, particularly where Project roads, work zones, or access controls may affect domestic cutting access.

Contractor / site supervision responsibilities include:

- Implementing access controls and safety measures: installing and maintaining signage, barriers, gates/locks, traffic controls, and detours in accordance with approved access protocols and the Access Management Plan approach.
- Field communications and coordination: coordinating day-to-day schedule changes (e.g., short-term closures, heavy lifts, clearing activities) with EVREC's engagement lead so notifications can be issued in accordance with notice practices.

- Issue response and escalation: receiving and responding to field-raised concerns (e.g., access confusion, unsafe interactions on roads), and escalating issues to EVREC when formal resolution or regulator coordination is required.
- Incident/near-miss reporting: ensuring that any incident or near miss involving public access, permit holders, or domestic woodcutting interactions is recorded and communicated to EVREC for tracking and reporting.
- Documentation: supporting EVREC's engagement register by providing necessary details (dates, locations, actions taken, photos where appropriate) related to access measures and issue resolution.
- Training and awareness: ensuring relevant site personnel are briefed on domestic woodcutting sensitivities, key access routes, and the expectation to treat public/permit-holder interactions respectfully and safely (including the "stop-work / make-safe / report" approach for safety-critical situations).

EVREC will incorporate these expectations into contractor management requirements (e.g., inductions, method statements, traffic management plans, and relevant health, safety and environment (HSE) procedures) to ensure DCWCCP commitments are translated into consistent field practice.

6. ENGAGEMENT PROCESS AND METHODOLOGY

This section outlines the methods, tools, and sequencing that EVREC will use to engage woodcutting permit holders, NLFAL, and other resource users potentially affected by the Project.

The engagement process emphasizes clear communication, transparency, and early coordination to identify concerns and define appropriate mitigation strategies.

6.1. Identification of Domestic Cutting Permits and Verification of Potential Overlaps

To ensure that engagement is complete, targeted, and traceable, EVREC will implement a structured process to identify domestic woodcutting permits/blocks in and near the Project Area and verify where Project activities may interact with domestic cutting activities. This process supports the Plan's objective to identify active permits and engage permit holders early to understand access and timing considerations.

6.1.1. Obtain and Maintain Permit/Block Information

EVREC will coordinate with NLFAL to obtain the most up-to-date information available on active and historical domestic wood cutting permits and domestic cutting blocks within and

adjacent to the Project Area. Updates will be requested at key Project milestones and as needed when Project layout and schedules change.

6.1.2. Spatial Screening and GIS Overlap Mapping

EVREC will conduct a GIS-based overlay of domestic cutting blocks / permit information against the evolving Project footprint and associated infrastructure (e.g., access roads, transmission/collector corridors, laydowns, quarries/borrow sources). The overlay analysis will identify an Area of Potential Interaction (API) where:

- Project works may overlap a domestic cutting block or known/available permit location; and/or
- Project access controls, traffic, or temporary closures could affect how permit holders reach domestic cutting areas.

6.1.3. Screening and Prioritization

Potential interactions will be screened and categorized to prioritize engagement effort. For example:

- **High priority:** direct overlap with planned clearing/roads/corridors, long-duration access changes, or anticipated schedule conflicts during domestic cutting season;
- **Medium priority**: proximity interactions (e.g., construction traffic/safety on shared access) with manageable routing alternatives; and
- **Low priority**: no direct overlap, limited duration activities, or no expected access implications.

6.1.4. Verification

EVREC will verify overlap findings through engagement with permit holders and coordination with NLFAL (and NLEM where Crown land management coordination is required). Verification may include map review meetings and, where helpful, site visits focused on confirming: access routes, seasonal timing, active harvesting locations, and practical constraints for coexistence.

6.1.5. Stakeholder List Development

A project contact and mailing list will be maintained that includes domestic woodcutting permit holders and relevant regulators. Contact information will be managed by EVREC's engagement staff and handled in accordance with privacy requirements.

6.1.6. Outputs and Documentation

Outputs from the identification and verification process will include, at minimum:

- a version-controlled domestic woodcutting overlap map pack (API maps and key access notes);
- an engagement prioritization list (high/medium/low); and

- entries in the engagement register documenting contact attempts, feedback, and agreed actions/mitigation. Engagement logging aligns with your approach to maintaining a traceable record through the Project life cycle.

6.1.7. Update Frequency and Triggers

The overlap screening will be refreshed when any of the following occur: changes in Project layout/schedule, updated provincial woodcutting permit/block information, or new stakeholder information/access requests.

6.2. Engagement Strategy

The engagement approach for wood and associated resource users is designed to:

- Establish early and ongoing communication with affected and interested parties;
- Provide timely and accurate Project information in plain language;
- Document all feedback and integrate it into Project planning; and
- Maintain a transparent and traceable record of engagement through to decommissioning.

Engagement activities will be implemented in three key phases:

Table 6.1: Phased Engagement Strategy Overview

Phase	Timing	Focus	Typical Activities
Pre-construction (EIS / FEED)	Pre-2027	Identification of woodcutting permit holders, NLEM coordination, initial correspondence, meetings, and data verification.	Issue introductory letters, conduct mapping reviews, log responses, prepare avoidance/mitigation plans.
Construction & Operations	2027–2060	Maintain communication during roadwork, access changes, and facility construction; coordinate schedules and access.	Notice of work, site meetings, email updates, joint inspections, adjustment of mitigation as needed.
Decommissioning / Rehabilitation	Post-2060	Maintain engagement through closure planning and reclamation to ensure mutual understanding of land use outcomes.	Notifications, closure meetings, data sharing, documentation of lessons learned.

6.3. Engagement Methods

EVREC will use multiple communication channels and mechanisms to reach woodcutting permit holders.

All correspondence will be recorded in the Engagement Register and logged against the stakeholder's contact entry.

6.3.1. Direct Correspondence and Meetings

- Initial Notification Letters: Sent to all identified woodcutting permit holders, summarizing the Project scope, potential overlaps, and EVREC contact information.
- Follow-Up Calls or Virtual Meetings: Used to clarify technical details, review maps, and discuss potential mitigation measures.
- In-Person Meetings / Site Visits: Conducted when direct coordination is needed to address overlapping claims, road access, or timing conflicts.

Meeting outcomes will be summarized in a Consultation Record Form and uploaded to the Engagement Register.

6.3.2. Project Mailing List

A Project contact and mailing list has been developed and will be updated as engagement progresses.

The list will include contact information for domestic woodcutting permit holders, NLFAL officials, and other relevant stakeholders such as domestic woodcutting permit holders.

Regular updates will be distributed to the mailing list to notify recipients of Project milestones, construction activities, or planned meetings.

The list will be maintained by EVREC's Community and Resource Engagement Coordinator and will comply with privacy regulations.

6.3.3. Project Email Account

A dedicated email account has been established to streamline correspondence: info@evrec.ca

- Accessible to EVREC's engagement and technical staff.
- Used for sending notices, receiving questions or comments, and providing follow-up responses.
- Mentioned in all public and rights-holder notices, newsletters, and meetings.

6.3.4. Project Office

EVREC's Community Office in Botwood serves as the main in-person contact point for stakeholders.

This office will be used to:

- Provide printed maps and wood-tenure overlap diagrams;
- Host smaller meetings with rights holders or forestry permittees; and
- Receive written submissions or forms related to access coordination.

Operating hours and contact details will be posted publicly.

6.3.5. Project Website

EVREC will maintain a Project-specific webpage within its corporate site (https://evrec.ca), which will:

- Provide project updates, maps, and current engagement status;
- Host downloadable notices and newsletters;
- Include contact forms for questions or feedback; and
- Summarize how stakeholder feedback is considered during design and construction.

A calendar of engagement milestones and public events will also be posted on the website.

6.3.6. Digital Engagement and Social Media

The Project will make use of EVREC's LinkedIn and Facebook accounts for proactive notifications, such as:

- Announcement of new public materials or notices;
- Updates on construction schedule and site access; and
- Invitations to participate in engagement meetings or community sessions.

Social-media channels will be used for notification only; feedback will be directed to the Project email or office for official response and documentation.

6.3.7. Coordination with Regulators

EVREC will maintain regular contact with NLFAL to share updated maps, stakeholder feedback, and mitigation commitments.

Joint meetings may be organized at key milestones to ensure alignment between woodcutting permit holders and -rights and Crown-lands management processes.

6.4. Documentation and Reporting

All engagement activities will be logged in the Domestic Woodcutting Engagement Register and summarized in quarterly or milestone reports.

Each entry will include:

- Stakeholder name and contact;
- Type of engagement (meeting, call, letter, email);
- Date, topic, and participants;
- Key issues raised;
- Agreed actions or follow-up commitments; and
- Current status (open, ongoing, closed).

Quarterly summaries will be shared internally with EVREC management and externally with NLFAL upon request.

6.5. Continuous Improvement

The engagement process will be reviewed annually to:

- Evaluate the effectiveness of communication tools and channels;
- Update stakeholder lists and contact protocols;
- Identify recurring issues and lessons learned; and
- Implement corrective actions or new strategies as needed.

Updates will be documented in a Revision Log appended to this Plan.

6.6. Engagement Completed To-Date

EVREC has initiated engagement activities to understand domestic woodcutting use and potential interactions with the EVREC Project. Engagement undertaken to date provides early baseline information on domestic woodcutting activity, access routes, seasonal timing, and potential areas of concern for permit holders.

6.6.1. Land and Resource Use (LRU) Survey

EVREC will conduct a Land and Resource Use (LRU) Survey that includes questions related to domestic woodcutting activities in and around the Project Area, including Twin Lakes, Botwood, and Leading Tickles. The survey is intended to help identify local domestic cutting activity, inform the domestic woodcutting baseline, and support early identification of areas of potential interaction.

Preliminary themes identified through early review of survey input (subject to final compilation and validation) include:

- domestic woodcutting is a common activity in the region, with strong seasonal patterns (often winter harvesting);
- access routes and local roads/trails are critical enabling conditions for domestic cutting activity; and
- early notification and clear access/safety protocols are key expectations for avoiding disruption during construction activities.

Once finalized, EVREC will append a brief summary of survey results (e.g., number of responses, response distribution, and key domestic woodcutting findings) to this Plan or incorporate the summary into the annual reporting process described in Section 8.

6.6.2. Community Information Channels Established

To support ongoing engagement, EVREC has established multiple communication channels through which domestic woodcutters and permit holders can seek information, provide feedback, or raise concerns, including:

- email contact via info@evrec.ca;
- a physical community presence via the EVREC Community Office in Botwood; and
- public information sharing via EVREC's website and social media channels (used for notifications and information sharing).

6.6.3. Early Interaction Tracking and Documentation

EVREC has committed to documenting engagement activities, concerns, and follow-up actions in an engagement register that is retained for compliance tracking and reporting purposes. Engagement records include contact attempts, issues raised, commitments made, and close-out status, consistent with the record-keeping approach described in Section 9.

6.6.4. Ongoing Engagement Planning

As Project design progresses and updated domestic cutting permit/block information becomes available through NLFAL, EVREC will transition from broad-based information channels to targeted outreach to potentially affected permit holders. Targeted engagement will focus on verifying access routes, seasonal timing, and practical mitigation measures, and on developing site-specific access and coexistence protocols where needed.

6.7. Engagement Outputs, Notice Periods, and Triggers by Project Phase

EVREC will tailor engagement intensity and deliverables to Project phase and the level of potential interaction with domestic woodcutting activities. Engagement will use both broad public channels (e.g., website/community office) and targeted outreach to permit holders.

6.7.1. Pre-construction / Design Development Phase

Purpose: identify potential overlaps early, verify access routes and seasonal sensitivities, and confirm practical mitigation options before works are scheduled.

Minimum engagement outputs:

- version-controlled overlap map pack (domestic cutting blocks/permits + Project footprint overlay);
- initial list of potentially affected permit holders (prioritized);
- introductory information package describing anticipated Project activities that could affect access and safety (plain language, map excerpts);
- meeting notes from any map-review sessions or site visits, logged in the engagement register.

Notice triggers:

- release of a materially updated Project footprint/layout (roads, corridors, clearing areas);
- identification of new/high-priority overlaps;
- confirmation of preliminary construction schedule (especially vegetation clearing and roadworks timing).

6.7.2. Construction Phase

Purpose: maintain safe coexistence during active works, avoid unnecessary disruption, and respond quickly to access/safety concerns.

Minimum engagement outputs:

- targeted notifications to affected permit holders where Project activities may affect domestic cutting access, timing, or safety;
- construction activity bulletins for communities (where/how to get updates and how to raise concerns);
- site-specific access and coexistence protocols (where needed) documenting access routes, gate controls, detours, signage, and safety measures; and
- updated maps showing active work areas and any temporary closures/controlled access points.

Recommended minimum notice periods (unless safety/emergency requires immediate action):

- 30 days prior to planned vegetation clearing or roadworks that may restrict access to a domestic cutting area;
- 14 days prior to initiating controlled access measures (gates/locks, detours) affecting known/verified routes;
- 48 to 72 hours prior to short-duration disruptive activities (e.g., brief closures for heavy lifts) where the affected group is limited and contactable; and
- same-day / immediate notice where required for safety (with follow-up explanation and revised access guidance).

Notice triggers:

- initiation of vegetation clearing/grubbing in or near an identified Area of Potential Interaction (API);
- road upgrades, traffic management changes, temporary closures, detours, or gate/lock installation;
- significant changes to construction schedule that coincide with domestic cutting season; and

- any incident/near miss involving public/permit holder interactions on Project roads (see Section 7 monitoring).

6.7.3. Operations and Maintenance Phase

Purpose: maintain predictable access, communicate maintenance schedules that could affect roads/corridors, and sustain a clear issue-resolution pathway.

Minimum engagement outputs:

- periodic (e.g., annual or seasonal) updates summarizing planned maintenance that may affect access;
- updates to access maps (gates, controlled areas, detours) as needed;
- ongoing engagement through the Botwood office and established communication channels; and
- annual summary reporting to NLFAL.

Notice triggers:

- planned road maintenance that may temporarily restrict access;
- corridor maintenance/vegetation management;
- any change in access control measures (gates, signage, restrictions).

6.7.4. Decommissioning and Rehabilitation Phase

Purpose: manage temporary access changes during dismantling, communicate safety controls, and confirm closure/rehabilitation outcomes relevant to local access and land use.

Minimum engagement outputs:

- decommissioning schedule notices and maps showing affected routes/areas;
- site-specific access protocols where temporary closures are required; and
- post-works updates confirming rehabilitation status and any long-term access outcomes.

Notice triggers:

- start of dismantling activities, heavy hauling, or material transport that affects access routes; and
- any temporary closure or controlled access required for public safety.

7. MITIGATION AND CONFLICT RESOLUTION MEASURES

EVREC will manage potential interactions between Project works and wood-cutting activities using a tiered approach:

1. Avoid
2. Minimize
3. Mitigate/Coordinate
4. Formalize (agreement & monitoring)

Mitigation will be selected in collaboration with NLFAL and the affected permit holder(s) and documented in the Domestic Woodcutting Engagement Register and Commitments Register.

7.1. Typical Interaction Scenarios

Common touchpoints between Project infrastructure and the woodcutting tenure include:

- Access roads / upgrades crossing cutting permits or active programs;
- Transmission and collection corridors cutting permits or active programs;
- Quarries / borrow sources in cutting permits or active programs;
- Temporary worker camps, laydowns and staging overlapping cutting permits or active programs;
- Seasonal timing conflicts (cutting windows vs. construction windows); and
- Information confidentiality (work plans, locations, schedules).

7.2. Mitigation Hierarchy and Decision Path

Avoidance / Micro-siting

- Re-align road centerlines or pole placements to skirt active permits or planned work areas.
- Adjust laydown boundaries to preserve access corridors.

Minimization

- Reduce construction footprint (narrowed ROW; temporary matting).
- Use existing disturbed corridors wherever practicable.

Mitigation / Coordination

- Access & Co-existence Protocols (Section 6.3) for shared roads and corridors.
- Schedule coordination: windows to allow drill moves/geophysics lines; advanced notice.

Formalization

- Road-use / Crossing Agreements, Notices, MOUs, or Letter of Non-Objection as appropriate.

- Record measures in the Engagement Register and Commitments Register with owners and dates.

7.3. Mitigation Measures Toolbox

The mitigation hierarchy will be applied using the following practical “toolbox” of measures tailored to domestic woodcutting. Measures will be selected case-by-case in collaboration with NLFAL and affected permit holders and recorded in the Woodcutting Engagement Register and Mitigation Tracking Table.

7.3.1. Avoidance and Micro Siting

Where feasible, EVREC will avoid creating conflicts by adjusting the Project footprint and work areas to reduce overlap with domestic cutting blocks and verified access routes, including:

- minor realignments of road centerlines, work pads, laydowns, or corridor placement to avoid key access points or active/verified cutting areas;
- maintaining buffers around known domestic cutting access junctions or commonly used staging/parking areas; and
- sequencing design to use existing disturbed corridors where practical (reducing new access fragmentation).

7.3.2. Minimization

Where avoidance is not feasible, EVREC will minimize the scale and duration of interaction, including:

- narrowing ROW / limiting cleared width to what is necessary for safe construction and operations;
- limiting the length and duration of temporary closures and restoring access promptly after activities are complete;
- minimizing winter-season disruption where domestic cutting is most active (where safety and constructability allow); and
- using traffic controls and staging plans that reduce congestion and safety risks on shared routes.

7.3.3. Mitigation/Coordination

Where interactions remain, EVREC will coordinate with permit holders to manage access, timing, and safety through measures such as:

- Advance notice of clearing, roadworks, blasting, heavy hauling, or other disruptive activities near domestic cutting access routes (consistent with the notice concept already embedded in your protocol table);

- Access & Co-existence Protocols defining: safe travel expectations, speed limits, signage locations, call-in procedures (if used), designated passing points, and emergency contacts;
- Temporary detours / alternate routes, clearly mapped and signed, when a customary access route is restricted;
- Scheduled access windows (where feasible) that allow permit holders to enter/exit safely around high-risk construction activities;
- On-the-ground marking of construction zones, no-go areas, and safe crossing points to reduce confusion and unsafe entry into active work areas; and
- Field-level issue resolution (foreman-to-foreman / supervisor-to-supervisor) to address minor access issues quickly before escalation.

7.3.4. Formalization

When ongoing or higher-risk interactions are identified, EVREC will formalize arrangements as appropriate, including:

- written site-specific access/coexistence protocols;
- letters or agreements documenting commitments such as notice periods, access controls, detours, and safety requirements; and
- assignment of responsible persons, deadlines, and close-out status in the Engagement Register and Mitigation Tracking Table.

7.3.5. Communication and Feedback Loop

All mitigation selections will be communicated back to affected permit holders in plain language, and updates (including changes to schedules or access status) will be shared using the Plan's established channels and logged for traceability.

7.4. Access & Co-existence Protocols Template

Table 7.1: Access And Co-Existing Protocol Template

Topic	Protocol / Standard
Notice	EVREC to provide ≥ 30 days written notice before road works or blasting near licensed ground; rights holder to give ≥30 days' notice before drill mobilizations within 500 m of Project corridors.
Traffic Management	Call-in on common radio channel; speed limits; signage; scheduled windows for wide loads.
Safety & Induction	Visiting crews receive site induction (traffic, blasting schedules, contacts, Emergency Response Plan (ERP)).
Corridor Etiquette	EVREC to clearly mark construction zones and detours.

Topic	Protocol / Standard
Emergency Coordination	ERP contacts exchanged; 24/7 call tree posted; joint response if incident affects shared corridor.
Dispute Escalation	Supervisor to supervisor → EVREC Woodcutting Engagement Lead → NLFAL liaison if unresolved.

7.5. Access Management Plan

EVREC will implement an Access Management Plan (AMP) to manage safe and predictable access in areas where Project activities may interact with domestic woodcutting access routes or domestic cutting blocks. The AMP operationalizes the Access & Co-existence Protocols and provides clear rules for access status, communications, and controls during construction and operations.

7.5.1. Access Status Classification

EVREC will apply a simple access status system for Project roads, corridors, and controlled work areas where interactions are possible:

- **Open**: access permitted with standard caution and posted rules;
- **Open with Restrictions**: access permitted subject to conditions (e.g., reduced speed, radio call-in, designated passing points, daylight-only access, escort requirements);
- **Temporary Closure**: no access for a defined period due to safety-critical activities (e.g., heavy lifts, blasting, active clearing); and
- **Controlled Access**: access by permission only (e.g., active construction zones, gate-controlled areas).

The current access status will be communicated through posted signage and updates through the Project's engagement channels (email/office/website), and where relevant, targeted notices to identified permit holders.

7.5.2. Access Permissions

Where gates/locks are required for safety or asset protection, EVREC will:

- communicate the reason for gating, the duration (temporary/permanent), and how access requests will be handled;
- maintain a controlled process for granting time-limited access where safe and appropriate (e.g., gate code/key control, escort protocols, or scheduled access windows); and
- ensure emergency access is always maintained in accordance with the Emergency Coordination elements of the Access & Co-existence Protocol.

7.5.3. Detours and Alternate Access Routes

If a closure or restriction affects a known access route used by domestic woodcutters, EVREC will identify and communicate feasible detours or alternate access routes where practical. Detours will be shown on updated maps and supported by field signage at decision points (e.g., junctions, gate locations). Where an alternate route is not feasible, EVREC will work with affected permit holders and NLFAL to identify other coordination measures (e.g., schedule windows, escorted access, or sequencing of works).

7.5.4. Winter Access Considerations

Recognizing that domestic woodcutting often occurs during winter and may rely on snowmobile/ATV access, EVREC will consider seasonal access needs in the AMP, including:

- communicating winter road maintenance intentions (e.g., which roads may be plowed/maintained for Project use and which may not);
- clarifying safe travel expectations when Project traffic is present; and
- avoiding unnecessary restrictions during peak domestic cutting periods where it can be done safely and without compromising Project delivery.

7.5.5. Communications and Point of Contact

EVREC will maintain a clear point-of-contact for access questions, restrictions, or safety concerns (via the Project email and Community Office), and will log access-related issues and resolutions in the engagement register.

7.5.6. Field Verification and Updates

EVREC will verify implementation of AMP measures through site inspections (e.g., signage in place, gates functioning as intended, closures lifted on time, detours marked). Any recurring issues (e.g., repeated complaints about a closure point) will trigger review and adjustment under the continuous improvement process.

7.6. Information Sharing and Confidentiality

- EVREC will share sufficient mapping/scheduling to ensure safety and coordination, while respecting proprietary exploration data;
- Two-way NDA templates may be used where more detailed information is required (e.g. detailed road alignments); and
- All commitments and constraints are to be logged and circulated to relevant supervisors.

7.7. Dispute Resolution

EVREC's approach to dispute resolution is based on early communication, timely response, and transparent documentation. Issues may be raised informally (e.g., during meetings or by phone/email) or through a formal complaint. All issues and complaints will be logged in the

Woodcutting Engagement Register, assigned an owner, tracked to close-out, and included in reporting as appropriate.

7.7.1. Intake Channels

Domestic woodcutting permit holders and other affected parties may raise concerns or complaints through:

- EVREC's project email (info@evrec.ca);
- in-person submission via the EVREC Community Office (Botwood);
- phone (1 709 257 2344) and
- during scheduled engagement sessions (meetings, map reviews, site visits).

7.7.2. Acknowledgement and Initial Screening

EVREC will acknowledge receipt of a complaint or concern within two business days and will conduct an initial screening to determine if the matter is:

- Safety-critical / urgent (e.g., unsafe access conditions, near misses, public safety risks), requiring immediate action; or
- Standard / non-urgent (e.g., schedule coordination, access inconvenience, information request).

For urgent matters, EVREC will initiate immediate controls (e.g., signage, temporary closure, escort controls) as needed and follow with a written summary once conditions are stabilized.

7.7.3. Investigation and Response Timelines

EVREC will investigate and provide a substantive response (including proposed corrective actions where applicable) within:

- 10 business days for standard matters; and
- 20 business days for complex matters requiring field verification, coordination with contractors, or regulatory input.

If additional time is required, EVREC will notify the complainant in writing before the deadline, explain why, and provide a revised response date.

7.7.4. Resolution Options

Depending on the nature of the issue, resolution may include:

- clarification / information sharing (e.g., maps, schedule updates, access status);
- field-level corrective action (e.g., signage improvements, detour marking, gate/lock process correction);
- schedule coordination measures (e.g., temporary access windows, sequencing adjustments);

- development or revision of an Access & Co-existence Protocol; or
- other mitigation measures identified in the toolbox.

7.7.5. Escalation Pathway

If the issue is not resolved to the satisfaction of the complainant after EVREC's response, EVREC will offer escalation steps, which may include:

1. review by EVREC's senior engagement lead / project management;
2. a joint meeting with the complainant and relevant contractor representatives (as applicable); and
3. coordination with the NLFAL where the issue relates to domestic cutting permits/blocks or requires regulator input.

7.7.6. Close-out, Documentation, and Learning

A complaint will be considered closed when:

- corrective actions (if any) have been implemented;
- the outcome has been communicated to the complainant; and
- the close-out is recorded in the Woodcutting Engagement Register (including dates, actions taken, and verification).

Recurring issues will trigger adaptive management actions (e.g., revisions to protocols, updated signage standards, changes to notice practices) and will be reviewed as part of the monitoring and evaluation process.

7.8. Documentation and Verification

Use the Consultation Record Form to capture each interaction and the mitigation agreed. Maintain a Mitigation Tracking Table for all known overlap areas:

Table 7.2: Consultation Record Form Template (Sample)

Location / Chainage	Interaction Type	Rights Holder	Mitigation Selected	Agreement Type	Owner	Due Date / Status
KP ___	Road–licence crossing	Licence ___	Micro-site road 60 m east; signage; 14-day notice	Road-use letter	Site Eng.	Open
KP ___	Quarry–prospective ground	Licence ___	Buffer 150 m; schedule window Aug–Sep	MOU	Const. Mgr	Closed

8. MONITORING REPORTING AND EVALUATION

Ongoing monitoring and transparent reporting will ensure that engagement with woodcutting permit holders and resource users remains effective and that all commitments are implemented as intended.

8.1. Monitoring Activities

EVREC will monitor the progress of engagement and mitigation through:

- Quarterly reviews of the Woodcutting Engagement Register;
- Verification of mitigation actions agreed with permit holders and NLFAL (e.g., access signage, buffer enforcement, scheduling notices); and
- Site inspections to confirm that access or safety measures are functioning; and
- Follow-up communication with permit holders to validate satisfaction with implemented measures.

Monitoring outcomes will be documented using the Mitigation Tracking Table in Section 6 and cross-referenced to the EIS Commitments Register.

8.2. KPIs

Table 8.1: Monitoring Indicators for Domestic Woodcutting Engagement

KPI	Description	Frequency	Target / Threshold	Responsible Party
Permit/Block Coverage	% of domestic cutting permits/blocks in the Area of Potential Interaction (API) screened via GIS and reviewed for interaction potential	Quarterly (or at major design changes)	100% of available data screened	EVREC Engagement Lead + GIS
High-Priority Outreach Completion	% of high-priority permit holders contacted (attempted + documented)	Quarterly during construction; annually during operations	≥ 90% within each reporting period	EVREC Engagement Lead
Engagement Activity Volume	# of documented engagements (meetings/calls/emails/site visits) with permit holders/NLFAL on domestic cutting issues	Quarterly	Track & trend (no fixed target)	EVREC Engagement Lead
Notice Timeliness – Major Disruptions	% of major access-impacting activities (clearing/roadworks/ long closures) where advance notice was issued	Monthly during construction	≥ 90% issued ≥ 30 days ahead (where practicable)	EVREC Engagement Lead + Construction

KPI	Description	Frequency	Target / Threshold	Responsible Party
Access Disruption Incidents	# of access disruptions affecting verified permit-holder routes (closures, gate issues, detour failures)	Monthly during construction; quarterly otherwise	Track & trend; investigate recurring issues	EVREC Construction Manager
Safety Incidents / Near Misses	# of incidents or near misses involving public/permit holders on Project roads or at access points	Monthly during construction; quarterly otherwise	Zero; all investigated	HSE + Construction
Complaint Acknowledgement Time	% of complaints acknowledged within 2 business days	Quarterly	≥ 95%	EVREC Engagement Lead
Complaint Resolution Time	% of complaints resolved within standard timelines (10 business days; 20 for complex)	Quarterly	≥ 90%	EVREC Engagement Lead
Escalations to NLFAL	# of issues requiring regulator involvement and resolution outcome	Quarterly	Track & trend	EVREC Engagement Lead + NLFAL liaison
Protocol Implementation Quality	% of required access/signage controls verified in place (per inspection checklist)	Monthly during construction	≥ 95% compliant	Construction + HSE
Stakeholder Satisfaction (light-touch)	% of respondents satisfied with clarity/timeliness of information (via periodic short survey or feedback form)	Annually	Establish baseline; improve year-on-year	EVREC Engagement Lead

Notes: Targets should be treated as performance goals; exceptions may occur due to emergency safety actions or late-breaking schedule changes. In such cases, EVREC will document rationale and corrective actions.

8.3. Adaptive Management and Trigger Points

EVREC will apply adaptive management to improve domestic woodcutting engagement outcomes over time. Monitoring results and KPI performance will be reviewed regularly and used to adjust engagement methods, notice practices, access controls, and mitigation measures as needed.

8.3.1. Trigger points and responses

The following conditions will trigger a focused review and corrective action:

- Repeated access complaints (e.g., ≥ 3 similar complaints in a quarter): conduct targeted outreach with affected permit holders, review access signage/detour effectiveness, and revise site protocol(s) as needed;
- Failure to meet notice timeliness target in a reporting period: review construction communications workflow and implement process controls (e.g., weekly look-ahead integration with engagement notifications);
- Any safety incident/near miss involving permit holders/public: implement immediate corrective actions, communicate learnings to relevant stakeholders where appropriate, and update field controls/protocols; and
- Extended complaint resolution times (below KPI targets): adjust resourcing/ownership, escalate earlier to senior management, and formalize interim controls while investigation continues.

Any adaptive management actions and resulting plan changes will be captured through the revision process and documented in the engagement register for traceability.

8.4. Reporting

- Quarterly internal reports to EVREC management summarizing engagements, outstanding issues, and mitigation updates.
- Annual summary reports shared with NLFAL outlining status of overlaps, dispute resolutions, and key metrics.
- Annual EIS compliance update to EA as part of EVREC's environmental and social performance reporting.

9. DATA MANAGEMENT AND RECORD KEEPING

9.1. Engagement Register and Confidentiality

All communications, meetings, and written correspondence will be logged in EVREC's Wood Cutting Engagement Register (SharePoint/Procore platform).
Each record will include:

- Date, participants, and meeting type;
- Key discussion points and commitments;
- Follow-up actions and responsible persons; and
- Status (open, in progress, closed).

Sensitive commercial information from rights holders will be treated as confidential and stored in restricted-access folders. Only authorized EVREC and STRUM personnel will have editing rights.

9.2. Data Retention and Integration

- Engagement records will be retained for a minimum of 7 years after Project completion or as required by NLECCC/NLFAL; and
- Information will be integrated with the main Consultation Database used for the PPP to maintain consistency across all EVREC stakeholder engagement plans.

9.3. Privacy, Consent, and Public Disclosure

EVREC recognizes that engagement with domestic woodcutting permit holders involves the collection and handling of personal information (e.g., names, contact details, and permit-related information). EVREC will manage information responsibly to enable meaningful engagement and safety communications while protecting privacy and ensuring appropriate transparency for EIS and compliance reporting.

9.3.1. Personal Information Collected and Purpose

For the purpose of implementing this DCWCCP, EVREC may collect and maintain information such as:

- permit holder name and preferred contact method (email, phone, mailing address);
- permit/block identifiers and general location information relevant to overlap screening and engagement;
- records of engagement (dates, issues raised, commitments made, outcomes); and
- complaints and resolution details (excluding unnecessary personal detail).

This information is collected solely to: (i) identify potential interactions between Project activities and domestic woodcutting, (ii) provide timely notices related to access/safety, (iii) document engagement and commitments, and (iv) support compliance reporting.

9.3.2. Consent and Fair Notice

Where EVREC collects information directly from individuals (e.g., via meeting sign-in, complaint intake, or direct correspondence), EVREC will provide fair notice of:

- what information is being collected;
- why it is collected and how it will be used;
- who will have access to it (need-to-know basis); and
- how individuals can request updates or corrections to their contact details.

9.3.3. Access Controls and Security

Access to personal information will be limited to authorized EVREC personnel and, where necessary, relevant contractors who require it to implement access notifications or safety measures (and only to the minimum extent required). Records will be stored in controlled systems consistent with EVREC's record-keeping approach and retained in accordance with the retention period specified in this Plan.

9.3.4. Sharing, Disclosure, and Reporting

EVREC will not publicly disclose personal contact information of permit holders. Reporting to regulators or in EIS documentation will be prepared in a manner that protects privacy, typically using aggregated or anonymized information (e.g., number of permit holders contacted, number of issues raised, mitigation actions implemented). Where regulator coordination requires discussion of specific cases, information will be shared only as needed for resolution and in a manner consistent with applicable privacy requirements.

9.3.5. Records Requests and Complaints About Privacy

If an individual has concerns about the handling of their personal information, they may raise the concern through the complaint process described above. EVREC will investigate and respond in accordance with the Plan's complaint handling timelines and will implement corrective actions where warranted.

10. MONITORING, REVISIONS AND CONTINUOUS IMPROVEMENT

This DCWCCP is a controlled document that will evolve with Project development and feedback from stakeholders and regulators.

Revisions may be triggered by:

- Changes in Project layout or schedule affecting wood cutting tenure overlap;
- Updates to the provincial domestic wood cutting database;
- New stakeholder information or access requests; or
- Lessons learned from monitoring and evaluation.

Each revision will:

- Be logged in the Revision Control Sheet;
- Include an updated Table of Contents and version number; and
- Be distributed to NLEM, NLECCC, and all rights holders who have engaged with the Project.

11. COMPANY INFORMATION

Contact information for EVREC is provided below:

Exploits Valley Renewable Energy Corporation

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12. LIST OF ABBREVIATIONS

Abbreviation	Definition
AAC	Annual Allowable Cut
AMP	Access Management Plan
API	Area of Potential Interaction
CBPPL	Corner Brook Pulp and Paper Limited
DCP	Domestic Cutting Permit
DCWCCP	Domestic and Commercial Wood Cutting Consultation Plan
EIS	Environmental Impact Statement
EPC	Engineering, Procurement, and Construction
ERP	Emergency Response Plan
EVREC	Exploits Valley Renewable Energy Corporation
FMD(s)	Forest Management District(s)
GHG	Greenhouse Gas
GIS	Geographic Information System
GW	Gigawatt
HSE	Health, Safety, and Environment
KPI(s)	Key Performance Indicator(s)
LRU	Land and Resource Use
MOU	Memorandum of Understanding
MW	Megawatt
NDA	Non-Disclosure Agreement
NL	Newfoundland and Labrador
NLECCC	Newfoundland and Labrador Department of Environment, Conservation and Climate Change
NLEM	Newfoundland and Labrador Department of Energy and Mines
NLFAL	Newfoundland and Labrador Department of Forestry, Agriculture and Lands
PV	Photovoltaic
RFNBO	Renewable Fuels of Non-Biological Origin
TWh	Terawatt-hour

13. REFERENCES

Government of Newfoundland and Labrador. Forestry Act, RSNL 1990, c. F-23.

Government of Newfoundland and Labrador. Cutting of Timber Regulations under the Forestry Act.

Government of Newfoundland and Labrador. Crown Lands Act, RSNL 1990, c. C-38.

Government of Newfoundland and Labrador. Environmental Protection Act, SNL 2002, c. E-14.2.

Government of Newfoundland and Labrador. Environmental Assessment Regulations, 2003 (NLR 54/03).

Government of Newfoundland and Labrador. Access to Information and Protection of Privacy Act, 2015 (ATIPPA).

Government of Newfoundland and Labrador. Occupational Health and Safety Act, RSNL 1990, c. O-3, and associated Regulations.

APPENDIX Q.5
Mineral Resource Industry Engagement Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

MINERAL RESOURCE INDUSTRY ENGAGEMENT PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps be taken to ensure that information contained in this response will be made available only to the receiving party, it's professional advisers and contract staff who are specifically engaged in the project.

TABLE OF CONTENTS

1. Introduction 4
   1.1. Guidelines Requirements 4
   1.2. Purpose of this Document 4
   1.3. Aims and Objectives 5
2. Project Description 6
   2.1. Site Location 7
3. Legislative and Policy Framework 8
   3.1. Federal Context 8
   3.2. Provincial Context 8
   3.3. Municipal Context 9
   3.4. Guidance and Best Practice 9
4. Roles and Responsibilities 10
   4.1. EVREC 10
   4.2. Department of Energy and Mines (NLEM) 10
   4.3. Mineral Rights Holders and Exploration Companies 11
   4.4. EVREC Environmental and Social Team 11
   4.5. Municipal Governments and Local Stakeholders 11
5. Mineral Resources in Newfoundland and Labrador 12
   5.1. Provincial Overview 12
   5.2. Regional Context — Central Newfoundland 12
   5.3. Mineral Tenure within and Adjacent to the Project 12
   5.4. Potential Interactions with EVREC Infrastructure 13
   5.5. Data Sources and Verification 14
6. Engagement Process and Methodology 14
   6.1. Engagement Strategy 14
   6.2. Engagement Methods 15
   6.3. Documentation and Reporting 16
   6.4. Continuous Improvement 17
7. Mitigation and Conflict-Resolution Measures 17
   7.1. Typical Interaction Scenarios 17
   7.2. Mitigation Hierarchy and Decision Path 18

7.3. Access & Co-existence Protocols Template 18
7.4. Geophysics Interference — Mitigation Guide 19
7.5. Blasting and Vibration Controls 19
7.6. Quarry/Borrow–Mineral Licence Interface 19
7.7. Information Sharing and Confidentiality 19
7.8. Dispute Resolution 20
7.9. Documentation and Verification 20
8. Issues Related to Mineral Resources and Other Land Uses 20
8.1. Summary of Key Issues 21
8.2. Communication and Follow-Up 21
9. Monitoring, Reporting, and Evaluation 22
9.1. Monitoring Activities 22
9.2. KPIs 22
9.3. Reporting 23
10. Data Management and Record Keeping 23
10.1. Engagement Register and Confidentiality 23
10.2. Data Retention and Integration 23
11. Monitoring, Revisions and Continuous Improvement 23
12. Company Information 24
13. References 24
14. List of Abbreviations 25

1. INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt3.5-gigawatt (GW) green hydrogen Pproject in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3,54,000+megawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 530 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. Guidelines Requirements

The Environmental Impact Statement (EIS) requested a Mineral Resource Industry Engagement Plan (MRIEP), reporting on the results of engagement with industry associations, mineral rights holders and other parties engaged in mineral exploration and mining in the region to identify and address concerns with the Project and develop appropriate mitigations, in consultation with the Department of Energy and Mines (NLEM).

1.2. Purpose of this Document

This MRIEP has been developed to address the requirements of the EIS Guidelines and to fulfill commitments made during Project development to engage with mineral rights holders, the mineral exploration and mining community, and the Province of Newfoundland and Labrador.

The purpose of this Plan is to:

- Identify existing mineral claims, exploration activities and their respective owners/proponents within the proposed project boundaries;
- Summarize the engagement efforts completed to date with mineral rights holders and industry stakeholders in the vicinity of the Project;
- Describe future engagement activities that will occur as Project design progresses;

- Identify and evaluate potential interactions between the Project footprint and existing mineral claims or exploration interests; and
- Outline preliminary mitigation measures to avoid or minimize potential conflicts with ongoing or planned mineral resource activities.

This Plan establishes the approach for continued communication and coordination with mineral tenure holders, exploration companies, and the mineral development sector.

1.3. Aims and Objectives

The overarching aim of this Plan is to ensure that the EVREC Project is developed in a manner that is compatible with ongoing and future mineral resource exploration and development, through early communication, proactive mitigation, and transparent coordination with mineral rights holders and government authorities.

Specifically, the MRIEP will:

- Identify all active and historical mineral rights and licences within the Project boundaries and adjacent lands through consultation with NLEM and review of the provincial mineral tenure database;
- Engage directly with mineral rights holders to inform them of Project activities, discuss potential overlap, and gather feedback on potential operational or access-related concerns;
- Record and address stakeholder input, including exploration timing, access routes, water use, and future work programs;
- Develop preliminary mitigation measures to reduce land-use conflicts including micro-siting adjustments, access agreements, and shared-use protocols in consultation with NLEM and affected license holders;
- Facilitate coordination with other land users, including domestic wood harvesters, forestry operators, and recreational users, where overlapping interests occur;
- Provide a transparent record of communications and engagement outcomes to ensure accountability to both NLEM and stakeholders; and
- Define a process for ongoing engagement throughout the Project's construction, operation, and decommissioning phases to maintain open communication and address issues as they arise.

Through the implementation of this Plan, EVREC aims to:

- Strengthen collaboration with NLEM and the mineral exploration industry;
- Minimize potential interference between Project infrastructure and mineral exploration activities;
- Ensure equitable and respectful treatment of all rights holders; and
- Support the sustainable and responsible use of Crown land in alignment with the Province's mineral resource development policies.

2. PROJECT DESCRIPTION

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across 4 sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two air separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne aboveground hydrogen storage facility for compressed gaseous hydrogen;
- 1000 MWh of battery storage for critical loads; and,
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to achieve the electrolyzer feedwater quality requirements and that treated discharge water complies with regulatory standards prior to being discharged back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below-ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood.
    - Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond.
    - Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

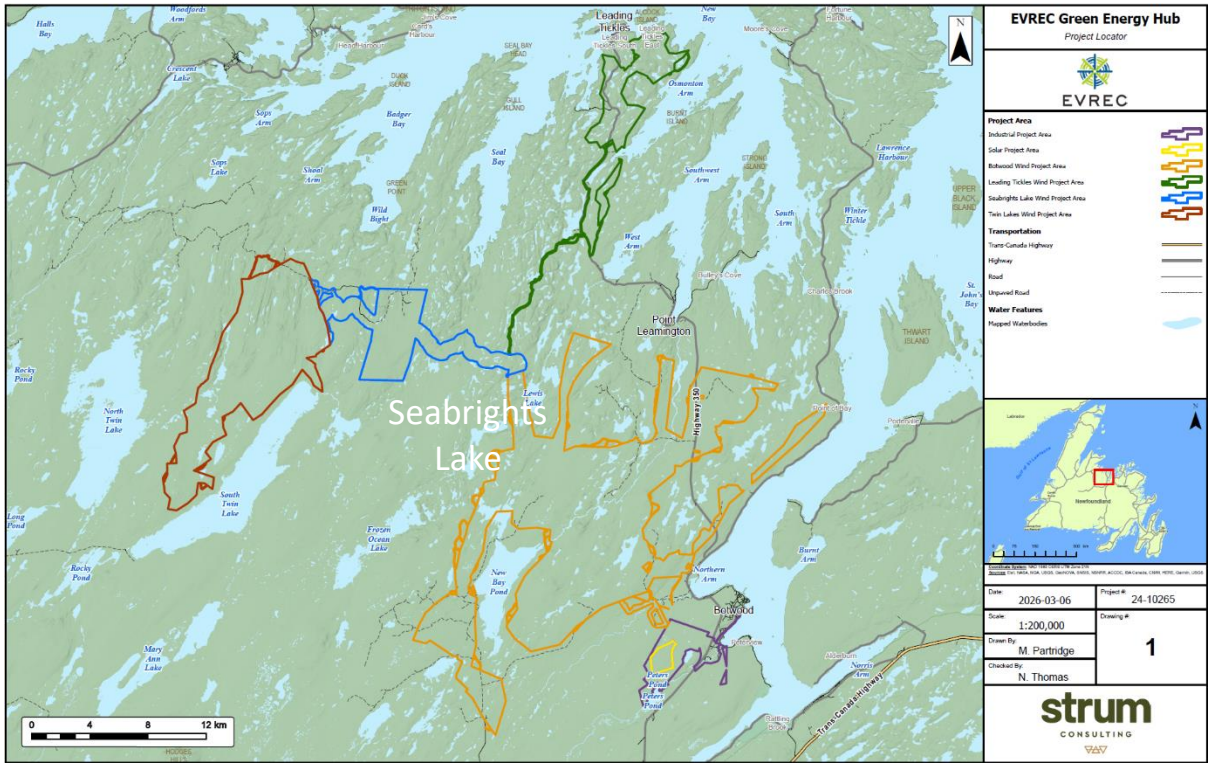

Figure 2.1: Overview of Project Lands

3. LEGISLATIVE AND POLICY FRAMEWORK

This MRIEP is prepared to meet the intent of the EIS Guidelines and to align EVREC's engagement approach with the regulatory framework governing mineral tenure, land use, and environmental assessment in the Province of Newfoundland and Labrador. The regulatory framework below outlines key statutes, regulations, and guidance documents that inform how EVREC will undertake consultation, coordination, and mitigation with mineral rights holders and other related stakeholders.

3.1. Federal Context

While engagement is primarily under provincial jurisdiction, the following federal statutes may be indirectly relevant:

- ***Fisheries Act*** — relevant to watercourse crossings/works that might also affect exploration access.
- ***Migratory Birds Convention Act / Species at Risk Act*** — inform timing of vegetation clearing near exploration corridors.
- ***Transportation of Dangerous Goods Act*** — applicable to transport of fuels/chemicals for construction and any shared corridors.

3.2. Provincial Context

Where the requirements of applicable legislation, regulations, approvals, or permit conditions differ from or exceed the commitments set out in this Plan, the more stringent requirement shall apply. Provincial Legislation and Policies (NL) are outlined in Table 3.1.

Table 3.1: Applicable Provincial Legislation and Policies

Instrument	Administered by	Relevance to MRIEP	Engagement Implications
Mineral Act **and Mineral Regulations**	NLEM	Establishes mineral tenure system (licences, mining leases), exploration approvals, assessment work reporting, and map-staking.	Coordinate with NLEM Mineral Lands Division to identify tenure overlaps, exploration schedules, access points, and contact information for rights holders; document engagement outcomes and mitigation commitments.
Crown Lands Act	Dept. of Forestry, Agriculture and Lands (NLFAL)/Crown Lands	Governs occupancy/tenure of Crown lands used by the Project (ancillary lands, access roads) and may overlap with mineral licences.	Maintain land-status mapping; consult with NLEM and licence holders where Project access intersects mineral tenure; consider micro-siting or access protocols to avoid interference.

Instrument	Administered by	Relevance to MRIEP	Engagement Implications
Environmental Protection Act and EA Regulations	Dept. of Environment, Conservation and Climate Change (NLECCC)	Sets the environmental assessment (EA) requirements and EIS Guideline obligations (including resource-user engagement).	Provide evidence of industry engagement, issue tracking, and mitigation in the EIS; maintain engagement records and update during FEED and construction.
Quarry Materials Act	NLEM	Governs quarry/borrow approvals; potential interface where borrow sites overlap mineral tenure.	Notify mineral rights holders; coordinate siting/ sequencing to avoid sterilizing prospective ground; consider relocation or agreements.
Forestry Act	NLFAL (Forestry)	Timber harvesting and forest access roads intersecting mineral exploration areas.	Coordinate road use and safety with exploration programs; provide notice and access windows where appropriate.
Water Resources Act	NLECCC (Water Resources Management Division)	Approvals for watercourse alterations/withdrawals related to access roads, crossings, or exploration drilling by others.	Share schedules/routes with NLEM and rights holders; align mitigation (crossings, sediment control) to maintain exploration access.
Occupational Health and Safety Act & Regulations	NL Government Services	Health and safety standards for construction and exploration activities.	Clarify responsibilities where shared access or concurrent operations occur.

3.3. Municipal Context

- Municipal plans and development regulations (e.g., Town of Botwood, nearby towns/Local Service Districts (LSDs)) may apply to road use, signage, laydowns, and other works connected to engagement meetings or access corridors.
- Coordination with municipalities supports notice of construction schedules, road safety, and community access to information.

3.4. Guidance and Best Practice

EVREC's engagement with the mineral industry will be consistent with recognized consultation frameworks, including:

- Stakeholder Engagement for Resource Development Projects;
- IFC Performance Standard 1- *Assessment and Management of Environmental and Social Risks and Impacts*, including stakeholder engagement and information disclosure;
- IAP2 Core Values for public participation; and
- NLEM's Mineral Exploration Approval guidance related to mineral exploration approvals and Mineral Lands mapping and data management.

4. ROLES AND RESPONSIBILITIES

The effective implementation of the MRIEP is founded on collaboration, transparency, and accountability among EVREC, NLEM, mineral rights holders, and other relevant resource users.

Each party's responsibilities are outlined below to ensure that engagement is well-coordinated, consistent with regulatory expectations, and responsive to stakeholder input.

4.1. EVREC

EVREC is the Plan Owner and is ultimately responsible for ensuring that all mineral-industry engagement activities are undertaken in accordance with this MRIEP, the EIS Guidelines, and relevant legislation.

Responsibilities:

- Maintain open and proactive communication with mineral rights holders and NLEM to identify potential conflicts or overlaps.
- Establish and maintain a Mineral Industry Engagement Register to record all correspondence, meeting outcomes, and mitigation measures.
- Coordinate with project engineers and planners to incorporate avoidance and mitigation measures into Project design where mineral tenure overlaps exist.
- Provide advance notification of Project schedules, access development, and earthworks to rights holders and NLEM.
- Respond promptly and factually to stakeholder inquiries and maintain consistent messaging across Project teams.
- Integrate mineral resource engagement outcomes into the broader Public Participation Plan (PPP) and Commitments Register.
- Update this MRIEP as Project design, permitting, or mineral tenure status changes.

4.2. Department of Energy and Mines (NLEM)

The NLEM (Mineral Lands Division) is the primary provincial regulator overseeing mineral exploration and development activities in Newfoundland and Labrador.

Responsibilities:

- Provide EVREC with up-to-date data on active and historical mineral licenses, claims, and leases within and adjacent to the Project Area.
- Facilitate communication between EVREC and mineral rights holders as needed.
- Review and provide input on proposed Project mitigation measures where mineral licenses or leases are affected.
- Participate in or observe meetings between EVREC and rights holders, when requested.
- Advise on best practices for maintaining safe, equitable coexistence between renewable energy development and mineral resource activities.

- Support conflict-resolution processes when competing land uses are identified.

4.3. Mineral Rights Holders and Exploration Companies

Mineral rights holders within or adjacent to the Project Area are key stakeholders with legal rights to explore or develop mineral resources under license or lease agreements with the Province.

Responsibilities:

- Review Project information provided by EVREC and identify potential conflicts, concerns, or overlapping areas of activity.
- Provide relevant information to EVREC regarding current or planned exploration activities, work schedules, and access routes.
- Participate in bilateral or group meetings to discuss mitigation measures or coexistence arrangements.
- Respect confidentiality and proprietary NLEM data boundaries during consultation.
- Communicate updates to NLEM and EVREC if license ownership, boundaries, or activity levels change.

4.4. EVREC Environmental and Social Team

The EVREC Environmental and Social Team, will manage all engagement logistics, recordkeeping, and technical coordination.

Responsibilities:

- Maintain the Engagement Register for all mineral-industry consultations.
- Track issues raised and responses provided, ensuring timely follow-up.
- Facilitate or moderate meetings between EVREC, NLEM, and rights holders.
- Prepare quarterly engagement summaries and submit them to the Environmental Manager and NLEM liaison.
- Support communication of technical or environmental data to stakeholders.

4.5. Municipal Governments and Local Stakeholders

Municipalities and LSDs may facilitate communication between EVREC, the mineral sector, and local businesses, particularly regarding access roads, infrastructure, or shared service corridors.

Responsibilities:

- Provide local land-use or zoning information that may influence access to mineral exploration sites.
- Disseminate Project notices to residents or businesses within their jurisdiction.
- Participate in stakeholder meetings and forward community questions or concerns to EVREC for response.

5. MINERAL RESOURCES IN NEWFOUNDLAND AND LABRADOR

5.1. Provincial Overview

Newfoundland and Labrador has a long-established mining jurisdiction with active production, advanced projects, and early-stage exploration across a range of commodities. At a provincial scale, activity typically includes:

- Iron ore (Labrador Trough);
- Nickel–copper–cobalt / PGE (e.g., Voisey's Bay district);
- Gold (orogenic belts in central Newfoundland and elsewhere);
- Base metals (VMS) including zinc–lead–copper–silver (historical/active camps);
- Critical minerals (antimony, rare earth elements, lithium prospects, graphite); and
- Industrial minerals & construction materials (aggregates, dimension stone, silica, limestone).

Mineral tenure (prospecting licenses and mining leases), exploration approvals, and geoscience information are administered by NLEM.

5.2. Regional Context — Central Newfoundland

The EVREC Project is situated within a part of central Newfoundland that hosts:

- Gold-bearing orogenic belts (e.g., Exploits Subzone trends) with active exploration;
- VMS-style base metals districts with historical production and new targets; and
- Numerous mineral showings and early-stage claims associated with regional structures and favorable stratigraphy.

Access is provided by provincial highways, forest/resource roads, and trail networks used by both exploration and other land users (forestry, recreation).

5.3. Mineral Tenure within and Adjacent to the Project

A current tenure snapshot will be maintained for the Project Area and a 10 to 15 km buffer to identify potential overlaps with EVREC lands, access roads, quarries, and transmission corridors.

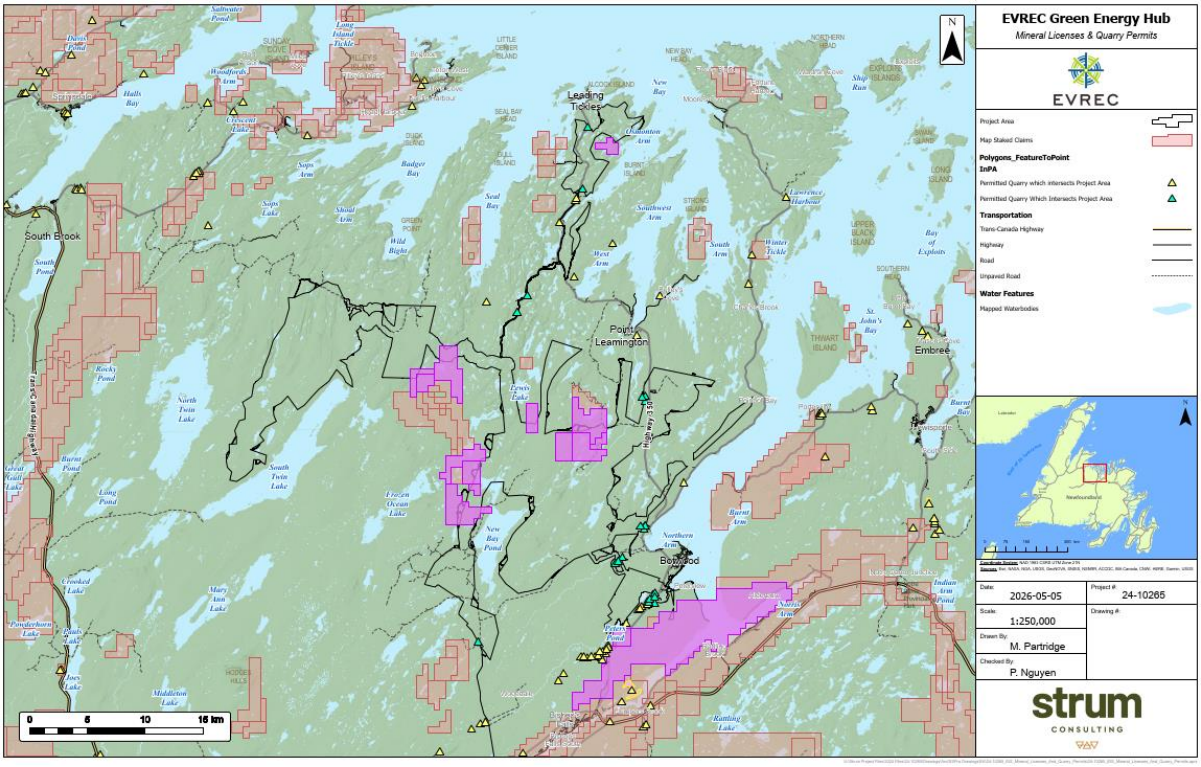

Figure 5.1: Map of Mining Tenures Within or Around the Project Area

5.4. Potential Interactions with EVREC Infrastructure

Potential touchpoints between mineral resource interests and the Project typically include:

- Access roads and road upgrades crossing licensed ground;
- Transmission/collection corridors running near active or planned survey lines;
- Quarries/borrow sources intersecting prospective geology or planned trench sites;
- Temporary laydowns and construction camps near exploration routes; and
- Seasonal timing conflicts (drilling windows vs. construction windows).

Where interactions are identified, EVREC will apply the avoid, minimize and mitigate hierarchy:

1. Avoidance / micro-siting of roads or pads where practical;
2. Shared-use protocols (signage, radio calls, traffic windows) where avoidance is not feasible;
3. Access agreements (temporary detours, crossing terms, safety measures); and
4. Schedule coordination with license holders to minimize disruption to exploration activities.

5.5. Data Sources and Verification

EVREC will maintain a changelog of sources and update frequency for this section, typically including:

- NLEM Mineral Lands tenure index and updates;
- NL Geoscience Atlas layers (geology, occurrences, assessment reports);
- Company public disclosures (news releases, technical reports); and
- Direct engagement inputs from rights holders and NLEM.

6. ENGAGEMENT PROCESS AND METHODOLOGY

This section outlines the methods, tools, and sequencing that EVREC will use to engage mineral rights holders, NLEM, and other resource users (such as domestic woodcutting permit holders) potentially affected by the Project.

The engagement process emphasizes clear communication, transparency, and early coordination to identify concerns and define appropriate mitigation strategies.

6.1. Engagement Strategy

The engagement approach for mineral and associated resource users is designed to:

- Establish early and ongoing communication with affected and interested parties;
- Provide timely and accurate Project information in plain language;
- Document all feedback and integrate it into Project planning; and
- Maintain a transparent and traceable record of engagement through to decommissioning.

Engagement activities will be implemented in three key phases:

Table 6.1: Phased Engagement Strategy Overview

Phase	Timing	Focus	Typical Activities
Pre-construction (EIS / FEED)	Pre-2026	Identification of mineral rights holders, NLEM coordination, initial correspondence, meetings, and data verification.	Issue introductory letters, conduct mapping reviews, log responses, prepare avoidance/mitigation plans.
Construction & Operations	2026–2060	Maintain communication during roadwork, access changes, and facility construction; coordinate schedules and access.	Notice of work, site meetings, email updates, joint inspections, adjustment of mitigation as needed.

Phase	Timing	Focus	Typical Activities
Decommissioning / Rehabilitation	Post-2060	Maintain engagement through closure planning and reclamation to ensure mutual understanding of land use outcomes.	Notifications, closure meetings, data sharing, documentation of lessons learned.

6.2. Engagement Methods

EVREC will use multiple communication channels and mechanisms to reach mineral rights holders, exploration companies, and other land users.

All correspondence will be recorded in the Engagement Register and logged against the stakeholder's contact entry.

6.2.1. Direct Correspondence and Meetings

- Initial Notification Letters: Sent to all identified mineral rights holders, summarizing the Project scope, potential overlaps, and EVREC contact information.
- Follow-Up Calls or Virtual Meetings: Used to clarify technical details, review maps, and discuss potential mitigation measures.
- In-Person Meetings / Site Visits: Conducted when direct coordination is needed to address overlapping claims, road access, or timing conflicts.

Meeting outcomes will be summarized in a Consultation Record Form and uploaded to the Engagement Register.

6.2.2. Project Mailing List

A Project contact and mailing list has been developed and will be updated as engagement progresses.

The list will include contact information for mineral rights holders, NLEM officials, and other relevant stakeholders such as domestic woodcutting permit holders.

Regular updates will be distributed to the mailing list to notify recipients of Project milestones, construction activities, or planned meetings.

The list will be maintained by EVREC's Community and Resource Engagement Coordinator and will comply with privacy regulations.

6.2.3. Project Email Account

A dedicated email account has been established to streamline correspondence: info@evrec.ca

- Accessible to EVREC's engagement and technical staff.
- Used for sending notices, receiving questions or comments, and providing follow-up responses.
- Mentioned in all public and rights-holder notices, newsletters, and meetings.

6.2.4. Project Office

EVREC's Community Office in Botwood serves as the main in-person contact point for stakeholders.

This office will be used to:

- Provide printed maps and mineral-tenure overlap diagrams;
- Host smaller meetings with rights holders or forestry permittees; and
- Receive written submissions or forms related to access coordination.

Operating hours and contact details will be posted publicly.

6.2.5. Project Website

EVREC will maintain a Project-specific webpage within its corporate site (https://evrec.ca), which will:

- Provide project updates, maps, and current engagement status;
- Host downloadable notices and newsletters;
- Include contact forms for questions or feedback; and
- Summarize how stakeholder feedback is considered during design and construction.

A calendar of engagement milestones and public events will also be posted on the website.

6.2.6. Digital Engagement and Social Media

The Project will make use of EVREC's LinkedIn and Facebook accounts for proactive notifications, such as:

- Announcement of new public materials or notices;
- Updates on construction schedule and site access; and
- Invitations to participate in engagement meetings or community sessions.

Social-media channels will be used for notification only; feedback will be directed to the Project email or office for official response and documentation.

6.2.7. Coordination with Regulators

EVREC will maintain regular contact with NLEM and NLFAL to share updated maps, stakeholder feedback, and mitigation commitments.

Joint meetings may be organized at key milestones to ensure alignment between mineral-rights and Crown-lands management processes.

6.3. Documentation and Reporting

All engagement activities will be logged in the Mineral Resource Engagement Register and summarized in quarterly or milestone reports.

Each entry will include:

- Stakeholder name and contact;
- Type of engagement (meeting, call, letter, email);
- Date, topic, and participants;
- Key issues raised;
- Agreed actions or follow-up commitments; and
- Current status (open, ongoing, closed).

Quarterly summaries will be shared internally with EVREC management and externally with NLEM upon request.

6.4. Continuous Improvement

The engagement process will be reviewed annually to:

- Evaluate the effectiveness of communication tools and channels;
- Update stakeholder lists and contact protocols;
- Identify recurring issues and lessons learned; and
- Implement corrective actions or new strategies as needed.

Updates will be documented in a Revision Log appended to this Plan.

7. MITIGATION AND CONFLICT-RESOLUTION MEASURES

EVREC will manage potential interactions between Project works and mineral resource activities using a tiered approach:

1. Avoid
2. Minimize
3. Mitigate/Coordinate
4. Formalize (agreement & monitoring)

Mitigation will be selected in collaboration with NLEM and the affected rights holder(s) and documented in the Mineral Industry Engagement Register and Commitments Register.

7.1. Typical Interaction Scenarios

Common touchpoints between Project infrastructure and mineral tenure include:

- Access roads / upgrades crossing mineral licenses or active programs;
- Transmission and collection corridors near survey lines, grids, or drill pads;
- Quarries / borrow sources in prospective ground or planned trench sites;
- Temporary laydowns and staging overlapping proposed exploration areas;
- Blasting vibrations (road cuts, quarries) near drill holes or equipment;
- Geophysics interference (electromagnetic / magnetic noise near HV lines and turbines);

- Seasonal timing conflicts (drilling windows vs. construction windows); and
- Information confidentiality (work plans, locations, schedules).

7.2. Mitigation Hierarchy and Decision Path

7.2.1. Avoidance / Micro-siting

- Re-align road centerlines or pole placements to skirt active licenses or planned work areas.
- Relocate quarry/borrow footprints away from high-potential geology or current trenches.
- Adjust laydown boundaries to preserve access corridors.

7.2.2. Minimization

- Reduce construction footprint (narrowed right-of-way (ROW); temporary matting).
- Use existing disturbed corridors wherever practicable.
- Optimize blasting plans to reduce peak particle velocity (PPV) at exploration assets.

7.2.3. Mitigation / Coordination

- Access & Co-existence Protocols (Section 6.3) for shared roads and corridors.
- Schedule coordination: windows to allow drill moves/geophysics lines; advanced notice.
- Technical mitigations for geophysics (buffers, temporary line de-energizing if feasible/justified).
- Monitoring & verification (vibration, traffic, safety spot checks).

7.2.4. Formalization

- Road-use / Crossing Agreements, Notices, Memoranda of Understanding (MOUs), or Letter of Non-Objection as appropriate.
- Record measures in the Engagement Register and Commitments Register with owners and dates.

7.3. Access & Co-existence Protocols Template

Table 7.1: Access and Co-Existing Protocol Template

Topic	Protocol / Standard	Notes
Notice	EVREC to provide ≥ 30 days written notice before road works or blasting near licensed ground; rights holder to give ≥ 30 days' notice before drill mobilizations within 500 m of Project corridors.	Fill notice periods with NLEM/ holder input.
Traffic Management	Call-in on common radio channel; speed limits; signage; scheduled windows for wide loads/drill moves.	-

Topic	Protocol / Standard	Notes
Safety & Induction	Visiting crews receive site induction (traffic, blasting schedules, contacts, Emergency Response Plan (ERP)).	-
Corridor Etiquette	Keep line grids and flagged stations clear of active road surfaces; EVREC to clearly mark construction zones and detours.	-
Emergency Coordination	ERP contacts exchanged; 24/7 call tree posted; joint response if incident affects shared corridor.	-
Dispute Escalation	Supervisor to supervisor → EVREC Mineral Engagement Lead → NLEM liaison if unresolved.	-

7.4. Geophysics Interference — Mitigation Guide

Potential interference from turbines/HV lines will be addressed case-by-case:

- Establish buffer distances from high-noise sources for EM/mag surveys. Plan surveys before energization where feasible.
- Consider temporary de-energizing of a short segment for a defined window if justified by scope, safety, and operations feasibility.
- Share line specifications (voltage, configuration) to support modeling by proponents.

7.5. Blasting and Vibration Controls

- Complete pre-blast notification to rights holders within 15 days and specify time window.
- Set PPV criteria at nearest exploration asset.
- Undertake pre-condition documentation (photos/notes) where risk warrants.
- Implement monitoring during blasts; provide records on request.

7.6. Quarry/Borrow–Mineral Licence Interface

When a potential overlap is identified:

1. Evaluate alternative sources or micro-siting;
2. If unavoidable, develop avoidance buffers and timing windows;
3. Establish rock handling and slope controls to protect adjacent ground;
4. Maintain two-way access for exploration vehicles; and
5. Document the outcome and any compensation or cooperation measures if applicable.

7.7. Information Sharing and Confidentiality

- EVREC will share sufficient mapping/scheduling to ensure safety and coordination, while respecting proprietary exploration data.

- Two-way Non – Disclosure Agreement (NDA) templates may be used where more detailed information is required (e.g., planned drill collars, detailed road alignments).
- All commitments and constraints are to be logged and circulated to relevant supervisors.

7.8. Dispute Resolution

Minor disputes should be resolved at the field level wherever safe and practical.

If unresolved within __ business days, escalate to:

1. EVREC Mineral Engagement Lead and the rights holder's senior representative;
2. If still unresolved, refer to NLEM for facilitated discussion; and
3. As a last resort, invoke formal processes available under applicable statutes or agreements.

7.9. Documentation and Verification

Use the Consultation Record Form to capture each interaction and the mitigation agreed. Maintain a Mitigation Tracking Table for all known overlap areas:

Table 7.2: Consultation Record Form Template

Location / Chainage	Interaction Type	Rights Holder	Mitigation Selected	Agreement Type	Owner	Due Date / Status
KP ___	Road–licence crossing	Licence ___	Micro-site road 60 m east; signage; 14-day notice	Road-use letter	Site Eng.	Open
KP ___	Quarry–prospective ground	Licence ___	Buffer 150 m; schedule window August to September	MOU	Const. Mgr	Closed

8. ISSUES RELATED TO MINERAL RESOURCES AND OTHER LAND USES

This section summarizes the key issues and concerns identified to date through engagement with mineral rights holders, community stakeholders, and local resource users, as well as the proposed mitigation measures and next steps.

While the primary focus of this Plan is mineral-resource engagement, many of the concerns raised during community discussions relate to shared land use, particularly domestic woodcutting and access to forested areas.

8.1. Summary of Key Issues

Table 8.1: Summary of Key Issues Identified to Date

Topic / Area of Concern	Description / Stakeholder Perspective	Proposed Mitigation / Response	Status / Next Step
Overlap with Mineral Licences	Exploration companies and licence holders requested early notification of Project works to plan access and field programs.	Maintain updated Mineral Tenure Map; provide ≥ 30 days advance notice of road construction or major site work; develop access protocols with NLEM and licence holders.	Ongoing – incorporated into MRIEP engagement workflow.
Access and Co-existence	Mineral rights holders emphasized the need to maintain safe access along forest and resource roads during construction.	Implement shared-use road rules (signage, radio channels, scheduling windows); document in Access & Co-existence Protocol.	Draft protocol prepared – pending review with NLEM.
Exploration Timing vs Construction Scheduling	Seasonal field programs may overlap with EVREC construction windows, increasing potential for traffic or safety conflicts.	Coordinate schedules through NLEM; hold pre-season coordination meetings; adjust sequencing where practical.	Pre-construction coordination to begin Q2 2027.
Geophysics Interference	Exploration proponents expressed concern about electromagnetic noise from HV lines and turbines.	Define survey buffers and scheduling windows; assess feasibility of temporary line de-energizing if justified.	To be confirmed during FEED – see Section 6.4.
Quarry / Borrow Overlap	Potential for quarries or borrow sources to occupy prospective ground under mineral licence.	Apply avoidance hierarchy; if overlap unavoidable, develop buffer and access agreement with licence holder.	Under review – coordinate with NLEM prior to permitting.
Visual and Environmental Effects	Concerns about vegetation loss and perceived clear-cutting.	Implement re-vegetation plan; communicate rationale for clearing (safety, turbine placement); provide before/after visuals.	To be integrated with ESCP and Rehabilitation Plan.
Coordination Among Resource Users	Stakeholders requested structured communication between EVREC, NLEM, and NLFAL to prevent duplication or confusion.	Maintain joint updates and share summary reports quarterly; convene joint meetings as needed.	Protocol to be established before construction.

8.2. Communication and Follow-Up

EVREC will continue to:

- Provide regular updates to NLEM, mineral rights holders, and community stakeholders on Project activities that may affect access or resource use;
- Maintain an Issue Tracking Table in the Engagement Register showing each concern, response, responsible party, and status;
- Document commitments and mitigation outcomes in the Commitments Register for EIS follow-up reporting; and
- Include resource-user engagement updates in quarterly reports to NLEM and NLECCC.

9. MONITORING, REPORTING, AND EVALUATION

Ongoing monitoring and transparent reporting will ensure that engagement with mineral rights holders and resource users remains effective and that all commitments are implemented as intended.

9.1. Monitoring Activities

EVREC will monitor the progress of engagement and mitigation through:

- Quarterly reviews of the Mineral Resource Engagement Register;
- Verification of mitigation actions agreed with rights holders and NLEM (e.g., access signage, buffer enforcement, scheduling notices);
- Site inspections to confirm that access or safety measures are functioning; and
- Follow-up communication with rights holders to validate satisfaction with implemented measures.

Monitoring outcomes will be documented using the Mitigation Tracking Table in Section 6 and cross-referenced to the EIS Commitments Register.

9.2. KPIs

Table 9.1: KPIs to be Monitored

Indicator	Target / Measure	Frequency	Responsible
Number of active rights holders engaged	100% of identified holders	Quarterly	EVREC Engagement Lead
Response timeliness to rights-holder inquiries	≤ 10 business days	Continuous	Community Relations
Mitigation commitments closed	≥ 90% by next audit	Quarterly	Environmental Manager
Stakeholder satisfaction (post-consultation feedback)	≥ 80% positive rating	Annual	EVREC/NLEM joint review

9.3. Reporting

- Quarterly internal reports to EVREC management summarizing engagements, outstanding issues, and mitigation updates.
- Annual summary reports shared with NLEM and NLFAL outlining status of overlaps, dispute resolutions, and key metrics.
- Annual EIS compliance update to NLECCC as part of EVREC's environmental and social performance reporting.

10. DATA MANAGEMENT AND RECORD KEEPING

10.1. Engagement Register and Confidentiality

All communications, meetings, and written correspondence will be logged in EVREC's Mineral Resource Engagement Register (SharePoint/Procore platform).

Each record will include:

- Date, participants, and meeting type;
- Key discussion points and commitments;
- Follow-up actions and responsible persons; and
- Status (open, in progress, closed).

Sensitive commercial information from rights holders will be treated as confidential and stored in restricted-access folders. Only authorized EVREC personnel will have editing rights.

10.2. Data Retention and Integration

- Engagement records will be retained for a minimum of seven years after Project completion or as required by NLECCC/NLEM.
- Information will be integrated with the main Consultation Database used for the PPP to maintain consistency across all EVREC stakeholder engagement plans.

11. MONITORING, REVISIONS AND CONTINUOUS IMPROVEMENT

This MRIEP is a controlled document that will evolve with Project development and feedback from stakeholders and regulators.

Revisions may be triggered by:

- Changes in Project layout or schedule affecting mineral tenure overlap;
- Updates to the provincial Mineral Lands database;
- New stakeholder information or access requests; or
- Lessons learned from monitoring and evaluation.

Each revision will:

- Be logged in the Revision Control Sheet;
- Include an updated Table of Contents and version number; and
- Be distributed to NLEM, NLECCC, and all rights holders who have engaged with the Project.

12. COMPANY INFORMATION

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13. REFERENCES

Government of Canada. Fisheries Act, R.S.C., 1985, c. F-14.

Government of Canada. Species at Risk Act, S.C. 2002, c. 29.

Government of Canada. Migratory Birds Convention Act, 1994, S.C. 1994, c. 22.

Government of Canada. Transportation of Dangerous Goods Act, 1992, S.C. 1992, c. 34, and associated Regulations.

Government of Newfoundland and Labrador. Mineral Act, RSNL 1990, c. M-12, and associated Mineral Regulations.

Government of Newfoundland and Labrador. Crown Lands Act, RSNL 1990, c. C-38.

Government of Newfoundland and Labrador. Environmental Protection Act, SNL 2002, c. E-14.2, and Environmental Assessment Regulations.

Government of Newfoundland and Labrador. Quarry Materials Act, RSNL 1990, c. Q-1.

Government of Newfoundland and Labrador. Forestry Act, RSNL 1990, c. F-23.

Government of Newfoundland and Labrador. Water Resources Act, SNL 2002, c. W-4.01.

Government of Newfoundland and Labrador. Occupational Health and Safety Act, RSNL 1990, c. O-3, and associated Regulations.

14. LIST OF ABBREVIATIONS

Abbreviation	Definition
CSA	Canadian Standards Association
EIS	Environmental Impact Statement
EVREC	Exploits Valley Renewable Energy Corporation
GHG	Greenhouse Gas
GW	Gigawatt
HV	High Voltage
IAP2	International Association for Public Participation
IFC	International Finance Corporation
KPI(s)	Key Performance Indicator(s)
LSDs	Local Service Districts
MRIEP	Mineral Resource Industry Engagement Plan
MW	Megawatt
NDA	Non-Disclosure Agreement
NL	Newfoundland and Labrador
NLECCC	Department of Environment, Conservation and Climate Change
NLEM	Department of Energy and Mines
NLFAL	Department of Forestry, Agriculture and Lands
PPP	Public Participation Plan
PPV	Peak Particle Velocity
PV	Photovoltaic
RFNBO	Renewable Fuels of Non-Biological Origin
ROW	Right-of-Way
TWh	Terawatt-hour

APPENDIX Q.6
Quarry Resource Consultation Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

QUARRY RESOURCES CONSULTATION PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers <u>all information</u> submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, it's professional advisers and contract staff engaged on the project that is specificically engaged in the project

Table of Contents

1 Introduction 4

1.1 Guidelines Requirements 4

1.2 Purpose of this Document 4

1.3 Aims and Objectives 5

2 Project Description 6

2.1 Site Location 7

3 Policy and Legal Framework 8

3.1 Provincial Legislation and Policies (NL) 8

3.2 Municipal Context 9

3.3 Federal Context 10

3.4 Guidance and Best Practice 10

4 Roles and Responsibilities 10

4.1 EVREC 10

4.2 Department of Energy and Mines (NLEM) 11

4.3 Department of Forestry, Agriculture and Lands (NLFAL) 11

4.4 Department of Environment, Conservation and Climate Change (NLECCC) 11

4.5 Municipalities and Local Service Districts (LSDs) 11

4.6 Existing Quarry Operators / Permit Holders 12

4.7 EVREC Environmental Manager / ESCP Lead 12

4.8 EVREC Construction Manager / Materials Lead 12

4.9 Contractors and Haulers 12

4.10 Community Stakeholders and Resource Users 12

5 Quarries in Newfoundland and Labrador 13

5.1 Provincial Context 13

5.2 Quarry Management System 13

5.3 Quarry Distribution and Types in NL 14

5.4 Regulatory and Operational Oversight 14

5.5 Quarry Reclamation and Rehabilitation 15

6 Material Demand and Quarry Selection 15

6.1 Material Demand Overview 15

6.2 Quarry and Borrow Source Options 16

6.3 Quarry Selection Methodology 16

6.4 Haul Routes and Logistics 17
6.5 Environmental and Social Considerations 17
6.6 Rehabilitation and Progressive Reclamation 18
6.7 Community and Stakeholder Engagement 18
7 Environmental Effects and Mitigation Measures 19
7.1 Overview 19
7.2 Construction Phase — Effects and Mitigation Measures 19
7.3 Operations Phase — Effects and Mitigation Measures 20
7.4 Decommissioning and Rehabilitation — Effects and Mitigation Measures 21
7.5 Residual and Cumulative Effects 22
8 Engagement Strategy 22
8.1 Purpose and Approach 22
8.2 Engagement Phases 23
8.3 Engagement Methods 23
9 Concerns and Issues Related to Existing Quarries 25
9.1 Summary of Key Concerns 26
9.2 Ongoing Engagement 27
10 Monitoring, Reporting, and Continuous Improvement 27
10.1 Monitoring Framework 27
10.2 Key Performance Indicators (KPIs) 27
10.3 Reporting and Disclosure 28
10.4 Data Management and Record Keeping 28
10.5 Audit and Compliance Verification 28
10.6 Continuous Improvement and Management Review 29
10.7 Revision Control 29
11 Company Information 29
12 References 29
13 List of Abbreviations 30

1 Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt3.5-gigawatt (GW) green hydrogen Project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3,54,000+megawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1 Guidelines Requirements

The Environmental Impact Statement (EIS) required a Quarry Resources Consultation Plan (QRCP), reporting on the results of engagement with industry associations, quarry rights holders and other stakeholders invested in the viability of quarrying in the region to identify and address concerns with the Project and develop appropriate mitigations, in consultation with the Department of Energy and Mines (NLEM).

1.2 Purpose of this Document

This QRCP has been developed to meet the requirements of the EIS Guidelines (NLECCC 2025) and to support EVREC's commitment to transparent and responsible resource use during the planning, construction, operation, and decommissioning phases of the Project.

The purpose of this Plan is to outline EVREC's approach to engaging with the quarry and aggregate industry, regulators, local communities, and resource users in relation to the sourcing, operation, and rehabilitation of quarry and borrow materials required for the Project.

The QRCP aims to ensure that quarry development and material sourcing are conducted in full compliance with the Newfoundland and Labrador *Quarry Materials Act* and associated regulations, while minimizing potential environmental and socio-economic impacts.

Specifically, this document:

- Describes the consultation and coordination framework for identifying, assessing, and managing quarry and borrow material requirements;
- Establishes the methods and communication protocols for engaging with regulators, local governments, and other resource users regarding the location, timing, and operation of quarry sites;
- Summarizes EVREC's procedures for environmental protection, safety, and community awareness related to quarrying activities; and
- Defines how feedback received from stakeholders will be recorded, addressed, and incorporated into Project planning and execution.

This Plan will guide EVREC's consultation activities through all Project phases and ensure that the use of aggregate and borrow materials supports both engineering needs and sustainable land management objectives.

1.3 Aims and Objectives

The overall aim of this QRCP is to ensure that the identification, development, and use of quarry and borrow resources for the EVREC Project are conducted in a safe, transparent, environmentally responsible, and socially acceptable manner, with meaningful input from local communities, regulatory agencies, and affected stakeholders.

1.3.1 Specific Objectives

This Plan seeks to:

- Establish a structured consultation process with provincial regulators (NLEM and Department of Forestry, Agriculture and Lands (NLFAL)), municipal governments, and existing quarry permit holders to ensure all quarry-related activities are coordinated and compliant;
- Identify and engage affected stakeholders early in the Project lifecycle to discuss potential interactions, access issues, and opportunities for collaboration;
- Develop and maintain a Quarry Resource Register that records site locations, permitting status, ownership, and operational updates;
- Minimize environmental impacts associated with material extraction through careful site selection, progressive reclamation, and adherence to environmental-protection and erosion-control measures;
- Ensure safety and operational transparency by maintaining clear communication regarding blasting schedules, haul routes, and access restrictions;
- Promote local benefits by coordinating with community-based contractors, suppliers, and businesses to maximize participation in quarry and material-supply opportunities;
- Integrate consultation outcomes into the Project's broader Environmental and Social Management System (ESMS) and commitments register; and

- Support adaptive management and continuous improvement, with regular review of quarry-sourcing strategies, consultation results, and environmental performance data.

Through the implementation of this Plan, EVREC aims to:

- Maintain regulatory compliance with all provincial quarry-development and environmental requirements;
- Ensure that local communities, quarry operators, and resource users remain informed and actively involved;
- Demonstrate that material sourcing decisions are based on transparent criteria and stakeholder input; and
- Contribute to the long-term sustainable management of aggregate and quarry resources in the Project region.

2 Project Description

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source

Hydrogen will react with nitrogen in two 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two air separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- 1100 MWh of battery storage for critical loads; and,
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to ensure that electrolyzer feedwater quality requirements are met and that treated discharge water complies with federal and provincial regulatory standards prior to being discharge back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1 Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood.
    - Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond.
    - Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

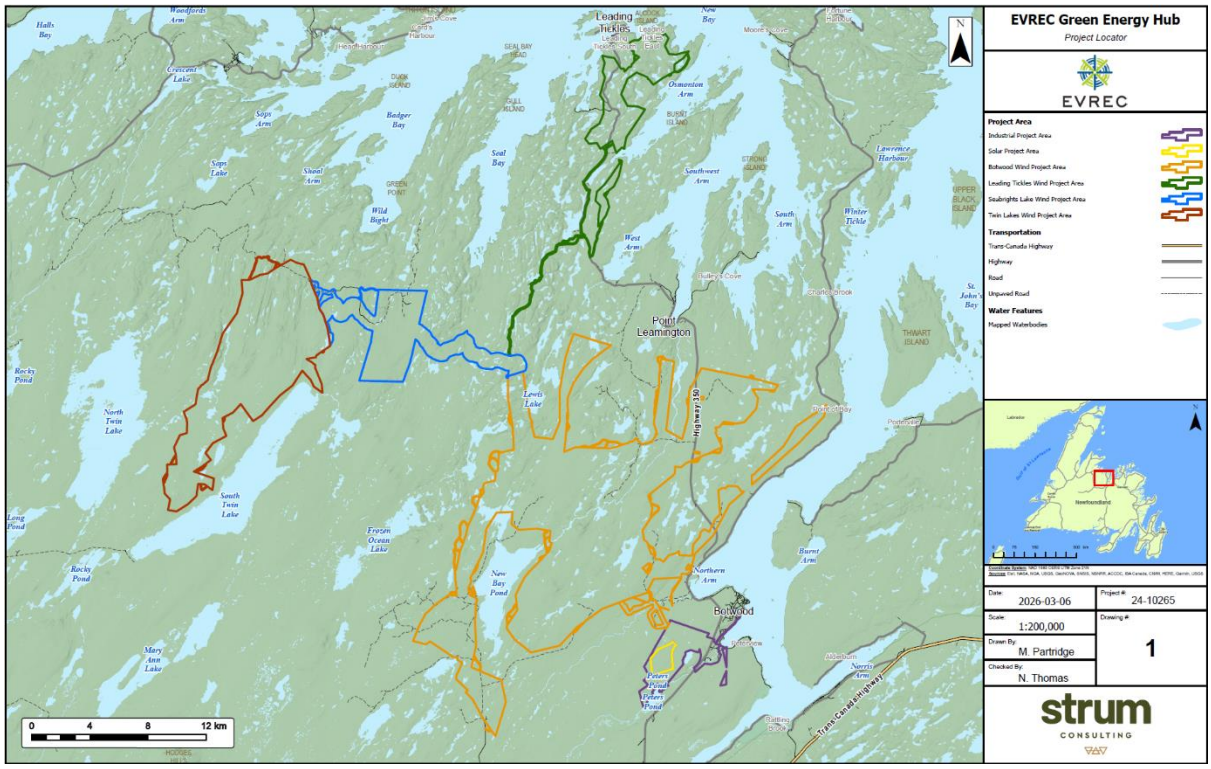

Figure 2.1: Overview of Project Lands

3 Policy and Legal Framework

This QRCP is guided by the regulatory framework that governs aggregate and quarry development, Crown land use, environmental protection, and health & safety in Newfoundland and Labrador.

Where any condition of a license/approval is more stringent than this Plan, the license/approval prevails.

3.1 Provincial Legislation and Policies (NL)

Table 3.1: Provincial Legislation and Policies

Instrument	Administered by	Relevance to Quarry Activities	Consultation / Engagement Implications
***Quarry Materials Act* & Quarry Materials Regulations**	Dept. of Energy and Mines (NLEM)	Governs permitting, royalties, operating conditions, rehabilitation, and inspection of quarries and borrow pits.	Coordinate early with NLEM on candidate sites; confirm permit pathway (new vs. existing); maintain Quarry Register; share schedule & rehabilitation plan.

Instrument	Administered by	Relevance to Quarry Activities	Consultation / Engagement Implications
Crown Lands Act	Dept. of Forestry, Agriculture and Lands (NLFAL) – Crown Lands	Authorization for occupation of Crown land (licences, leases, reserves).	Verify land status; confirm overlapping rights/users (forestry, mineral, recreational); document any required land tenure changes.
Environmental Protection Act **(EPA) & EA Regulations**	Department of Environment, Conservation and Climate Change (NLECCC)	EIS requirements and plan appendices (Erosion and Sediment Control Plan (ESCP), Waste Management Plan (WMP), etc.); approvals may be required for works with environmental risk.	Provide EIS cross-references; keep quarry consultation outcomes available for NLECCC review.
Water Resources Act **(incl. permits for watercourse alterations)**	NLECCC – Water Resources Mgmt. Division	Culverts, crossings, pit dewatering, discharge to waterbodies; sediment/erosion control.	Coordinate with ESCP; obtain permits; notify stakeholders on timing; implement monitoring as required.
Forestry Act	NLFAL	Wood removal, brushing, and access development near forestry operations.	Notify domestic/commercial permit holders if access is affected; confirm any salvage/distribution protocols.
Mineral Act	NLEM – Mineral Lands	Mineral tenure may overlap quarry candidates.	Screen sites against Mineral Lands index; consult rights holders; apply avoid–minimize–mitigate; record outcomes in Mineral Resource Industry Engagement Plan (MRIEP).
Occupational Health & Safety Act **and Regulations**	NL Government Services	Worker safety (blasting, traffic control, equipment, dust/noise).	Ensure contractor training & safe work procedures; publish blasting notice protocol to public & rights holders.
Wildlife Act / Endangered Species Act **(where applicable)**	NLFAL	Timing windows, habitat considerations, encounters response.	Integrate with ESCP/Public Participation Plan (PPP); communicate constraints to quarry contractors.

3.2 Municipal Context

Municipal Development Regulations may apply to haul routes, traffic safety, noise, dust, and signage, particularly were quarry access or stockpiles interface with municipal roads or boundaries.

- Coordinate haul-route selection, hours of work, and road maintenance with municipalities/Local Service Districts (LSDs); and
- Provide public notice (website/newspaper/community boards) for blasting windows where appropriate.

3.3 Federal Context

While quarry approvals are primarily provincial, certain federal statutes may be triggered indirectly:

- *Fisheries Act* — if pit dewatering or watercourse works risk harmful alteration, disruption, or destruction (HADD) of fish habitat;
- *Migratory Birds Convention Act / Species at Risk Act* — timing of clearing and protection of listed species; and
- *Transportation of Dangerous Goods (TDG) Act*— transport of explosives and fuels associated with quarrying.

3.4 Guidance and Best Practice

EVREC will align quarry engagement and operations with relevant standards and guidance including:

- CSA Z767-17 – Stakeholder Engagement for Resource Development Projects;
- NLEM Guidance for quarry application content and rehabilitation standards;
- NLECCC Erosion & Sediment Control guidance;
- ATV/road safety and traffic-control guidelines (provincial); and
- Blasting recommended practices (peak particle velocity (PPV) limits, monitoring, pre-blast notifications).

4 Roles and Responsibilities

Successful implementation of the QRCP depends on clear accountability among EVREC, regulators, municipalities, quarry operators, contractors, and community stakeholders. The roles below ensure that quarry identification, permitting, operation, and rehabilitation proceed in a coordinated, compliant, and transparent manner.

4.1 EVREC

- Own and maintain this QRCP and ensure alignment with the EIS Guidelines and corporate ESMS;
- Coordinate consultation with NLEM, NLFAL (Crown Lands/Forestry), NLECCC, municipalities/LSDs, and local quarry operators;
- Maintain the Quarry Approvals Register (permits, conditions, notifications) and Consultation Log;

- Ensure quarry design integrates ESCP, WMP, Emergency Response Plan (ERP)/Hazardous Materials Training Plan (HMTP) requirements and progressive rehabilitation;
- Provide advance notices of blasting, haul route changes, and key milestones to stakeholders; and
- Track commitments in the Commitments Register and report status to regulators.

4.2 Department of Energy and Mines (NLEM)

- Review quarry/borrow applications; issue permits, conditions, and royalties;
- Coordinate with EVREC on site selection, inspection, and rehabilitation expectations; and
- Advise on overlaps with mineral tenure and direct engagement with rights holders (link to MRIEP).

4.3 Department of Forestry, Agriculture and Lands (NLFAL)

4.3.1 Crown Lands Division

- Confirm land status and occupancy (licenses/leases/reserves); and
- Coordinate on access corridors, land-use conflicts, and tenure requirements.

4.3.2 Forestry Division

- Coordinate where quarry access/clearing intersects forestry operations or domestic woodcutting; and
- Provide direction on salvage/distribution of merchantable timber.

4.4 Department of Environment, Conservation and Climate Change (NLECCC)

- Environmental Assessment / Pollution Prevention / Water Resources;
- Review EIS documentation and related plans (ESCP, WMP);
- Issue approvals for watercourse alterations, pit dewatering, and discharges; confirm monitoring requirements; and
- Coordinate on timing windows (wildlife, migratory birds, species at risk) where applicable.

4.5 Municipalities and Local Service Districts (LSDs)

- Provide local requirements for haul routes, traffic control, noise, dust, signage, and working hours;
- Facilitate public notifications for blasting or traffic impacts via municipal websites and bulletin boards; and
- Participate in consultation meetings and escalate community concerns to EVREC.

4.6 Existing Quarry Operators / Permit Holders

- Share information on operating hours, access, haul routes, and blasting schedules where coordination is required;
- Participate in meetings to identify conflict points and mitigation (e.g., staggered blasting, alternate haul timing); and
- Comply with permit conditions and environmental protection measures.

4.7 EVREC Environmental Manager / ESCP Lead

- Integrate quarry controls with ESCP (sediment/erosion, dewatering, water quality monitoring);
- Review contractor method statements and inspection results; verify corrective actions; and
- Maintain environmental records for EIS follow-up and regulator audits.

4.8 EVREC Construction Manager / Materials Lead

- Define material demand envelope and quarry schedule; select candidate sites with NLEM/NLFAL input;
- Ensure haul routes, staging areas, and traffic plans are implemented safely and communicated to municipalities/LSDs; and
- Coordinate blasting windows, signage, and community notices with the Communications Team.

4.9 Contractors and Haulers

- Operate quarries and haul roads in compliance with permits, OHS regulations, and EVREC plans (ESCP, ERP, WMP);
- Conduct pre-blast notifications; maintain PPV records where required; implement dust and noise controls; and
- Keep daily logs (production tonnage, traffic counts, inspections); report incidents promptly.

4.10 Community Stakeholders and Resource Users

- Provide feedback on haul routes, blasting notices, and access considerations; and
- Use the grievance mechanism Public Participation Plan (PPP) to register concerns; participate in information sessions and site walk-throughs as appropriate.

5 Quarries in Newfoundland and Labrador

5.1 Provincial Context

Newfoundland and Labrador has a long history of aggregate and quarry material extraction to support public infrastructure, industrial, and resource development projects. Quarries across the province supply a variety of materials, including:

- Crushed rock and gravel for construction and road building;
- Sand and fill materials for grading, backfilling, and trench bedding;
- Riprap and armour stone for erosion protection; and
- Concrete and asphalt aggregates for industrial and civil projects.

Quarry materials in the province are considered Crown-owned resources and are managed under the *Quarry Materials Act* (QMA), which provides the legislative basis for permitting, royalties, and environmental protection standards.

NLEM is responsible for issuing Quarry Permits, Quarry Leases, and Exploration Approvals, while NLFAL and NLECCC provide support on land tenure, environmental review, and rehabilitation compliance.

According to NLEM's published data, the province has over 1,200 active quarry permits and leases, 19 within the PA and 6 within the PF. The region around Botwood and the Exploits Valley—where the EVREC Project is located—has historically supplied high-quality granite, gravel, and sand for both local and regional infrastructure developments.

5.2 Quarry Management System

The *Quarry Materials Act* regulates quarry operations through a tiered system of tenure and oversight:

Table 5.1: Quarry Management System in Place in NL

Tenure Type	Description / Term	Typical Use
Quarry Permit	Annual permit (≤ 1 year) allowing removal of ≤ 20,000 m^3 of material; issued to individuals, contractors, or companies.	Temporary borrow pits for road construction or fill.
Quarry Lease	Long-term authorization (up to 5 years) for production exceeding 20,000 m^3; renewable upon review.	Commercial and industrial quarry operations.
Exploration Approval	Short-term approval to test or evaluate the suitability of a resource.	Material-quality testing and geotechnical sampling.

Applications for quarry operations on Crown land require:

1. Submission of a site plan and rehabilitation proposal;
2. Proof of environmental compliance (alignment with EIS commitments); and

3. Payment of royalties and security deposits (as applicable).

5.3 Quarry Distribution and Types in NL

Quarries in Newfoundland and Labrador are classified broadly by their geological source material and end use:

Table 5.2: Quarry Classification

Material Type	Geological Source / Location	Typical Use
Hard Rock (Granite, Dolostone, Basalt, Gabbro)	Widespread across Central NL and Avalon; locally in Botwood area.	Crushed stone, riprap, and concrete aggregate.
Glaciofluvial Sand and Gravel	Valley deposits along Exploits and Humber River systems.	Fill, concrete aggregate, road base.
Sand (Fine)	Alluvial and nearshore deposits in coastal/river settings.	Bedding material, backfill.
Limestone	Central NL (Cormack, NL)	Cement, agricultural lime.
Slate / Dimension Stone	Newfoundland Appalachians (Green Bay, Baie Verte).	Decorative, architectural use.

The Botwood–Exploits Valley area is underlain by competent granitic and volcanic formations, providing suitable rock for road-base, concrete, and armor-stone applications.

5.4 Regulatory and Operational Oversight

Key provincial agencies and roles for quarry oversight include:

Table 5.3: Regulatory Oversight in the Province

Agency / Division	Function / Role
NLEM (Mineral Lands Division)	Quarry permitting, inspections, and royalty collection.
NLFAL (Crown Lands Division)	Land tenure verification and coordination of overlapping land uses.
NLECCC (Environmental Assessment, Water Resources, and Pollution Prevention Division)	Environmental assessment review, water licencing, and compliance monitoring.
NL Government Services (OHS Division)	Worker safety inspections and certification.
Municipal Governments	Zoning, road permits, local noise/dust complaints, and emergency coordination.

EVREC will maintain a single point of contact for quarry-related inquiries and will ensure that all new applications or amendments are coordinated with NLEM and NLECCC in accordance with this framework.

5.5 Quarry Reclamation and Rehabilitation

All quarry and borrow operations in NL must comply with progressive reclamation requirements under the *Quarry Materials Act* and NLEM's Guidelines for Rehabilitation of Pits and Quarries.

Key principles include:

- Progressive grading and stabilization of slopes and berms;
- Replacement of overburden/topsoil to promote vegetation growth;
- Surface drainage control to prevent erosion or sedimentation;
- Re-vegetation using native species consistent with site conditions; and
- Final inspection and approval by NLEM prior to permit closure.

EVREC will integrate reclamation practices into its construction sequence and will coordinate final reclamation inspections with NLEM and NLECCC.

6 Material Demand and Quarry Selection

The purpose of this section is to identify the types, quantities, and sources of quarry and borrow materials required for the EVREC Project, and to outline the process for selecting, approving, and managing these material sources in a manner that meets engineering, environmental, and community standards.

The section also integrates the environmental and social factors associated with quarry sourcing and operation.

6.1 Material Demand Overview

The Project will require substantial volumes of aggregate materials for wind farm, transmission, industrial facility, and port components. These materials will include:

Table 6.1: Material Demand Anticipated for the Project

Material Type	Typical Use
Crushed Rock / Granular A & B	Road and pad subbase and base courses
Sand / Fine Aggregate	Cable trench bedding, concrete mix, grading
Gravel / Pit Run	Access roads, laydown pads, backfill
Riprap / Armour Stone	Drainage structures, shoreline stabilization
Overburden / Fill	Berms, grading, landscaping

Material Type	Typical Use
Concrete Aggregate	Wind turbine foundations, substation pads, building foundations

Preliminary assessments indicate that aggregate demand will be concentrated during the main civil works period (2027–2030), tapering during operations and resurfacing at decommissioning for rehabilitation.

6.2 Quarry and Borrow Source Options

EVREC will source materials from a combination of existing licensed quarries and, where necessary, new temporary borrow areas to be permitted under *the Quarry Materials Act*.

6.2.1 Existing Quarries

Existing quarries near the Project area, operated under valid NLEM permits or leases, will be assessed first for:

- Material quality and suitability for engineering specifications;
- Remaining permitted volumes;
- Proximity to Project components and haul efficiency; and
- Compliance history and environmental performance.

EVREC will prioritize the use of these existing quarries to reduce new land disturbance and permitting needs.

6.2.2 New Quarry or Borrow Sites

Where existing capacity is insufficient or material specifications are not met, EVREC may develop new temporary borrow sites, in consultation with NLEM and NLECCC.

New site selection will consider:

- Geological suitability (rock type, deposit volume, overburden depth);
- Haul distance and road access feasibility;
- Environmental and social sensitivities (wetlands, watercourses, cabins, recreation); and
- Potential overlap with other resource uses (forestry, mineral tenure).

All new sites will require NLEM quarry permits and adherence to mitigation measures outlined in this Plan.

6.3 Quarry Selection Methodology

EVREC will apply a stepwise selection process that incorporates technical, environmental, and engagement criteria:

1. Desktop Screening: Review of NLEM's Mineral Lands and Geoscience Atlas to identify deposits and exclude sensitive or restricted areas.
2. Field Verification: Site reconnaissance to evaluate geology, overburden, drainage, and access conditions.
3. Stakeholder Consultation: Engagement with NLEM, NLFAL (Forestry/Crown Lands), municipalities, and local operators.
4. Environmental Review: Screening for proximity to wetlands, waterbodies, wildlife habitat, and existing developments.
5. Engineering Assessment: Testing for gradation, strength, and other material properties.
6. Final Selection and Permitting: Prioritize sites meeting both technical and environmental criteria and secure necessary permits.

This process ensures that quarry operations align with engineering needs, regulatory compliance, and social license expectations.

6.4 Haul Routes and Logistics

Quarry and borrow materials will be transported along pre-defined haul routes connecting source sites to wind project areas, substations, the industrial facility, and the port.

Route selection will consider:

- Road classification and load-bearing capacity;
- Distance and travel time;
- Community proximity and noise/dust considerations; and
- Safety and traffic management during peak construction.

Haul-road management will follow EVREC's Traffic Management Plan, which will define:

- Vehicle types and load limits;
- Hours of operation;
- Dust and noise control (watering, speed limits, mufflers);
- Signage and warning-light requirements; and
- Public notification procedures for high-traffic periods.

6.5 Environmental and Social Considerations

Quarry development and hauling can have temporary but notable impacts on the environment and nearby communities.

Potential issues and corresponding mitigation measures are summarized below.

Table 6.2: Potential Issues and Mitigations for Quarry Development and Hauling

Potential Issue	Description / Concern	Mitigation Measure / Response
Noise and Vibration	From blasting and hauling activities.	Adhere to NLECCC and municipal noise bylaws; restrict blasting to daylight hours; monitor PPV.
Dust and Air Quality	From crushing, loading, and transport.	Use water or dust suppressants on haul roads; install perimeter monitoring if required.
Traffic and Safety	Increased truck traffic near communities.	Implement Traffic Management Plan; install signage and enforce speed limits; communicate haul schedules.
Water and Sediment Control	Dewatering or stormwater runoff from pits.	Follow ESCP; install sediment traps; conduct turbidity monitoring.
Wildlife Disturbance	Habitat loss or noise/light effects.	Avoid clearing during breeding windows; implement buffers from wetlands.
Visual Effects	Temporary disturbance to local landscape.	Limit active footprint; implement progressive reclamation and vegetation screening.
Community Perception	Concerns about land use or resource fairness.	Communicate through PPP; provide updates and grievance pathway for feedback.

6.6 Rehabilitation and Progressive Reclamation

All quarries and borrow areas will be progressively rehabilitated in accordance with NLEM's Guidelines for Rehabilitation of Pits and Quarries.

Rehabilitation will be integrated with construction sequencing and include:

- Regrading and stabilization of slopes;
- Replacement of stored topsoil/overburden;
- Re-vegetation using approved native seed mixes; and
- Final inspection and approval by NLEM and NLECCC.

Rehabilitation will occur as soon as practical after material extraction ceases and will be verified through joint inspections with regulators.

6.7 Community and Stakeholder Engagement

Throughout quarry selection and operation, EVREC will maintain proactive communication with:

- NLEM, NLECCC, and NLFAL (permitting and compliance oversight);
- Municipalities/LSDs (haul routes, safety, complaints management);
- Local quarry operators and contractors (coordination and opportunities); and
- Public and community groups (notifications, grievance process).

Feedback will be documented in the Engagement Register and summarized in quarterly consultation updates.

7 Environmental Effects and Mitigation Measures

7.1 Overview

The Project does not conflict with any established federal, provincial, or municipal land-use designations, policies, or by-laws.

Where quarry development overlaps with municipal jurisdictions, additional development and operating permits may be required prior to NLEM permit issuance.

Land and resource uses, including existing quarry operations and future aggregate development, are expected to continue at or near current levels in the long term.

While temporary disturbance will occur during Project construction and operation, the Project will not restrict or permanently degrade resource potential beyond localized and manageable effects.

EVREC will manage these effects through the implementation of a suite of Environmental Management Plans (EMPs) and monitoring programs, including the:

- Erosion and Sediment Control Plan (ESCP);
- Waste Management Plan (WMP);
- Hazardous Materials Training Plan (HMTP);
- Public Participation Plan (PPP); and
- Asset Retirement Obligation (ARO) / Rehabilitation Plan.

These plans collectively address soil, water, vegetation, waste, and social interface mitigation measures relevant to quarry development and operation.

7.2 Construction Phase — Effects and Mitigation Measures

During construction, Project activities such as clearing, grubbing, grading, and access-road construction could spatially overlap with existing or potential quarry areas.

The primary environmental effects may include:

- Temporary disturbance of soils and vegetation;
- Restricted access for quarry operators or other resource users;
- Alteration of localized drainage patterns due to site preparation; and
- Minor loss of available aggregate within the Project footprint.

7.2.1 Mitigation Measures

- Early Coordination: Continue engagement with NLEM, NLFAL, and quarry permit holders to verify overlapping areas and develop scheduling/avoidance measures;

- Micro-siting Adjustments: Modify access routes or temporary laydowns to avoid active or high-potential quarry sites where feasible;
- Access Maintenance: Maintain temporary bypasses or alternate access for quarry users if construction activities restrict entry;
- Erosion and Sediment Control: Implement ESCP measures (silt fences, sediment traps, stabilized entrances) in all quarry-adjacent work areas;
- Progressive Rehabilitation: Stabilize disturbed areas as construction advances using approved seed mixes and native species;
- Traffic Management: Enforce speed limits, signage, and haul scheduling to minimize safety risks and congestion; and
- Blasting Management: Provide minimum 14-day notice for blasting near any licensed quarry or community area; monitor PPV levels per NLECCC criteria.

7.2.2 Engagement Measures

EVREC will maintain direct contact with quarry operators and NLEM throughout construction, providing:

- Maps of active and planned work areas;
- Regular updates through the Botwood Community Office;
- Invitations to site coordination meetings; and
- Clear communication channels for concerns or feedback.

7.3 Operations Phase — Effects and Mitigation Measures

During operations, the presence of Project infrastructure (wind farms, access roads, substations, and laydowns) will result in permanent alteration of some lands previously available for quarrying or aggregate exploration.

While the overall regional resource base will remain substantial, localized loss of quarry potential may occur.

7.3.1 Potential Effects

- Reduction of available surface area for new quarry development within Project boundaries;
- Restricted access to remote quarry sites due to turbine spacing, power lines, or roads;
- Increased noise and vibration from ongoing maintenance traffic and operations; and
- Community perception of restricted access to Crown land or aggregate resources.

7.3.2 Mitigation Measures

- Resource Compensation: Identify comparable aggregate sources outside the Project footprint in coordination with NLEM to offset lost potential;
- Co-existence Planning: Maintain shared-use roads where practical to allow continued quarry access for local contractors;

- Noise / Dust Controls: Maintain road watering and vegetation buffers around haul roads and operational areas;
- Monitoring: Continue dust, noise, and vibration monitoring where quarry and operational zones interface; and
- Stakeholder Updates: Provide operations-phase communication through the Project website, social media, and PPP updates regarding any land-use changes or rehabilitation milestones.

7.3.3 Engagement Measures

EVREC will continue to engage with resource users regarding the overlap of Project operations with known quarry areas.

This engagement will include:

- Ongoing information sessions or liaison committee meetings;
- Updates on rehabilitation progress or new land availability; and
- Transparent responses to community inquiries through the established grievance mechanism.

7.4 Decommissioning and Rehabilitation — Effects and Mitigation Measures

Decommissioning activities will reverse many temporary land disturbances and provide an opportunity to restore or enhance quarry potential in areas previously occupied by Project infrastructure.

However, some localized constraints may remain where permanent structures (e.g., turbine foundations) are removed or repurposed.

7.4.1 Potential Effects

- Temporary reactivation of haul roads and traffic disturbance;
- Localized soil or erosion issues during infrastructure removal; and
- Coordination with ongoing or re-established quarry operations.

7.4.2 Mitigation Measures

- Rehabilitation Planning: Implement decommissioning and reclamation measures consistent with the Asset Retirement Obligation (ARO) and NLEM Guidelines for Rehabilitation of Pits and Quarries.
- Restoration of Access: Re-establish safe public and industry access to rehabilitated areas where feasible.
- Topsoil and Vegetation: Re-spread stored overburden, seed disturbed areas with native mixes approved by NLFAL, and monitor vegetation success.
- Progress Verification: Conduct joint post-rehabilitation inspections with NLEM and NLECCC.
- Communication: Notify stakeholders and permit holders of rehabilitation milestones and potential opportunities for future land reuse.

7.4.3 Engagement Measures

EVREC will continue to engage with:

- NLEM and NLECCC on rehabilitation monitoring and permit closure;
- Quarry owners and operators regarding re-use or repurposing of restored sites; and
- Communities on post-closure access and visual restoration outcomes.

All decommissioning activities and stakeholder feedback will be summarized in quarterly engagement reports and the final EIS follow-up documentation.

7.5 Residual and Cumulative Effects

Residual effects of the Project on quarry resources are expected to be localized, minor, and reversible.

Given the widespread availability of aggregate sources within Central Newfoundland, the Project will not result in significant cumulative impacts on the province's quarry resource base.

Cumulative considerations include:

- Temporary overlap with other infrastructure projects (e.g., municipal works, highway upgrades);
- Shared use of haul routes; and
- Regional quarry activity levels in coordination with NLEM.

Ongoing engagement, environmental management, and progressive rehabilitation will ensure the Project remains compatible with long-term resource development in the region.

8 Engagement Strategy

8.1 Purpose and Approach

The engagement strategy defines how EVREC will communicate, consult, and coordinate with quarry owners, regulators, and community stakeholders who may be affected by or involved in quarry and borrow activities associated with the Project.

The strategy ensures that engagement is transparent, inclusive, and responsive, aligning with EVREC's corporate commitment to responsible resource use and the requirements of the EIS Guidelines (NLECCC 2025).

Engagement with quarry owners and regulators will:

- Facilitate two-way communication about the Project's quarry requirements and potential interactions with existing quarry operations;
- Identify and resolve issues early in the planning process to minimize conflict and promote cooperation;

- Ensure regulatory compliance with NLEM and NLECCC requirements for quarry consultation and permitting; and
- Provide ongoing opportunities for feedback throughout construction, operation, and decommissioning.

8.2 Engagement Phases

Engagement will occur throughout the Project lifecycle, with structured activities at key milestones.

Table 8.1: Engagement Phases

Phase	Purpose	Primary Engagement Activities
Pre-Construction (EIS / FEED)	Notify quarry owners and regulators of proposed quarry requirements; identify overlaps; solicit feedback.	Letters, meetings, public notices, mailing list updates.
Construction Phase	Coordinate timing of quarry operations, haul routes, and blasting schedules; address new issues.	Site coordination meetings, updates via email, office visits.
Operations Phase	Maintain communication on ongoing use of quarries, maintenance activities, and rehabilitation progress.	Quarterly updates, liaison committee meetings, website postings.
Decommissioning and Rehabilitation	Notify stakeholders of rehabilitation activities and future land availability.	Notices, targeted meetings with NLEM and quarry operators.

8.3 Engagement Methods

8.3.1 Quarry Owners

Appendix A provides a list of active quarry operators within and near the Project area, including permit numbers, operator contacts, and site descriptions.

EVREC will engage these quarry owners to:

- Share detailed Project plans and maps showing quarry and infrastructure locations;
- Discuss potential access or operational overlaps;
- Identify opportunities for material supply or contracting; and
- Gather feedback on potential issues and mitigation measures.

Engagement sessions will be held during three key Project phases:

1. Pre-construction – to review design and permitting implications;
2. Start of operations – to coordinate haul routes and material sourcing; and
3. Pre-decommissioning – to discuss rehabilitation and land reinstatement.

Meetings will be documented using standardized Consultation Record Forms Project Mailing List.

EVREC has established a mailing list for all identified quarry owners, regulators, municipalities, and local businesses potentially affected by the Project.

The list will be updated regularly throughout construction and operation, and will include:

- Quarry operators and permit holders;
- NLEM and NLECCC regulatory contacts;
- Municipalities and Local Service Districts (LSDs); and
- Community associations and construction contractors.

The list will be maintained by the EVREC Community Relations Team, who will issue quarterly bulletins and notices of public meetings, Project updates, and key construction milestones.

8.3.2 Project Email Account

EVREC has activated a dedicated email account for all stakeholder correspondence: info@everc.ca

This account:

- Serves as the primary contact for quarry owners, regulators, and community members;
- Is accessible by authorized EVREC team members; and
- Ensures all inquiries, feedback, and responses are logged in the Engagement Register for traceability.

The address is displayed on all Project notices, the website, and social media communications.

8.3.3 Project Office

EVREC's Community Office in Botwood acts as an in-person contact point for the public and local businesses.

It will:

- Display quarry-related Project information, maps, and EIS materials;
- Provide a space for scheduled meetings with quarry operators; and
- Accept written submissions or feedback forms for inclusion in the Consultation Register.

The office's operating hours, phone number, and address will be published on all notices and the Project website.

8.3.4 Project Website

A dedicated Project webpage will be created under EVREC's corporate site https://evrec.ca.

The webpage will:

- Post updates on the Project's quarry requirements, progress, and rehabilitation;
- Provide downloadable resources (maps, newsletters, meeting summaries);

- Include an online contact form for submitting feedback; and
- Publish the Project's engagement schedule and responses to frequently asked questions (FAQs).

All public notices for quarry activities will also be hosted here.

8.3.5 Digital and Social Media Engagement

EVREC will use its corporate social media platforms (LinkedIn, Facebook) to share proactive notifications and engagement opportunities.

Social media will be used for

- Posting construction and haul-route updates;
- Announcing meeting dates, new materials, and milestones; and
- Encouraging community awareness of quarry-sourcing progress and rehabilitation outcomes.

While social media will not be used for direct consultation or grievance submissions, it will serve as a broad notification tool linked back to the official website and email contact.

8.3.6 Coordination with Regulators

EVREC will maintain continuous coordination with NLEM (Quarry Materials Division) and NLECCC throughout the Project.

Key tasks include:

- Early notification of any new quarry permit applications;
- Sharing of consultation outcomes, mitigation measures, and rehabilitation progress;
- Regular review meetings during the construction and rehabilitation phases; and
- Integration of regulator feedback into the Engagement Register.

Joint meetings with NLEM and NLECCC will occur at least twice annually during active quarrying periods.

9 Concerns and Issues Related to Existing Quarries

EVREC recognizes that local quarry operators and permit holders are important stakeholders in the Project area. Engagement to date has identified a range of issues and concerns regarding potential interactions between existing quarry operations and Project activities.

These concerns relate primarily to access, supply opportunities, operational continuity, and infrastructure overlap.

The issues summarized below will continue to guide EVREC's consultation and mitigation commitments through the construction, operations, and decommissioning phases.

9.1 Summary of Key Concerns

Table 9.1: Summary of Key Concerns to Date

No.	Concern / Issue	Stakeholder Perspective	EVREC Response / Proposed Mitigation
1	**Access to operating facilities prior to commencement of construction**	Quarry owners requested assurance that construction works (e.g., new roads, staging areas, or fencing) will not block or delay entry to existing quarries.	EVREC will map all quarry access routes in the Project GIS, maintain access during all construction phases, and coordinate alternate routes if temporary closures are required. Advance notification (≥ 14 days) will be provided to affected operators.
2	**Ability to supply the Project during construction**	Local operators expressed interest in supplying aggregate materials for Project needs and requested clarity on procurement and qualification processes.	EVREC will issue local-procurement notices through the Community Office and website, identifying required material types and standards. Preference will be given to qualified local suppliers where feasible and cost-competitive.
3	**Ability to access and operate existing quarries during construction**	Operators are concerned that increased Project traffic, safety restrictions, or temporary haul-road closures could limit their own operations.	EVREC will develop shared-use traffic plans and coordinate scheduling with active quarry operators. Site-specific road-use agreements may be established to ensure uninterrupted access and clear safety rules.
4	**Impact of new / upgraded access roads and wind turbine generator (WTG) locations on existing operations**	Some existing or proposed quarry areas overlap with planned access routes or WTG pads, raising concerns about land availability and resource sterilization.	EVREC will avoid active quarry boundaries where feasible through micro-siting and buffer zones. Where avoidance is not feasible, EVREC will consult NLEM and the operator to determine equitable mitigation such as relocation, access realignment, or replacement material sources.
5	**Environmental management and regulatory compliance**	Operators asked how EVREC will control dust, runoff, and vibration from adjacent construction that might affect quarry safety or compliance.	All works near existing quarries will follow ESCP and WMP measures (sediment controls, watering for dust, vibration monitoring). Operators will be invited to provide feedback on site conditions during construction.
6	**Communication and coordination**	Quarry stakeholders emphasized the need for clear, consistent communication lines with EVREC before and during construction.	EVREC will maintain a dedicated contact point (Community Office and email info@evrec.energy) and will hold coordination meetings with quarry owners at least twice per year or as requested.

9.2 Ongoing Engagement

To address and monitor these concerns, EVREC will:

- Maintain open and continuous dialogue with active quarry owners through the Engagement Register and periodic site meetings;
- Provide advance notice of construction or roadwork near existing quarry boundaries;
- Ensure that quarry owners are invited to community or liaison committee meetings that discuss land-use topics; and
- Record all commitments, mitigation actions, and feedback in the Quarry Consultation Register for tracking and reporting to NLEM and NLECCC.

10 Monitoring, Reporting, and Continuous Improvement

Monitoring and reporting ensure that quarry-related consultation, permitting, environmental controls, and rehabilitation are implemented as intended and that lessons learned are fed back into project delivery for continual improvement.

10.1 Monitoring Framework

EVREC will monitor performance through a combination of document reviews, site inspections, and stakeholder follow-ups:

- Permit/tenure checks: status of NLEM quarry permits/leases, Crown Lands occupancy, municipal notices, blasting licences;
- Consultation verification: evidence of notices and meetings with quarry owners, municipalities/LSDs, NLEM, NLECCC (sign-in sheets, emails, letters);
- ESCP implementation: erosion/sediment controls at pits, dewatering discharge quality, turbidity checks downstream of work areas;
- Operational controls: traffic/haul-route compliance, dust suppression, noise and PPV vibration monitoring where required;
- Access & safety: continuity of access for existing quarry operators; road signage, speed limits, radio-call procedures;
- Rehabilitation progress: areas graded/stabilized, topsoil returned, revegetation success, photo logs; and
- Issue tracking: grievances/concerns logged via the PPP and resolutions within Service Level Agreement SLA.

10.2 Key Performance Indicators (KPIs)

Table 10.1: KPIs to be Monitored

KPI	Definition / Measure	Target	Frequency
Permitting timeliness	% of required NLEM/Crown/Municipal approvals secured before work	100%	Monthly during permitting

KPI	Definition / Measure	Target	Frequency
Notice compliance	% of blasting/haul notices issued ≥ required days in advance	≥ 95%	By event
Stakeholder engagement	# of quarry-owner/NLEM coordination meetings held vs planned	≥ 2 per active season	Quarterly
Traffic safety	# of haul-route incidents / near misses	0 incidents; downward trend	Monthly
Dust control	# of dust exceedances or complaints	0 exceedances; ≤ 2 substantiated complaints/quarter with CAPA	Monthly
PPV compliance	% blasts within approved PPV thresholds	100%	Each blast
Water quality	% turbidity samples within ESCP criteria	≥ 95%	As per ESCP
Grievance closure	% of quarry-related complaints closed within SLA	≥ 90% within 30 days	Quarterly
Rehabilitation progress	% of disturbed pit area stabilized/revegetated	Meet plan milestones	Quarterly

10.3 Reporting and Disclosure

- Monthly internal report (construction): permits status, inspections, incidents, CAPAs, haul volumes, rehabilitation progress;
- Quarterly summary to NLEM/NLECCC/NLFAL: consultation outcomes, KPI dashboard, issues/grievances and resolutions, rehabilitation status; and
- Annual public summary via the PPP website/newsletter: quarry locations in use, mitigation highlights, rehabilitation achievements.

10.4 Data Management and Record Keeping

Records will be maintained in EVREC's Quarry Approvals Register and Quarry Consultation Register (SharePoint/Procore):

- Permits/approvals & conditions, royalty receipts;
- Notices (blasting/haul), sign-in sheets, emails/letters;
- Inspection forms (ESCP, traffic, dust/noise/PPV, dewatering logs);
- Rehabilitation maps and photo sets; and
- CAPA log and close-out evidence.

10.5 Audit and Compliance Verification

- Internal audits: at least annually (or per construction season) covering permitting, ESCP effectiveness, notices, KPI evidence, and register accuracy; and

- Regulatory audits: participate in NLEM/NLECCC inspections; maintain readiness files on site; track findings to closure.

10.6 Continuous Improvement and Management Review

- After-action reviews (AARs) following significant blasts, weather events, or grievances; updates to procedures where needed;
- Lessons learned shared with contractors and regulators; incorporated into next-season method statements; and
- Annual management review of QRCP performance, resourcing, and updates to the Material Demand & Quarry Selection plan and rehabilitation milestones.

10.7 Revision Control

The QRCP is a controlled document. Revisions will be issued when:

- Permit conditions change or new quarries are introduced;
- Monitoring indicates the need to adjust controls; and
- Stakeholder commitments or schedules materially change.

Each revision will include a Revision Control Sheet, updated Table of Contents, and distribution to NLEM/NLECCC/NLFAL and listed stakeholders.

11 Company Information

Contact information for EVREC is provided below:

Exploits Valley Renewable Energy Corporation

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Toronto, ON M5J 2V1

Telephone: 1 709 257 2344

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12 References

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Government of Newfoundland and Labrador. Crown Lands Act, RSNL 1990, c. C-38.

Government of Newfoundland and Labrador. Environmental Protection Act, SNL 2002, c. E-14.2, and Environmental Assessment Regulations.

Government of Newfoundland and Labrador. Water Resources Act, SNL 2002, c. W-4.01.

Government of Newfoundland and Labrador. Forestry Act, RSNL 1990, c. F-23.

Government of Newfoundland and Labrador. Mineral Act, RSNL 1990, c. M-12.

Government of Newfoundland and Labrador. Occupational Health and Safety Act, RSNL 1990, c. O-3, and associated Regulations.

Government of Newfoundland and Labrador. Endangered Species Act, SNL 2001, c. E-10.1.

13 List of Abbreviations

Abbreviation	Definition
ARO	Asset Retirement Obligation
CAPA	Corrective and Preventive Action
CSA	Canadian Standards Association
EIS	Environmental Impact Statement
EMPs	Environmental Management Plans
EPA	Environmental Protection Act
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
ESMS	Environmental and Social Management System
EVREC	Exploits Valley Renewable Energy Corporation
FAQ(s)	Frequently Asked Questions
FEED	Front-End Engineering Design
GHG	Greenhouse Gas
GIS	Geographic Information System
GW	Gigawatt
HADD	Harmful Alteration, Disruption, or Destruction
HMTP	Hazardous Materials Training Plan
KPI / KPIs	Key Performance Indicator(s)

Abbreviation	Definition
LSDs	Local Service Districts
m^3	Cubic metres
MRIEP	Mineral Resource Industry Engagement Plan
MW	Megawatt
NL	Newfoundland and Labrador
NLECCC	Department of Environment, Conservation and Climate Change
NLEM	Department of Energy and Mines
NLFAL	Department of Forestry, Agriculture and Lands
OHS	Occupational Health & Safety
PPP	Public Participation Plan
PPV	Peak Particle Velocity
PV	Photovoltaic
QMA	Quarry Materials Act
QRCP	Quarry Resources Consultation Plan
RFNBO	Renewable Fuels of Non-Biological Origin
SLA	Service Level Agreement
TDG	Transportation of Dangerous Goods
TWh	Terawatt-hour
WMP	Waste Management Plan
WTG	Wind Turbine Generator

APPENDIX Q.7
Asset Retirement Obligation

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

EXPLOITS VALLEY RENEWABLE ENERGY CORPORATION

ASSET RETIREMENT OBLIGATION

Decommissioning General Plan

May 2025

An asset retirement obligation is a liability resulting from a legal obligation to retire or decommission a plant asset. The types of work activities typically include removing or dismantling the asset. For the Exploits Valley Renewable Energy Corporation ("EVREC") the various aspects of the implementation of the Asset Retirement Obligation standard have been reviewed, and in doing so the underlying requirements and issues that must be complied with have been fully addressed. However, the Project has taken a very realistic approach in developing their initial plan that can be implemented to meet the future requirements but as of the date of this report the Company has not discussed the plan with the regulating body.

Table of Contents

1 PROJECT OVERVIEW 4

1.1 PROJECT LOCATION 5

FIGURE 1 - PROJECT LOCATION 5

FIGURE 2- PROJECT WIND FARM LAYOUT 6

FIGURE 3 -OVERALL SITE LAYOUT 7

1.2 PROJECT ELEMENTS 7

2 ASSET RETIREMENT OBLIGATION 9

3 ENVIRONMENTAL CONSIDERATIONS 10

4 DECOMMISSIONING AND DEMOLITION 13

4.1 FACILITIES TO REMAIN IN PLACE 14
4.2 EQUIPMENT TO REMAIN IN PLACE 14

5 REMOVAL APPROACH 14

5.1 ELECTRICAL INFRASTRUCTURE 14
5.2 HYDROGEN PLANT, AMMONIA PLANT 15
5.3 PORT FACILITIES 16
5.4 ROADWAYS AND STAGING AREAS 16
5.5 WIND TURBINES 16
5.6 CAMPS, CANTEENS, WAREHOUSES, OFFICES, FENCING 17
5.7 FOUNDATIONS 17
5.8 SUBSURFACE PIPING AND UTILITIES 17

6 DISPOSITION OF MAJOR PROJECT COMPONENTS 18

7 SCHEDULE 22

8 IMPLEMENTATION OF DECOMMISSIONING AND DEMOLITION ACTIVITIES 22

9 CAPITAL COST ESTIMATE 24

1 Project Overview

The Exploits Valley Renewable Energy Corporation (EVREC), is proposing to develop, construct and operate a wind to green ammonia project on the brownfield former Abitibi lands near Botwood Central Newfoundland, Canada (the "Project"). The Project is positioned to be one of the lowest cost green hydrogen/ammonia producers globally utilizing 100% renewable energy. The Project includes development of an onshore Wind Farm consisting of approximately 450 wind turbines and associated offsite infrastructure (export and equipment terminals, access roads, collector substations, and pipelines). Included as part of the Project will be an Industrial Facility comprised of electrolyzers, an air separation plant, ammonia plant(s), electrical energy storage facilities, hydrogen molecular storage, water purification systems, warehousing, administration buildings and other associated utility infrastructures (switchyards, transformers, pipelines, cooling systems) including a 50 MW grid connection for critical loads. The facility will be designed to include the best available technology economically available and meet or exceed all regulated safety and environmental standards. The nameplate capacity of the Energy Generating facility will be approximately 3.2 gigawatts of clean wind energy generated by an anticipated fleet of 7.0-8.0 MW wind turbines. The facility will be constructed and commissioned in a phased approach. The project is expected to have a 50-year life cycle on the main facility elements. Keep as a 50/50

The Project will be permitted by the Government of Newfoundland Ministry of Environment and Climate Change prior to construction. Commercial operation of the project is expected to commence in 2030.

The Project will produce green ammonia through the conversion of renewable electricity into green hydrogen and to green ammonia. The ability to manufacture green ammonia allows for an important opportunity for the Project as demand from Europe for green ammonia is expected to increase considerably in the next few years. Most European countries have recognized that they will be unable to meet renewable hydrogen and ammonia demand and national emission targets by domestic production only. As such, European countries are supporting both local hydrogen projects, and hydrogen imported from projects from outside of Europe to meet their anticipated consumption and GHG reduction targets. The German National Hydrogen Strategy, published in 2020, recognizes that domestic production of renewable and low-carbon hydrogen will not be sufficient to cover new demand and most of the hydrogen needed will have to be imported from cost-effective sources elsewhere (Government of Germany 2020). As such, the German National Hydrogen Strategy focuses on developing collaborations that include importing hydrogen.

The Asset Reclamation Obligations will be partially funded through the sale of equipment, materials and other assets recovered through a decommissioning and demolition Plan (the

"Plan"). As such, the power systems (turbines, battery storage and electrical structures) and other facilities will be decommissioned, demolished, and removed and the Environmental permits will be terminated. To date, the Port facilities, along with some of the core assets (ex. - energy storage systems) are the only assets that have been considered for repurposing.

1.1 Project Location

The Project will be located on approximately 30,000 hectares of the brownfield former Abitibi lands, approximately 13 kilometers west of Botwood Newfoundland, Canada. The approximate center of the Project is 49.161441° N, 55.486669° W (Figure 1).

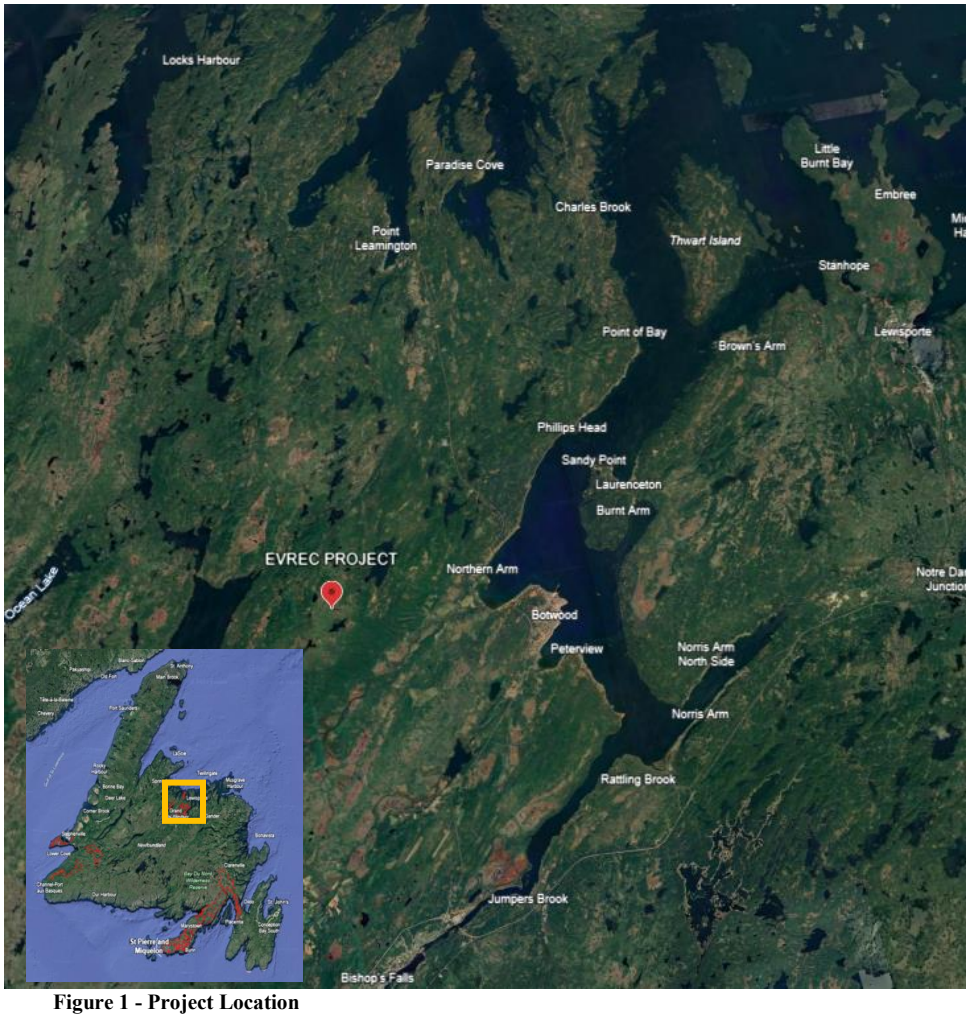

Figure 1 - Project Location

The project site is located on four adjacent parcels; forestry sites logged for industrial purposes since the 1800s by successors of Abitibi Consolidated

The wind project site is split into three main areas:

- Approximately 150 km2 of land surrounding the town of Botwood to the north and west.
- Approximately 100 km2 of land in the Twin Lakes region, primarily falling to the north and west of the South Twin Lake.
- Approximately 50 km2 of land on the peninsula of Leading Tickles, either side of the Botwood Highway, north to south for approximately 14 km.

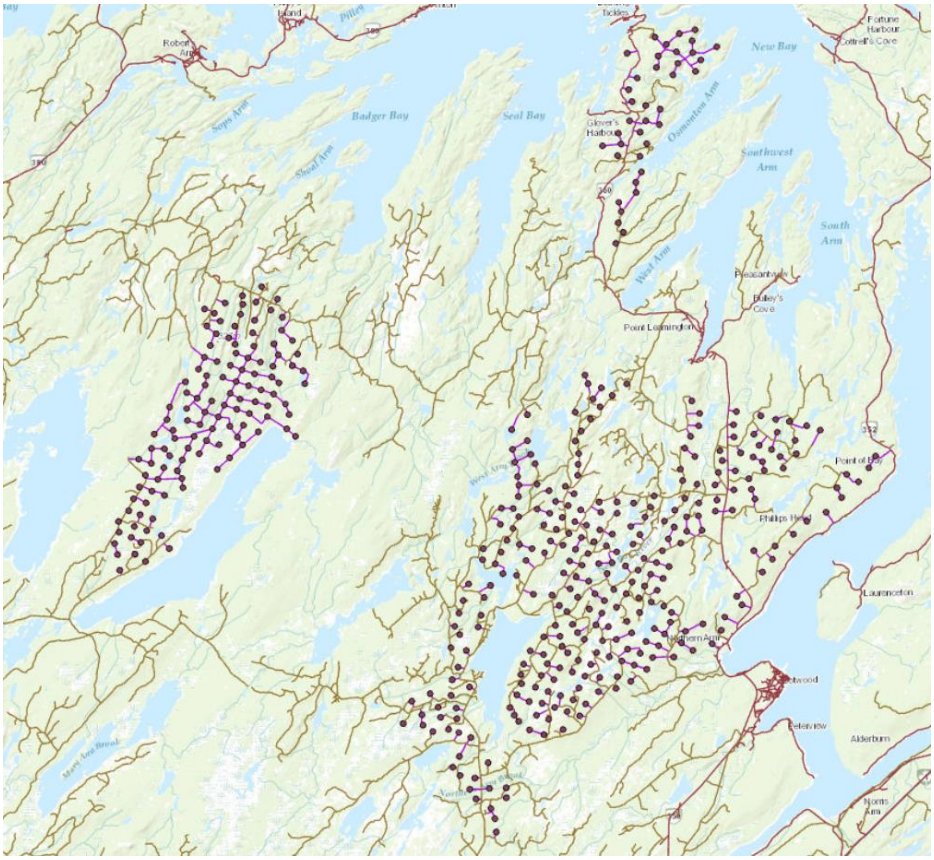

Figure 2- Project Wind Farm Layout

The industrial site is located approximately 4 kilometers from the Town of Botwood and the port location.

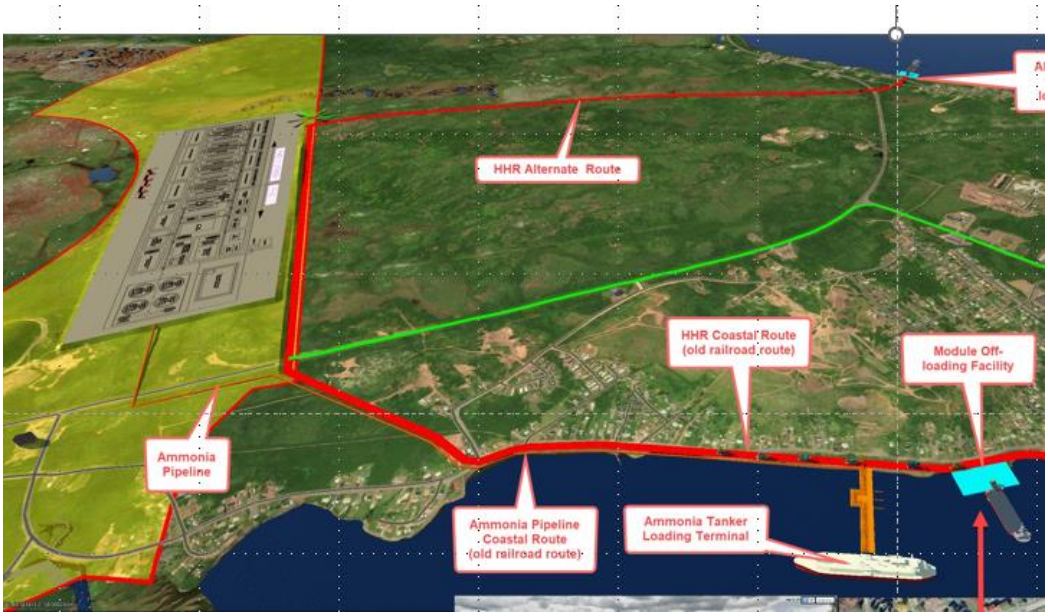

Figure 3 -Overall Site Layout

The industrial site is currently undeveloped forest land located in an area that is zoned industrial under the Town of Botwood Zoning ordinances.

1.2 Project Elements

The main project elements, including linear facilities and construction laydown areas, are as follows:

- Wind Farm:
  - ~450 wind turbine generators (WTGs) capable of producing up to 3,250 megawatts (MWs) of electricity.
  - Electrical transmission lines, collection systems and substations
  - Gravel borrows pits, excess soil management.
  - Access roads, crane pads, inspection and maintenance lay down points.
  - Warehousing and satellite offices /control rooms
  - Initial footprint is 30,000 hectares with less than 5% being disturbed.
- Port Export Facility
  - Ammonia export loading line
  - Ship loading facility.
  - Purge and emergency flare
  - Access roads
  - Staging areas
  - Satellite office/ control rooms
  - Emergency Response Stations

    - Jetty will be designed to accommodate up to 50,000 dead weight tonnage (DWT), vessels with a loading rate of 600 tonnes per hour (T/h) via a 350 mm double-walled, carbon steel, insulated pipeline (estimated loading of 3.5 days).
- Offsite Utilities and Infrastructure
    - Transmission lines, substation, switch yards and grid connection
    - Water supply and discharge pipeline
    - Water pumphouse
    - Access roads
    - Satellite office/ control rooms

- Industrial Facility:
    - Electrical Infrastructure
        - Main Switchyard to receive power from all the wind turbine collector stations
        - Grid connection to the Newfoundland Power system at the 138KV level
        - An electrical energy storage system having a capacity of 1050 MWhrs with a discharge rate of 100 MW/hr.
        - Diesel backup generator - 60MW
    - Hydrogen Plant and Storage
        - 12 ha is required for storage tanks, electrolyzers, and an administration building associated with the hydrogen plant.
        - Several 50 T double-walled tanks for short-term storage.
        - Eighteen hydrogen electrolyzer plants (total 2,250 MW capacity; and up to 187.45 kT/year product output)
- Ammonia Plant, Storage, and Transport
        - 7 ha required for the ammonia plant and 1 ha for the storage tanks.
        - Three 1,350 tonnes per day (T/d) ammonia trains are required, located 2 km from Botwood.
        - Three cryogenic double-walled tanks with a capacity of 50,000 m3 each for 150,000 T liquid ammonia storage.
        - Ammonia production (product output) will total 2,868 T/d.
- Air Separation Plant
        - 600 tpd N2 plant with liquid nitrogen storage
- Molecular Storage
        - Approximately 85,000m3 of above ground hydrogen storage (bullets, Spheres, gas collector system)
- Utilities and Other Infrastructure
        - Above ground heat exchangers
        - Control house
        - Administration building
        - Maintenance Shops
        - Water Treatment facility
        - Fire Suppression Stations
        - Diesel/H2-fired emergency backup generators to support critical facility load in

the event of a power interruption (not normally operated except for monthly reliability testing).

- Secure perimeter chain link fencing with two site access points, a main entrance gate and a secondary access gate.
- One raw Water retention Pond
- One stormwater retention pond served by perimeter stormwater culverts to manage stormwater onsite.
- Industrial wastewater will be treated, and effluent will be released through one of the stormwater ponds and facility outfall.
- Any process wastewater collected during maintenance activities will be collected in a holding tank and periodically removed by a licensed hauler.

2 Asset Retirement Obligation

The Asset Retirement Obligation for the Project will be conducted by implementing the decommissioning and rehabilitation activities, which aim to restore the site to its original state.

This will involve decommissioning and demolition of the key components which will involve:

- the safe isolation and purging of all equipment,
- the selling of equipment and facilities of no interest to third parties,
- the removal of regulated and un-unregulated materials,
- the dismantling/demolishing of the wind turbines, the industrial plant and associated facilities,
- the recycling components and materials to the extent possible,
- the removal of any remaining waste,
- establishing final grade at the Project Site and Wind Turbine bases including where applicable overburden and topsoil replacement and natural re-vegetation promotion.

It is anticipated that these activities will take approximately 16 to 24 months to complete, with certain planning, valuation and equipment marketing activities scheduled prior to Plan execution.

Once decommissioning and demolition activities are complete, the Project Site and certain related assets will be sold or transferred for future use.

Prior to the start of decommissioning, a decommissioning plan will be submitted to the Newfoundland Department of Environmental and Climate Change – Director of Regulatory Compliance. The submitted plan will identify and discuss the proposed decommissioning activities and schedule for the energy center site, transmission line corridor, and all appurtenant facilities constructed as a part of/or because of the project. This will include: all applicable laws, ordinances, regulations, standards, (LORS) and local/ regional plans applicable at that time:

- how the specific proposed decommissioning activities will comply with the identified LORS and plans
- an analysis of all decommissioning alternatives considered, including restoration of the site to its preconstruction, natural state and
- the reasons for selecting the preferred proposal.

It is recognized the project will have at least a 50-year life cycle at which time the assets may still have significant intrinsic value such that the plant may continue to operate in its current design or be modified to support other industries and/or the province. The Project will continue to seek the best economic and social solution and modify its current decommissioning strategy given future needs.

3 Environmental Considerations

The initial footprint of the project site is 30,000 hectares. The Project Site is wooded land, and its surroundings were also disturbed and have been used for mixed residential, recreational and commercial purposes. The Port site, which remains an operational Port with ongoing activity. The area around the industrial site and the wind turbine sites were predominately logging areas and have continued to entertain recreational activities. The decommissioning and demolition activities will comply with all applicable laws, ordinances, regulations and standards (LORS) and should not result in any significant adverse environmental impacts. The overall goal is to have the site returned back to "near" its original state.

Table 1 provides a summary of the initial environmental considerations and risk profile with the decommissioning and demolition of the facility at the end of project life. It should be noted that there are no major impacts identified at this time.

Table 1 – Environmental Considerations

Technical Area	Potential for impacts	Risk Level
Air Quality and Greenhouse Gases	There are no significant potential impacts. Emissions during decommissioning and demolition are significantly lower than during construction or operation for criteria air pollutants and lower than during operation for greenhouse gases.	Low

Technical Area	Potential for impacts	Risk Level
Public Health	There are no significant potential impacts with either the decommissioning of the industrial facility (hydrogen electrolyzers, ammonia trains and utility infrastructure) or the wind/solar farms. Emissions during decommissioning and demolition are significantly lower than during construction or operation for air pollutants and toxic air contaminants.	Low
Hazardous Materials Management	Implementation of the proposed conditions and compliance with LORS will ensure there are no significant impacts.	Low
Visual Resources	There will be no negative visual impact from decommissioning and demolition. Since the areas will be returned to its original state and the dominate project area landscape is forested, the visual character of the project area will remain substantially unchanged.	Low
Land Use	There are no land use impacts other than the loss of business and job opportunities when the Facility is shut down.	Low
Noise and Vibration	There will not be a substantial increase in ambient noise levels during decommissioning and demolition relative to current conditions and no significant impacts from noise.	Low

Technical Area	Potential for impacts	Risk Level
Socioeconomics	The socioeconomic impact from closure of the full Project could be significant since the Project will provide a significant boost to the local economy. There is a potential for continued use of the majority of the site for renewable energy which could retain jobs and create new jobs.	Low
Traffic and Transportation	Decommissioning and demolition activities will not result in significant, additional traffic impacts and will not cause a significant impact on traffic and transportation.	Low
Cultural Resources	There will be no significant impacts. No subsurface work will occur outside areas where subsurface work occurred during construction.	Low
Biological Resources	There will be no decommissioning and demolition outside the site boundaries. As the decommissioning activities will restore the site to its original condition, the visual character of the project area will remain substantially unchanged.	Low
Paleontology	There will be no significant impacts. No subsurface work will occur outside areas where subsurface work occurred during construction.	Low
Geologic Hazards and Soil Resources	There will be minimal movement of soil on-site and in the areas of the wind turbines; therefore, there will be no significant impacts on soil and geologic resources.	Low

Technical Area	Potential for impacts	Risk Level
Soil and Water Resources	Compliance with General Environmental Permit for Discharges of Storm and Ground Water associated with the operating activity will be sufficient to protect water resources during decommissioning and demolition.	Low
Waste Management	There will be no significant impact, and it is expected that there will be sufficient capacity in future landfills to accommodate non-recyclable material.	Low
Worker Safety and Fire Protection	Implementation of the proposed conditions and compliance with LORS will ensure there are no significant impacts.	Low

4 Decommissioning and Demolition

For the purposes of the ARO planning, decommissioning and demolition are considered two separate activities, as described below:

Decommissioning – Activities completed to place the facility in a zero-energy and environmentally neutral state. To include all activities associated with preparation of the plant for demolition.

Demolition – Physical removal through use of mechanical means of above and below grade structures, utilities, equipment and associated appurtenances.

Upon termination of power generation activities, the following initial decommissioning activities will occur to remove the Project from service:

- Drain all fluid systems and collect all contents to ensure public health and safety, and protection of the environment.
- Categorize all waste including lubricating oils, fuels, water treatment chemicals, universal waste, etc. These materials will be managed for proper containerization, profiling, and shipment off-site for disposal or recycling.

- Identify utility systems required for potential other uses or continued operation of remaining infrastructure.
- Design and install temporary facilities for support of contractor personnel such as office trailers, temporary power, potable water and sanitary service.
- Equipment liquidation/sale activities.

Certain Project facilities and equipment will remain in place at the Project Site to support the demolition activities. Also, certain other equipment, (i.e. spare parts, transformers) will be decommissioned and placed into temporary storage, at either the Project Site or elsewhere.

Facilities and equipment that neither remains in place nor is placed into temporary storage will be permanently removed from the Project Site. The planned disposition of the current project assets and equipment is as follows:

4.1 Facilities to Remain in Place

- Warehouse (existing contents removed and replaced with specified equipment to be placed in temporary storage);
- Any lower voltage connections (below 230kV) to project site for standby or station service and associated equipment needed to serve the Control Room, Warehouse, or fire systems.
- Fire water pumps and associated underground piping and hydrants.

4.2 Equipment to Remain in Place

- Main Substation and connection to grid power, battery systems (de-energized and in a safe store condition per the manufacturer's recommendations);
- Unit auxiliary transformers (de-energized and in a safe store condition per
- Site security equipment (cameras, fencing, controlled access gates, etc.
- Raw water supply ponds and Storm water collection ponds;
- Main water pumphouse facility and main water supply line, and
- Any equipment or assets that the Town of Botwood or Crown lands will find valuable for redevelopment purposes in the future.

5 Removal Approach

5.1 Electrical Infrastructure

Decommissioning of the electrical infrastructure includes removal of the conductors, dropping poles to ground level and disassembling the framing / hardware for removal from the ROW for reuse, recycling or sent to an appropriate facility for disposal.

The equipment within the substations and primary terminal station at the main plant facility (e.g., circuit breakers, disconnect switches, conductors, oil-filled equipment), will be drained/removed and either reused or disposed of via licensed contractors. The substation structures will also be decommissioned and removed.

A high-level decommissioning strategy for electrical infrastructure will be finalized which will include the following key activities include:

- Transmission line decommissioning: steel towers, wood poles, and conductors will be removed as efficiently as possible, and the trenches for underground sections will be filled with appropriate soils. Materials such as copper, steel, aluminum, and other materials will be sold and recycled off-site.

- Substation decommissioning: components to be decommissioned include switchgear / cabling and transformers. The procedure entails carefully removing the equipment using cranes and a specialist contractor. For switchgear / cabling and transformers, the materials will be removed from the site; for civil works, areas will be re-graded and covered with reinstatement soils. Most components from the dismantled substation can be reused off site.

5.2 Hydrogen Plant, Ammonia Plant

The units will be purged and cleared of any solids or regeneration materials. Following the purging and clearing exercise, the units will be systematically dismantled and removed from site. The foundations will be removed, and the site will be cleaned and graded. The ammonia tank and water tanks will also be purged, cleaned, disassembled, and removed from site for recycling. The components of the hydrogen units, including electrolyzers, water purification systems, and hydrogen handling systems will be disassembled and removed from site. The components will be recycled or refurbished for continued use. The buildings housing the electrolyzers can be demolished or left in place to facilitate redevelopment of the site by other industries. The hydrogen storage facility will be demolished, and its materials will be recycled off site.

If there is any contaminated material, it will be removed and disposed of at in a licensed facility prior to final grading. Graded areas will have organic materials re-spread and seeded.

5.3 Port Facilities

The Port facilities will be decommissioned by removing the ammonia loading infrastructure such as loading lines and loading arms. The jetty and associated mooring infrastructure is planned to be demolished or left in place for use in future site development.

5.4 Roadways and Staging Areas

Personnel and equipment will be demobilized once they are no longer required for the Project. Project sequencing and work force allocation will look to reduce temporary layoffs during winter seasons for workforce continuity. Equipment will be carefully removed, and offices will be taken down in reverse order of setup and transported off site.

Existing materials, equipment, and spare parts at the laydown or storage facilities will be removed from the site or turned over to the Crown/Town of Botwood. Once the overall scope has been completed, the contractor will fully demobilize from the site. Temporary construction trailers will be removed, as well as equipment that is no longer required.

Final grading will be completed at the site laydown and site office areas once infrastructure has been removed. These areas will have organic materials re-spread and seeded. If there is any contaminated material, it will be removed and disposed of at a licensed facility prior to final grading.

At the wind farms, surplus excavated material will be spread in the immediate vicinity of the new tower foundation to provide positive drainage. The area immediately surrounding the turbine foundation will be re-graded, and soil that was removed will be replaced. Excavated organics will be stored and reapplied during decommissioning and revegetation will be allowed to occur naturally.

5.5 Wind Turbines

A high-level decommissioning strategy has been developed for the wind turbines and key activities include removing the structure, including the turbine. Components such as nacelle and tower components have an established practice of recycling, and appropriate plans will be implemented. Wind turbine blades will be removed and either recycled or disposed of depending on the original materials of construction.

For any other components that do not currently have a mature recycling method, it will be determined whether they can be resold at the time of decommissioning.

The turbine foundation pedestal concrete will be removed to 1 m below ground, rebar cut off and the site covered with soil. Laydown areas and turbine access roads will be reclaimed, while public roads will remain, and any gates will be removed. The underground electrical cable collectors will be cut off and removed to 1 m depth and the overhead collector poles and conductors will be removed.

5.6 Camps, Canteens, Warehouses, Offices, Fencing

All camps, canteens, warehouses, field offices and fencing will be removed for recycling or disposal.

5.7 Foundations

- Foundations will be retained for facilities and equipment that will remain in place.
- Ammonia/Hydrogen and major equipment block foundations will be removed to grade or existing finished pad surface depending on slab construction details and future use considerations.
- Turbine pedestals, platforms and other elevated concrete major equipment block structures will be removed to final foundation elevation.
- Sump structures will be filled to final foundation elevation.
- Foundations for facilities and equipment to be decommissioned and removed from the Project Site or placed in temporary storage will be removed entirely if feasible.
- Paved roadways and parking lots will be left in place.
- Structures located at significant depth (greater than 12 feet) will remain in place; and
- Pilings, if present beneath foundations scheduled for removal, will be cut immediately below the foundation, and left in place.

5.8 Subsurface Piping and Utilities

- Cooling tower basin walls (if utilized) will be removed to six inches below grade and the remaining basin will be filled to grade level with recycled concrete and clean fill and compacted as described under Backfilling and Finished Site Grade specifications below;
- Any pipes that are 0-12 feet below surface and are accessible (i.e., not located below foundations that are not removed) will be removed, with the exception of piping required for operation of the fire protection system including hydrants);
- Circulating water pipes that are below foundations in existing duct banks or concrete encased will remain in place and not be excavated. Circulating water pipe risers and manways will be removed from grade to 12’ below grade surface. The remaining pipe will be filled with flowable fill and capped with a weld in place steel cap.

- The piping that is not associated with recycled water, non-reclaimable wastewater, or sanitary sewer pipelines will be water washed and left in place or removed.
- All subsurface piping 6" diameter or greater that will remain and not be removed will be filled with flowable fill and capped with a weld in place steel cap.
- All cabling from underground duct bank conduits will be removed and duct banks will be left in place with empty conduit. Duct banks and conduit to be used for future site development will be left in place without grout/caps;
- The storm water drainage and retention system will be left in place and remain operable;
- The reservoir will be allowed to remain in place for future use by the county or other users.
- Other subsurface facilities that are located within 12 feet of the surface and not identified above will be removed;

Prior to abandoning or decommissioning any existing underground utilities in place, such as water-supply pipeline(s), and sewer pipeline(s), the Project personnel will document the status so that the location of such pipelines can be identified in the future. This will include a brief description of the former utility use, diameter/dimension of the abandoned utility, depth of burial, and date of abandonment. At the completion of decommissioning and demolition, site grade will be returned to datum elevation as shown on existing drawings and sloped to existing stormwater drains to prevent accumulation and ponding of rainwater. All areas excavated during demolition will be backfilled with existing site material, and imported clean engineered fill, if necessary, to maintain the required site grade.

6 Disposition of Major Project Components

The proposed disposition of the major project components is summarized in Table 2. For each major Project component, a "Primary Approach" has been identified, which is the intended approach for disposition of that component. In some cases, an "Alternative Approach" has been identified, which would be implemented should the Primary Approach be infeasible due to market conditions or component condition.

Table 2 Summary of Decommissioning Approach

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Offsite Wind Turbines	Disconnect, disassemble / remove, and or sell to a new user	Demolish, size, and sell as recycled ferrous metal

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Energy Storage System	Disconnect, disassemble / remove, and or sell to a new user	Demolish, size, and sell as recycled ferrous metal
Air Separation Plant	Disconnect, disassemble / remove, and or sell to a new user	Demolish, size, and sell as recycled ferrous metal
Power Generators	Disconnect, disassemble / remove, and or sell to a new user	Demolish, size, and sell as recycled ferrous metal
Heat Exchangers	Disconnect, disassemble / remove, and or sell to a new user	Demolish, size, and sell as recycled ferrous metal
Battery Storage	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Stack Structures	Demolish, size, and sell as recycled ferrous metal	Demolish, size, and sell as recycled ferrous metal
Electrolyzers	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Step Up Transformers	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Ammonia Plant	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Transformers	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Generator Breakers	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Maintenance Building and Control Room Building	Demolish, size, and sell as recycled ferrous metal	NA

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Switchgear Building	Demolish, size, and sell as recycled ferrous metal	NA
Diesel Fire Pumps	Maintained on-site for operation during D&D operations	Disconnect, disassemble / remove, and sell to a new user
Emergency Generators (diesel)	Decommissioned and Stored for Possible Future Use	Disconnect, disassemble / remove, and sell to a new user
Cooling Tower Motors	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Water Treatment	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Cold Water Tanks	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Demin Water Tanks	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Ammonia Storage Tanks	Demolish, size, and sell as recycled ferrous metal	NA
Gas Treatment and Purification Facility	Demolish, size, and sell as recycled ferrous metal	NA
Fin Fan Coolers	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Circulating Water Pumps	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Cooling Tower Electrical Building	Disconnect, disassemble / remove, and sell to a new user	Demolish building and components and dispose of as C&D debris, ferrous, and non-ferrous material

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Canteen and Camps	Demolish, size, and sell as recycled ferrous metal	NA
Administration Building	Remains in Place	Demolish, size, and sell as recycled ferrous metal
Non-Reclaimable Wastewater Tank	Demolish, size, and sell as recycled ferrous metal	NA
Fire Protection System	Demolish, size, and sell as recycled ferrous metal	NA
Wind Towers	Demolish, size, and sell as recycled ferrous metal	NA
Wind Tower Foundations	Demolish, size, and sell as recycled ferrous metal as noted above	NA
Access Roads, bridges, culverts	Remain in place	NA
Solar Plant	Demolish, size, and sell as recycled ferrous metal	NA
Haul Road	Regrade the site to Town of Botwood requirements	NA
HV/MV Transmission Lines	Demolish, size, and sell as recycled ferrous metal	NA
High Pressure and Large Diameter Piping	Demolish, size, and sell as recycled ferrous metal.	NA

7 Schedule

It is anticipated that the decommissioning activities will take 16 -24 months by a qualified contractor. The timeline includes the preparation of planning documentation, detailed project and asset characterization activities, and equipment marketing activities.

Decommissioning and demolition will begin once a plan has been prepared and approved by the regulatory authorities.

8 Implementation of Decommissioning and Demolition Activities

The decommissioning and demolition of the Project will be completed in three consecutive phases. The work in each phase is described below:

Phase 1 (6-Month Estimated Duration) - The initial activities under Phase 1 will include disconnection of the Project from primary utilities including electrical supply from the switchyard, wind turbines, solar farms and grid. The water supply will also be isolated and purged. Once on-site systems and piping scheduled for demolition are confirmed purged and high voltage electricity is isolated additional Phase 1 activities will proceed which will include but not limited to:

- Removal of regulated materials including hazardous materials/waste and universal waste. This includes removal, containerization, profiling, manifesting and transport for off-site disposal of the following items:
- Lubricating and cooling oils removal/recovery from equipment scheduled for demolition/salvage;
- Universal waste removal including fluorescent lights, ballasts, batteries, mercury switches, etc.;
- Tank cleaning including removal of free liquids, sludges and tank bottoms; and
- Decommission and store onsite – equipment components listed for possible future reuse.

Phase 2 (8-12 Month Estimated Duration) – The perceived work in this phase will consist of the demolition and removal of all the hydrogen and ammonia trains, energy storage, transformer, molecular storage facilities, pipelines, structures, misc. equipment and all remaining ancillary structures to existing grade.

All equipment that can be sold and all ferrous and non-ferrous salvage material is deemed to generate sufficient funds to cover all the Asset Retirement Obligations for the project.

Phase 3 (1 - 5 Month Estimated Duration) - Phase 3 consists of the placement and compaction of backfill material and imported engineered backfill material in the required areas to meet the closure standards. The Project will also complete all capping of underground pipes that have deemed to remain in place from the demolition phases. Final grading of disturbed areas per the final grading design will be completed in this phase. All temporary safety fences will be removed, sanitary facilities demobilization, office and complete equipment/tools demobilization will occur.

After the completion of the decommissioning and demolition, the Project will issue a project close-out report and provide it to the Environmental Authorities. This report will document beginning and end-state property conditions, means and methods used in completing the work, field activity daily logs, records of material transport both on and off site (to include off-site waste, salvage and component shipments; as well as imported fill and other materials) and will be the basis of discharging the project from all its obligations.

At the end of the ARO, the property will be turned back to Crown Lands as per the lease/license agreements.

9 Capital Cost Estimate

The table below summarizes the total ARO cost that is expected for the EVREC project.

Item	Net Cost	Notes
Civil & Site Grading	($100,000,000)	Assuming minimal site grading, equipment bases removed 1 meter below grade, materials spread over roadway
Foundations & Buildings	($50,000,000)	Assume deep foundations are cut-off below grade and left in place.
Piping & Steel	($15,000,000)	Salvage price inclusive of demolition.
Electrical & Instrumentation	($3,300,000)	Salvage price inclusive of demolition.
Mechanical Equipment	($2,200,000)	Salvage price inclusive of demolition.
Balance of Plant	($80,000,000)	Catch-all for other plant decommissioning costs net any salvage value.
Warehouse for long-term storage items	($10,000,000)	For safe storage of transformers and other long term storage equipment.
Roadways, revegetation, etc	($20,000,000)	For decommissioning of quarries, borrow pits and revegetation if required
Wind Turbine, collector stations, spare parts	$389,143,800,	Assume Recovery at 15% of original capital
Energy Storage	$24,200,000	Assume Recovery at 5% of original capital
Hydrogen Plant	$146,980,000	Assume Recovery at 5% of original capital
Ammonia Plant	$87,600,000	Assume Recovery at 5% of original capital
Solar plant	$2,706,000	Assume Recovery at 2% of original capital
Electrical Transmission	$87,911,386	Assume Recovery at 15% of original capital
Indirect Costs	($90,000,000)	Permits, Engineering, Project Management and G&A costs over decommissioning period
Property Sale	$0	
Contingency & UAP	($30,000,000)	
Total ARO Estimate	$338,041,196	**+ reflects surplus cash**

Notes:

- All costs are in 2024 USD, no escalation is considered.
- This is a Class 4/ROM estimate (-20-50% / +30-50%), based on the current project design and definition.
- Positive number indicates a higher level of contingency as the financial model assumes a zero-cost base for decommissioning.

APPENDIX Q.8
Outfitters Environmental Effects Monitoring Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

OUTFITTERS ENVIRONMENTAL EFFECTS MONITORING PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, its professional advisers and contract staff engaged on the project that is specificically engaged in the project.

Contents

1. Introduction 4
   1.1 Guideline Requirements 4
   1.2 Purpose of this Document 4
   1.3 Aims and Objectives 5
2. Project Description 5
   2.1 Site Location 7
3. Outfitters in Newfoundland and Labrador 8
   3.1 Overview 8
4. Roles and Responsibilities 8
   4.1 EVREC 9
   4.2 Department of Forestry, Agriculture and Lands (NLFAL) 9
   4.3 Outfitters 9
5. Engagement Process and Methodology 10
   5.1 Engagement Strategy 10
   5.2 Engagement Methods 11
      5.2.1 Direct Correspondence and Meetings 11
      5.2.2 Project Mailing List 11
      5.2.3 Project Email Account 11
      5.2.4 Project Office 11
      5.2.5 Project Website 12
      5.2.6 Digital Engagement and Social Media 12
      5.2.7 Coordination with Regulators 12
   5.3 Documentation and Reporting 13
   5.4 Continuous Improvement 13
6. Mitigation and Conflict-Resolution Measures 13
   6.1 Typical Interaction Scenarios 13
   6.2 Mitigation Hierarchy and Decision Path 14
      Avoidance / Micro-siting 14
      Minimization 14
      Mitigation / Coordination 14
      Formalization 14
   6.3 Access & Co-existence Protocols Template 14

6.4 Information Sharing and Confidentiality 15
6.5 Dispute Resolution 15
6.6 Documentation and Verification 15
7. Monitoring, Reporting, and Evaluation 15
7.1 Monitoring Activities 16
7.2 Key Performance Indicators (KPIs) 16
7.3 Reporting 16
8. Data Management and Record Keeping 16
8.1 Engagement Register and Confidentiality 16
8.2 Data Retention and Integration 17
9. Monitoring, Revisions and Continuous Improvement 17
10. Company Information 17
11. References 18
12. List of Abbreviations 18

1. Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5-gigawatt (GW) green hydrogen Project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3.5 gigawatt (GW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1 Guideline Requirements

The Environmental Impact Statement (EIS) Guidelines require a description of the engagement by the Proponent (EVREC) with the Newfoundland and Labrador Outfitters Association (NLOA), concerns expressed by the NLOA and how those concerns are being addressed. The Outfitter Environmental Effects Monitoring Plan (OEEMP) outlines the potential environmental effects of the Project on licensed outfitters, measures to mitigate the effects, and monitoring plans for the life of the Project.

1.2 Purpose of this Document

This OEEMP has been developed to address the requirements of the Environmental Impact Statement (EIS) Guidelines and to fulfill commitments made during Project development to engage with registered outfitters in Management Area 15, which surrounds the Project area.

The purpose of this Plan is to:

- Identify existing licensed outfitters within the proposed project boundaries;
- Summarize the engagement efforts completed to date with licensed in the vicinity of the Project;
- Describe future engagement activities that will occur as Project design progresses;

- Identify and evaluate potential interactions between the Project footprint and the licensed outfitters; and
- Outline preliminary mitigation measures to avoid or minimize potential conflicts with licensed outfitters.

1.3 Aims and Objectives

The overarching aim of this Plan is to ensure that the EVREC Project is developed in a manner that is compatible with the identified registered outfitters through early communication, proactive mitigation, and transparent coordination with registered outfitters.

Specifically, the OEEMP will:

- Identify all registered outfitters within the Project boundaries and adjacent lands through consultation with the Wildlife Division of the NLFAL and NLTCAR
- Engage directly with the registered outfitters to inform them of Project activities, discuss potential overlap, and gather feedback on potential operational or access-related concerns;
- Record and address stakeholder input, including hunting locations/timing, access routes, water use, and future work programs;
- Develop preliminary mitigation measures to reduce land-use conflicts including micro-siting adjustments, access agreements, and shared-use protocols in consultation with NLFAL and affected outfitters;
- Facilitate coordination with other land users, including mineral, and recreational users, where overlapping interests occur;
- Provide a transparent record of communications and engagement outcomes to ensure accountability to both NLFAL and outfitters; and
- Define a process for ongoing engagement throughout the Project's construction, operation, and decommissioning phases to maintain open communication and address issues as they arise.

Through the implementation of this Plan, EVREC aims to:

- Strengthen collaboration with NLFAL and the outfitters;
- Minimize potential interference between Project infrastructure and hunting activities;
- Ensure equitable and respectful treatment of all parties; and
- Support the sustainable and responsible use of Crown land in alignment with the Province's hunting policies.

2. Project Description

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to

meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 Terawatt-hour (TWh) of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce approximately 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peters Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres (L) per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two 2,500 tonnes per day Haber-Bosch reactors to produce approximately 1 million tonnes of certified green ammonia every year. Nitrogen for the process will be sourced by two Air Separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- A 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- 1,100 MWh of battery storage for critical loads; and
- A 150 MW solar PV plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to ensure that electrolyzer feedwater quality requirements are met and that treated discharge water complies with regulatory standards prior to being discharge back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 above ground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below-ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former Asarco wharf, enabling simultaneous offloading of up to two vessels.

2.1 Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood. Approximate coordinates: Lat: 49.128°, Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111°, Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347°, Long: -55.346°.
- The marginal wharf is located at the former Asarco wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442°, Long: -55.3381°.
- Freshwater supply will come from Peters Pond.
    - Approximate coordinates: Lat: 49.088°, Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabright's Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: Lat: 49.2082°, Long: -55.5077°
    - Twin Lakes: Lat: 49.3041°, Long: -55.7968°
    - Seabright's Lake: Lat: 49.3231°, Long: -55.6567°
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

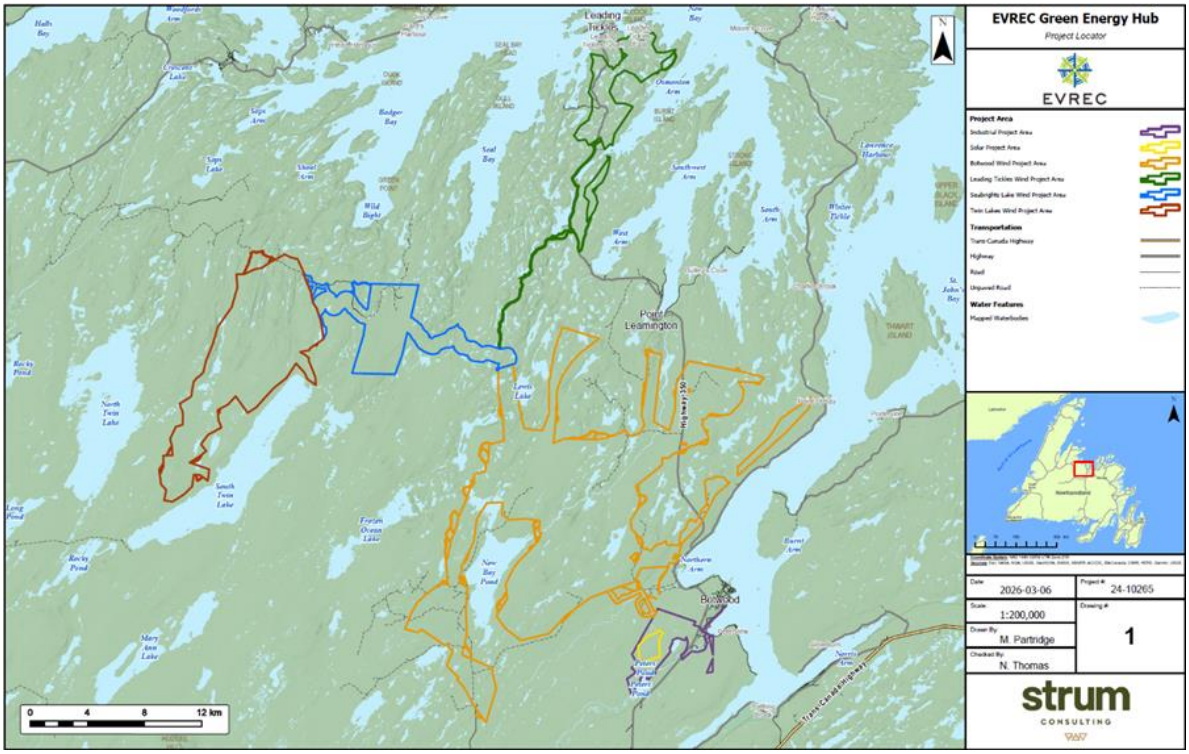

Figure 1: Project Area

3. Outfitters in Newfoundland and Labrador

3.1 Overview

Figure 2 reflects the buffers zones for the A1 Hunts, Hideaway Lodge and Oceanside Lodge, which are the three (3) outfitter operations in moose Area 15.

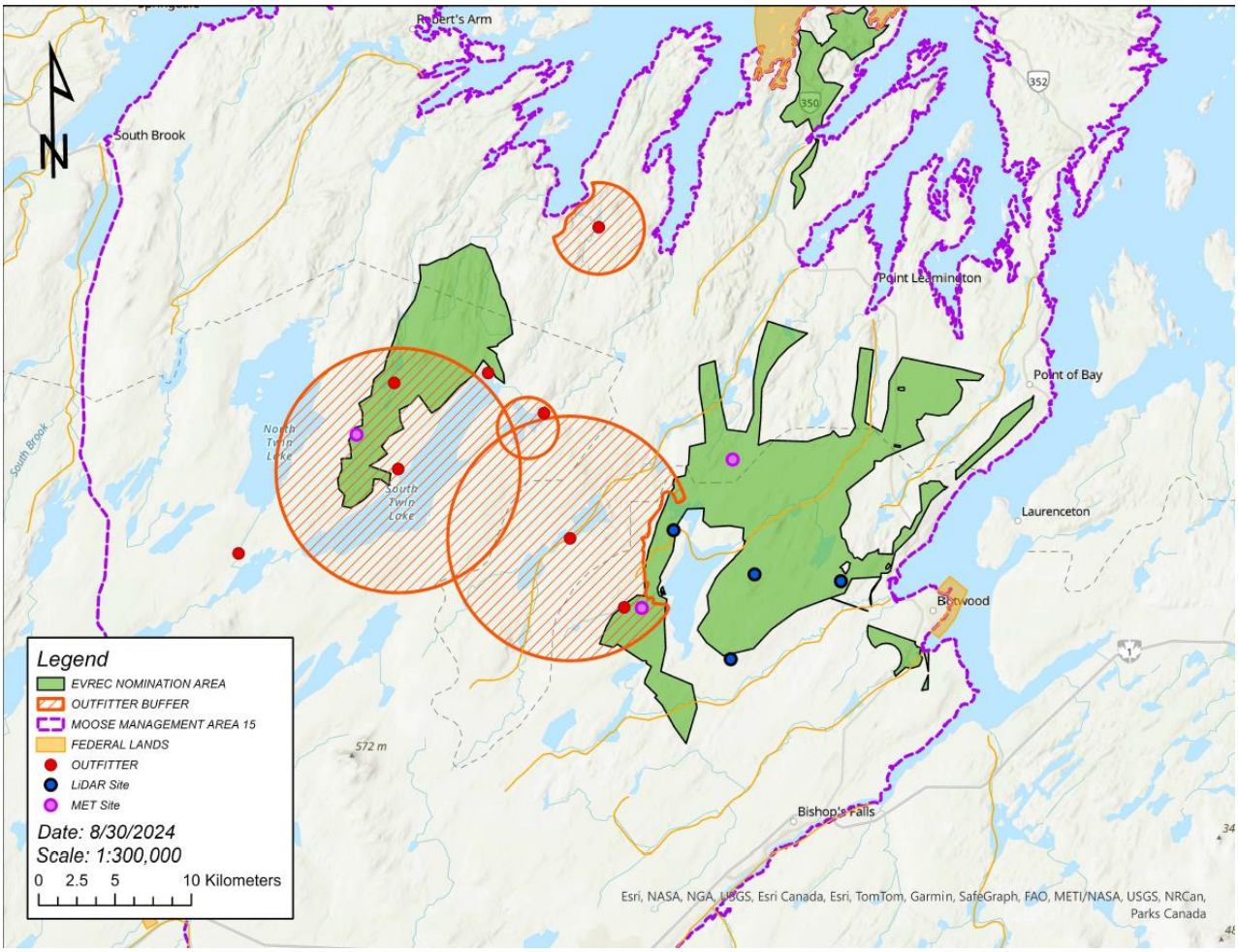

Figure 2: Outfitter Buffer Zones

4. Roles and Responsibilities

The effective implementation of the OEEMP is founded on collaboration, transparency, and accountability among EVREC, NLFAL, NLOA, and registered outfitters.

Each party's responsibilities are outlined below to ensure that engagement is well-coordinated, consistent with regulatory expectations, and responsive to stakeholder input.

4.1 EVREC

EVREC is the Plan Owner and is ultimately responsible for ensuring that all outfitter engagement activities are undertaken in accordance with this OEEMP, the EIS Guidelines, and relevant legislation.

Responsibilities:

- Maintain open and proactive communication with registered outfitters and NLFAL to identify potential conflicts or overlaps.
- Establish and maintain an Outfitters Engagement Register to record all correspondence, meeting outcomes, and mitigation measures.
- Provide advance notification of Project schedules, access development, and earthworks to registered outfitters and NLFAL.
- Respond promptly and factually to stakeholder inquiries and maintain consistent messaging across Project teams.
- Integrate outfitter engagement outcomes into the broader Engagement and Participation Plan (EPP) and Commitments Register.
- Update this OEEMP as Project design changes.

4.2 Department of Forestry, Agriculture and Lands (NLFAL)

The Department of Forestry, Agriculture and Lands is the primary provincial regulator overseeing the issuance of hunting licences in Newfoundland and Labrador.

Responsibilities:

- Provide EVREC with up-to-date data on active hunting permits within, and adjacent to, the Project Area.
- Facilitate communication between EVREC and outfitters as needed.
- Review and provide input on proposed Project mitigation measures where hunting permits/licenses/leases are affected.
- Participate in or observe meetings between EVREC and rights holders, when requested.
- Advise on best practices for maintaining safe, equitable coexistence between renewable energy development and outfitter activities.
- Support conflict-resolution processes when competing land uses are identified.

4.3 Outfitters

Outfitters within or adjacent to the Project Area are key stakeholders with legal rights to explore or develop mineral resources under license or lease agreements with the Province.

Responsibilities:

- Review Project information provided by EVREC and identify potential conflicts, concerns, or overlapping areas of activity.
- Provide relevant information to EVREC regarding current or planned hunting/guiding activities and access routes.
- Participate in bilateral or group meetings to discuss mitigation measures or coexistence arrangements.
- Respect confidentiality and proprietary data boundaries during consultation.
- Communicate updates to NLFAL, NLOA and NLTCAR if permit ownership, boundaries, or activity levels change.

5. Engagement Process and Methodology

This section outlines the methods, tools, and sequencing that EVREC will use to engage outfitters and NLFAL potentially affected by the Project.

The engagement process emphasizes clear communication, transparency, and early coordination to identify concerns and define appropriate mitigation strategies.

5.1 Engagement Strategy

The engagement approach for mineral and associated resource users is designed to:

- Establish early and ongoing communication with affected and interested parties;
- Provide timely and accurate Project information in plain language;
- Document all feedback and integrate it into Project planning; and
- Maintain a transparent and traceable record of engagement through to decommissioning.

Engagement activities will be implemented in three key phases:

Table 5.1: Phased Engagement Strategy Overview

Phase	Timing	Focus	Typical Activities
Pre-construction (EIS / Front-End Engineering Design [FEED])	Pre-2027	Identification of outfitters, NLFAL coordination, initial correspondence, meetings, and data verification.	Issue introductory letters, conduct mapping reviews, log responses, prepare avoidance/mitigation plans.
Construction & Operations	2027–2060	Maintain communication during roadwork, access changes, and facility construction; coordinate schedules and access.	Notice of work, site meetings, email updates, joint inspections, adjustment of mitigation as needed.
Decommissioning / Rehabilitation	Post-2060	Maintain engagement through closure planning and reclamation to ensure mutual understanding of land use outcomes.	Notifications, closure meetings, data sharing, documentation of lessons learned.

5.2 Engagement Methods

EVREC will use multiple communication channels and mechanisms to reach mineral rights holders, exploration companies, and other land users.

All correspondence will be recorded in the Engagement Register and logged against the stakeholder's contact entry.

5.2.1 Direct Correspondence and Meetings

- Initial Notification Letters: Sent to all identified outfitters, summarizing the Project scope, potential overlaps, and EVREC contact information.
- Follow-Up Calls or Virtual Meetings: Used to clarify technical details, review maps, and discuss potential mitigation measures.
- In-Person Meetings / Site Visits: Conducted when direct coordination is needed to address overlapping claims, road access, or timing conflicts.

Meeting outcomes will be summarized in a Consultation Record Form and uploaded to the Engagement Register.

5.2.2 Project Mailing List

A Project contact and mailing list has been developed and will be updated as engagement progresses. The list will include contact information for outfitters and NLFAL officials.

Regular updates will be distributed to the mailing list to notify recipients of Project milestones, construction activities, or planned meetings.

The list will be maintained by EVREC's Community and Resource Engagement Coordinator and will comply with privacy regulations.

5.2.3 Project Email Account

A dedicated email account has been established to streamline correspondence: info@evrec.ca

- Accessible to EVREC's engagement and technical staff.
- Used for sending notices, receiving questions or comments, and providing follow-up responses.
- Mentioned in all public and rights-holder notices, newsletters, and meetings.

5.2.4 Project Office

EVREC's Community Office in Botwood serves as the main in-person contact point for stakeholders.

This office will be used to:

- Provide printed maps and mineral-tenure overlap diagrams;
- Host smaller meetings with rights holders or forestry permittees; and
- Receive written submissions or forms related to access coordination.

Operating hours and contact details will be posted publicly.

5.2.5 Project Website

EVREC will maintain a Project-specific webpage within its corporate site (https://evrec.ca), which will:

- Provide project updates, maps, and current engagement status;
- Host downloadable notices and newsletters;
- Include contact forms for questions or feedback; and
- Summarize how stakeholder feedback is considered during design and construction.

A calendar of engagement milestones and public events will also be posted on the website.

5.2.6 Digital Engagement and Social Media

The Project will make use of EVREC's LinkedIn and Facebook accounts for proactive notifications, such as:

- Announcement of new public materials or notices;
- Updates on construction schedule and site access; and
- Invitations to participate in engagement meetings or community sessions.

Social-media channels will be used for notification only; feedback will be directed to the Project email or office for official response and documentation.

5.2.7 Coordination with Regulators

EVREC will maintain regular contact with NLFAL to share updated maps, stakeholder feedback, and mitigation commitments.

Joint meetings may be organized at key milestones to ensure alignment between woodcutting permit holders and rights and Crown-lands management processes.

5.3 Documentation and Reporting

All engagement activities will be logged in the Outfitters Engagement Register and summarized in quarterly or milestone reports.

Each entry will include:

- Stakeholder name and contact;
- Type of engagement (meeting, call, letter, email);
- Date, topic, and participants;
- Key issues raised;
- Agreed actions or follow-up commitments; and
- Current status (open, ongoing, closed).

Quarterly summaries will be shared internally with EVREC management and externally with NLFAL upon request.

5.4 Continuous Improvement

The engagement process will be reviewed annually to:

- Evaluate the effectiveness of communication tools and channels;
- Update stakeholder lists and contact protocols;
- Identify recurring issues and lessons learned; and
- Implement corrective actions or new strategies as needed.

Updates will be documented in a Revision Log appended to this Plan.

6. Mitigation and Conflict-Resolution Measures

EVREC will manage potential interactions between Project works and outfitters using a tiered approach:

1. Avoid
2. Minimize
3. Mitigate/Coordinate
4. Formalize (agreement & monitoring)

Mitigation will be selected in collaboration with NLFAL and the affected permit holder(s) and documented in the Outfitters Engagement Register and Commitments Register.

6.1 Typical Interaction Scenarios

Common touchpoints between Project infrastructure and outfitters include:

- Access roads / upgrades crossing cutting permits or active programs;
- Transmission and collection corridors cutting permits or active programs;
- Quarries / borrow sources in cutting permits or active programs;
- Temporary laydowns and staging overlapping cutting permits or active programs;
- Seasonal timing conflicts (cutting windows vs. construction windows); and
- Information confidentiality (work plans, locations, schedules).

6.2 Mitigation Hierarchy and Decision Path

Avoidance / Micro-siting

- Re-align road centerlines or pole placements to skirt active permits or planned work areas.
- Adjust laydown boundaries to preserve access corridors.

Minimization

- Reduce construction footprint (narrowed right-of-way [ROW]; temporary matting).
- Use existing disturbed corridors wherever practicable.

Mitigation / Coordination

- Access & Co-existence Protocols (Section 6.3) for shared roads and corridors.
- Schedule coordination: windows to allow drill moves/geophysics lines; advanced notice.

Formalization

- Road-use / Crossing Agreements, Notices, MOUs, or Letter of Non-Objection as appropriate.
- Record measures in the Engagement Register and Commitments Register with owners and dates.

6.3 Access & Co-existence Protocols Template

Table 6.1: Access and Co-Existing Protocol Template

Topic	Protocol / Standard
Notice	EVREC to provide ≥ 30 days written notice before road works or blasting near licensed ground; rights holder to give ≥30 days' notice before drill mobilizations within 500 m of Project corridors.
Traffic Management	Call-in on common radio channel; speed limits; signage; scheduled windows for wide loads.
Safety & Induction	Visiting crews receive site induction (traffic, blasting schedules, contacts, Emergency Response Plan (ERP)).
Corridor Etiquette	Keep line grids and flagged stations clear of active road surfaces; EVREC to clearly mark construction zones and detours.
Emergency Coordination	ERP contacts exchanged; 24/7 call tree posted; joint response if incident affects shared corridor.

Topic	Protocol / Standard
Dispute Escalation	Supervisor to supervisor → EVREC Mineral Engagement Lead → NLFAL liaison if unresolved.

6.4 Information Sharing and Confidentiality

- EVREC will share sufficient mapping/scheduling to ensure safety and coordination, while respecting proprietary exploration data.
- Mutual NDA templates may be used where more detailed information is required (e.g., planned drill collars, detailed road alignments).
- All commitments and constraints are to be logged and circulated to relevant supervisors.

6.5 Dispute Resolution

Minor disputes should be resolved at the field level wherever safe and practical. If unresolved within 30 business days, escalate to:

1. EVREC 's Facility Manager and the respective Outfitter;
2. If still unresolved, refer to NLFAL for facilitated discussion; or
3. As a last resort, invoke formal processes available under applicable statutes or agreements.

6.6 Documentation and Verification

Use the Consultation Record Form to capture each interaction and the mitigation agreed.

Maintain a Mitigation Tracking Table for all known overlap areas:

Table 6.2: Consultation Record Form Template (Sample)

Location / Chainage	Interaction Type	Rights Holder	Mitigation Selected	Agreement Type	Owner	Due Date / Status
KP ___	Road–licence crossing	Licence ___	Micro-site road 60 m east; signage; 14-day notice	Road-use letter	Site Eng.	Open
KP ___	Quarry–prospective ground	Licence ___	Buffer 150 m; schedule window Aug–Sep	MOU	Const. Mgr	Closed

7. Monitoring, Reporting, and Evaluation

Ongoing monitoring and transparent reporting will ensure that engagement with mineral rights holders and resource users remains effective and that all commitments are implemented as intended.

7.1 Monitoring Activities

EVREC will monitor the progress of engagement and mitigation through:

- Quarterly reviews of the Outfitter Engagement Register;
- Verification of mitigation actions agreed with Outfitters and NLFAL (e.g., access signage, buffer enforcement, scheduling notices);
- Site inspections to confirm that access or safety measures are functioning; and
- Follow-up communication with Outfitters to validate satisfaction with implemented measures.

7.2 Key Performance Indicators (KPIs)

Table 7.1: KPIs to be Monitored

Indicator	Target / Measure	Frequency	Responsible
Number of outfitters engaged	100% of identified holders	Quarterly	EVREC Engagement Lead
Response timeliness to outfitters inquiries	≤ 10 business days	Continuous	Community Relations
Mitigation commitments closed	≥ 90% by next audit	Quarterly	Environmental Manager
Stakeholder satisfaction (post-consultation feedback)	≥ 80% positive rating	Annual	EVREC/NLEM joint review

7.3 Reporting

- Quarterly internal reports to EVREC management summarizing engagements, outstanding issues, and mitigation updates.
- Annual summary reports shared with NLFAL outlining status of overlaps, dispute resolutions, and key metrics.
- Annual EIS compliance update to the Department of Environment, Conservation and Climate Change (NLECCC) as part of EVREC's environmental and social performance reporting.

8. Data Management and Record Keeping

8.1 Engagement Register and Confidentiality

All communications, meetings, and written correspondence will be logged in EVREC's Outfitter Engagement Register (SharePoint/Procore platform).

Each record will include:

- Date, participants, and meeting type;
- Key discussion points and commitments;
- Follow-up actions and responsible persons; and
- Status (open, in progress, closed).

Sensitive commercial information from rights holders will be treated as confidential and stored in restricted-access folders. Only authorized EVREC personnel will have editing rights.

8.2 Data Retention and Integration

- Engagement records will be retained for a minimum of 7 years after Project completion or as required by NLECCC/NLFAL.
- Information will be integrated with the main Consultation Database used for the EPP to maintain consistency across all EVREC stakeholder engagement plans.

9. Monitoring, Revisions and Continuous Improvement

This OEEMP is a controlled document that will evolve with Project development and feedback from stakeholders and regulators.

Revisions may be triggered by:

- Changes in Project layout or schedule affecting outfitter overlap;
- New stakeholder information or access requests; or
- Lessons learned from monitoring and evaluation.

Each revision will:

- Be logged in the Revision Control Sheet;
- Include an updated Table of Contents and version number; and

10. Company Information

Contact information for EVREC is provided below:
Exploits Valley Renewable Energy Corporation
Contact: Dean Comand

Mailing Address:
181 Bay Street
Toronto, ON M5J 2V1
Telephone: 1 709 257 2344
Email: info@evrec.ca

11. References

Government of Newfoundland and Labrador. Crown Lands Act, RSNL 1990, c. C-38.
Government of Newfoundland and Labrador. Wildlife Act, RSNL 1990, c. W-8.
Government of Newfoundland and Labrador. Forestry Act, RSNL 1990, c. F-23.
Government of Newfoundland and Labrador. Environmental Protection Act, SNL 2002, c. E-14.2.
Government of Newfoundland and Labrador. Environmental Assessment Regulations, 2003 (NLR 54/03).
Government of Newfoundland and Labrador. Lands Act and associated Crown Lands policies and procedures (as applicable).
Government of Newfoundland and Labrador. Access to Information and Protection of Privacy Act, 2015 (ATIPPA).

12. List of Abbreviations

Abbreviation	Definition
EIS	Environmental Impact Statement
ERP	Emergency Response Plan
EVREC	Exploits Valley Renewable Energy Corporation
FEED	Front-End Engineering Design
GHG	Greenhouse Gas
GW	Gigawatt
KPI(s)	Key Performance Indicator(s)
MOU	Memorandum of Understanding
MW	Megawatt
NDA	Non-Disclosure Agreement
NL	Newfoundland and Labrador
NLECCC	Newfoundland and Labrador Department of Environment, Conservation and Climate Change
NLEM	Newfoundland and Labrador Department of Energy and Mines
NLFAL	Newfoundland and Labrador Department of Forestry, Agriculture and Lands
NLOA	Newfoundland and Labrador Outfitters Association
NLTCAR	Newfoundland and Labrador Tourism, Culture, Arts and Recreation
OEEMP	Outfitter Environmental Effects Monitoring Plan
PV	Photovoltaic
RFNBO	Renewable Fuels of Non-Biological Origin
ROW	Right-of-Way
TWh	Terawatt-hour

APPENDIX Q.9
Erosion and Sediment Control Plan – Table of Contents

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

EROSION AND SEDIMENT CONTROL PLAN – TABLE OF CONTENTS

May 2026

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Annotated Table of Contents

Erosion and Sediment Control Plan (ESCP)

Exploits Valley Renewable Energy Corporation (EVREC)

1.0 Introduction

Provides the purpose and scope of the ESCP, including regulatory context and overall intent to manage erosion and sedimentation risks across all project phases.

1.1 Project Overview

Summarizes the EVREC project, including major components (wind, solar, hydrogen/ammonia facilities, and port infrastructure) and overall scale.

2.0 Objectives

Defines the key environmental and compliance objectives of the ESCP, including erosion prevention, habitat protection, and regulatory adherence throughout the project lifecycle.

3.0 Regulatory Framework

Outlines all applicable legislation, guidelines, and standards governing erosion and sediment control for the project.

3.1 Federal Regulations

Summarizes relevant federal legislation (e.g., Fisheries Act, CEPA, Impact Assessment Act) and their implications for project compliance.

3.2 Provincial Regulations (Newfoundland and Labrador)

Details applicable provincial legislation and requirements related to environmental protection and water resources.

3.3 Guidelines and Standards

Identifies best practice guidance documents and technical standards that inform ESCP implementation.

4.0 Site Description

Describes the physical and environmental characteristics of the project area, including location, topography, soils, climate, and sensitive environmental features.

5.0 Potential Erosion and Sedimentation Risks

Identifies key sources of erosion and sedimentation across project components (wind, solar, industrial facilities) and environmental conditions.

6.0 Erosion and Sediment Control Measures

Defines mitigation strategies across all project phases to prevent or minimize erosion and sedimentation impacts.

6.1 Pre-Construction Measures

Outlines planning and preparatory actions such as environmental assessments, buffer zones, permitting, and access design.

6.2 Construction Phase Measures

Details active mitigation measures during construction, including silt fences, sediment basins, matting, stormwater controls, dust suppression, and stabilized entrances.

6.3 Post-Construction Measures

Describes site restoration and long-term stabilization measures, including revegetation, drainage systems, and habitat restoration.

7.0 Monitoring and Maintenance

Establishes inspection protocols, maintenance requirements, water quality monitoring, and record-keeping procedures to ensure effectiveness of control measures.

8.0 Emergency Response Plan

Defines response procedures for erosion-related incidents, spills, and sedimentation events, including reporting requirements and coordination with regulators.

9.0 Roles and Responsibilities

Identifies key personnel and stakeholders responsible for implementing, monitoring, and maintaining the ESCP (e.g., Project Manager, QEP, Contractors).

10.0 Conclusion

Summarizes the ESCP's role in ensuring environmental protection and regulatory compliance throughout the project lifecycle.

APPENDIX Q.10

Groundwater and Surface Water Monitoring Management Plan – Table of Contents

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

GROUNDWATER AND SURFACE WATER MONITORING MANAGEMENT PLAN – TABLE OF CONTENTS

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps be taken to ensure that information contained in this response will be made available only to the receiving party, its professional advisers and contract staff who are specifically engaged in the project.

Table of Contents

Groundwater and Surface Water Monitoring and Management Plan

Exploits Valley Renewable Energy Corporation (EVREC)

1.0 PROJECT DESCRIPTION
- 1.1 Project Overview
- 1.2 Purpose & Regulatory Context
- 1.3 Scope of the Plan
- 1.4 Description of Site Activities
- 1.5 Timeline of Activities
- 1.6 Revision and Document Control

2.0 ROLES AND RESPONSIBILITIES
- 2.1 Construction Manager
- 2.2 Area Lead
- 2.3 Inspectors/Monitors

3.0 POTENTIAL SURFACE AND GROUNDWATER POLLUTANTS

4.0 DRAINAGE CONTROLS
- 4.1 Erosion and Sediment Control
- 4.2 Swales
- 4.3 Drainage Ditches
- 4.4 Check Dams (Sediment Traps)
- 4.5 Rock Dissipation Berm
- 4.6 Level Spreaders
- 4.7 Culverts
- 4.8 Sediment Basins

5.0 CONTROL & MITIGATION MEASURES
- 5.1 Avoidance Controls
- 5.2 General Mitigations and Housekeeping
- 5.3 Runoff Control
- 5.4 Discharge Limits for Surface Water Sampling
- 5.5 Contingency Plan

6.0 CONSIDERATIONS FOR WORK IN OR NEAR WATERBODIES
- 6.1 In-water Works

7.0 EROSION/SEDIMENT CONTROL AND MANAGEMENT MONITORING
- 7.1 Inspection Requirements
- 7.2 Maintenance Requirements

8.0 GROUNDWATER MONITORING NETWORK DESIGN
- 8.1 Well Placement
- 8.2 Drilling Methodology
- 8.3 Well Development
- 8.4 Hydraulic Testing

9.0 GROUNDWATER AND SURFACE WATER MONITORING
- 9.1 Monitoring Parameters

9.2 Monitoring Frequency
9.3 Monitoring Methodology
9.3.1 Well Level Measurements
9.3.2 Purging Methods
9.3.3 Sample Collection Techniques
10.0 REPORTING & RECORD KEEPING
11.0 CONTIGENCY PLAN
12.0 COMPANY INFORMATION
13.0 STATEMENT OF QUALIFICATIONS AND LIABILITY
14.0 REFERENCES

LIST OF TABLES
LIST OF APPENDICES

APPENDIX Q.11
Hazardous Materials Response & Training Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

EVREC

HAZARDOUS MATERIALS RESPONSE & TRAINING PLAN

May 2026

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Table of Contents

1. Introduction 4

1.1. Guidelines Requirements 4

1.2. Purpose of this Document 4

1.3. Aims and Objectives 5

1.4. Hierarchy and Application 6

2. Project Description 6

2.1. Site Location 8

3. Environmental Legislation 9

3.1. Federal Legislation and Regulations 9

3.2. Provincial Legislation and Regulations 9

3.3. Industry Standards and Guidance 10

3.4. Corporate and Project-Level Integration 11

4. Roles and Responsibilities 11

4.1. EVREC 11

4.2. Environmental Manager / HSE Manager 12

4.3. Site Supervisors and Foremen 12

4.4. Contractors and Subcontractors 12

4.5. Trainers and Third-Party Providers 13

4.6. Employees and Workers 13

4.7. Regulatory Authorities 13

5. Training Requirements and Competency 13

5.1. General Orientation 14

5.2. Health, Safety, and Environmental (HSE) Training 14

5.2.1. Employee Training 14

5.2.2. Emergency Response Team (ERT) Training 15

5.2.3. Provincial Regulatory HSE Training 15

5.3. Training Records and Documentation 16

5.4. Minimum Qualification Requirements 16

5.5. Proof of Competency 16

5.6. Refresher and Supplemental Training 16

6. Existing Resources and Training 17

6.1. Existing Emergency Response Resources 17
6.2. Training Programs 17
6.3. Coordination with External Agencies 18
7. Emergency Resources Required 19
7.1. Equipment Accessibility and Readiness 19
7.2. Primary Emergency Response Equipment 19
7.3. Emergency Response Vehicles 20
7.4. Maintenance and Inspection Program 21
7.5. Inventory Management 21
7.6. Storage and Security 22
7.7. Decontamination and Waste Interface 22
8. Monitoring, Auditing, and Continuous Improvement 22
8.1. Objectives 22
8.2. KPIs Measured 23
8.3. Drills and Exercises 23
8.4. Inspections & Record Reviews 23
8.5. Audit Program 24
8.6. Competency Maintenance & Recertification 24
8.7. Reporting and Management Review 24
8.8. Continuous Improvement 24
8.9. Plan Revision Control 24
9. Company Information 25
10. Document Management 25
11. Distribution 25
12. Reference Documents 25

1. Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt3.5-gigawatt (GW) green hydrogen Pproject in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3,54,000+megawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. Guidelines Requirements

The Environmental Impact Statement (EIS) guidelines requested a Hazardous Materials Response and Training Plan (HMRTP) that describes how fire fighters and first responders in local areas and along transportation routes will be trained to the appropriate National Fire Protection Association (NFPA) Codes and Standards (e.g., NFPA 1072 Hazardous Materials Technician) and any other related codes necessary to execute a Hazardous Materials Response. Vehicles and hazardous materials equipment needed to execute an effective Hazardous Materials Response shall be identified in the plan. In accordance with the requirements of the *Fire Protection Services Act*, training shall meet the approval of the Fire Commissioner.

1.2. Purpose of this Document

This HMTP establishes EVREC's methods to plan, deliver, document, and maintain competencies for all personnel involved in the handling, storage, use, transport, and emergency response of hazardous materials throughout all Project phases — construction, operation & maintenance (O&M), and decommissioning & rehabilitation.

The Plan applies to all EVREC Project components, including the wind project areas, collection/gathering and transmission systems, industrial facility (electrolyzers, air separation units, ammonia trains, utilities, hydrogen storage, and battery energy storage system BESS), solar facility, water intake and pipeline systems, warehousing and laydowns, and the Port of Botwood terminal interface.

Training requirements outlined in this Plan ensure that all personnel — EVREC staff, contractors, and subcontractors — possess the knowledge and skills necessary to safely manage hazardous substances and respond effectively to emergencies in compliance with applicable federal and provincial legislation, including the Transportation of Dangerous Goods (TDG) Regulations, Workplace Hazardous Materials Information System (WHMIS) 2015, and the NL Storage and Handling of Gasoline and Associated Products Regulations (58/03).

The EVREC Health, Safety, and Environmental (HSE) Management Team, supported by qualified trainers and subject-matter experts, will provide oversight and guidance to ensure that hazardous material activities are planned and executed in accordance with regulatory requirements, corporate policies, and EVREC's overarching goal of safe, environmentally responsible operations and continual improvement.

1.3. Aims and Objectives

Overall, this HMTP provides guidance on the acceptable practices for the training, competency development, and awareness of personnel engaged in the handling, storage, transportation, and emergency response of hazardous materials throughout the EVREC Project lifecycle. It is intended to serve as both a reference document for planning and executing training activities and a guidance tool for ensuring consistent compliance and preparedness across all Project areas.

This HMTP currently focuses on the construction and operational phases of the Project. As the Project nears the end of its operational timeline, subsequent revisions will incorporate detailed training requirements for decommissioning, dismantling, and rehabilitation activities, consistent with the Asset Retirement Obligation (ARO) Plan and the Emergency Response Plan (ERP).

The Plan shall be made available to all EVREC staff, contractors, and subcontractors to ensure that each individual understands and fulfills their responsibilities in maintaining the highest standards of safety and environmental protection when managing, transporting, or responding to incidents involving hazardous substances.

Specifically, this HMTP will:

- Provide a reference to applicable legislative and regulatory requirements governing hazardous materials management and training, including WHMIS 2015,

Transportation of Dangerous Goods (TDG) Regulations, Occupational Health and Safety Regulations (NL), and relevant CSA and NFPA standards;

- Establish a structured training framework for all workers who handle, store, transport, or supervise hazardous materials during construction, operation, and decommissioning phases;
- Ensure competency through a combination of formal instruction, site-specific orientation, vendor-supplied technical training, and on-the-job coaching for all relevant personnel;
- Define procedures for verifying and documenting training records, certifications, and refresher intervals to demonstrate compliance with regulatory requirements;
- Support emergency preparedness and response capability by ensuring all workers understand the hazards of materials on site, the use of Safety Data Sheets (SDS), and the actions required during spills, releases, or fires; and
- Establish a revision and communication process to ensure that changes to training requirements, legislative updates, or hazardous-materials inventory adjustments are consistently reflected and communicated across all responsible parties.

1.4. Hierarchy and Application

The hazardous materials training requirements and procedures outlined in this Plan shall be implemented in conjunction with the terms and conditions of all applicable permits, licenses, and regulatory approvals issued under federal and provincial legislation, including but not limited to requirements under the Transportation of Dangerous Goods (TDG) Regulations, Workplace Hazardous Materials Information System (WHMIS 2015), and the Occupational Health and Safety Regulations (NL).

Where any inconsistency or conflict arises between this Plan and a permit, license, or condition issued by a regulatory authority, the conditions imposed by that authority shall take precedence over the contents of this Plan.

All training, competency verification, and recordkeeping activities described herein will be integrated within EVREC's Health, Safety, and Environmental Management System (HSEMS) to ensure alignment with other key management plans, including the Emergency Response Plan (ERP), Waste Management Plan (WMP), and Erosion and Sediment Control Plan (ESCP). EVREC will ensure that any revisions to relevant regulations, industry standards, or corporate policies are promptly reviewed and incorporated into this Plan, and that updated training requirements are communicated to all affected personnel and contractors.

2. Project Description

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two air separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- 1000 MWh of battery storage for critical loads; and
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to achieve the electrolyzer feedwater quality requirements, and that treated discharge water complies with regulatory standards prior to being discharged back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood. Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant. Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood. Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood. Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond. Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood. Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

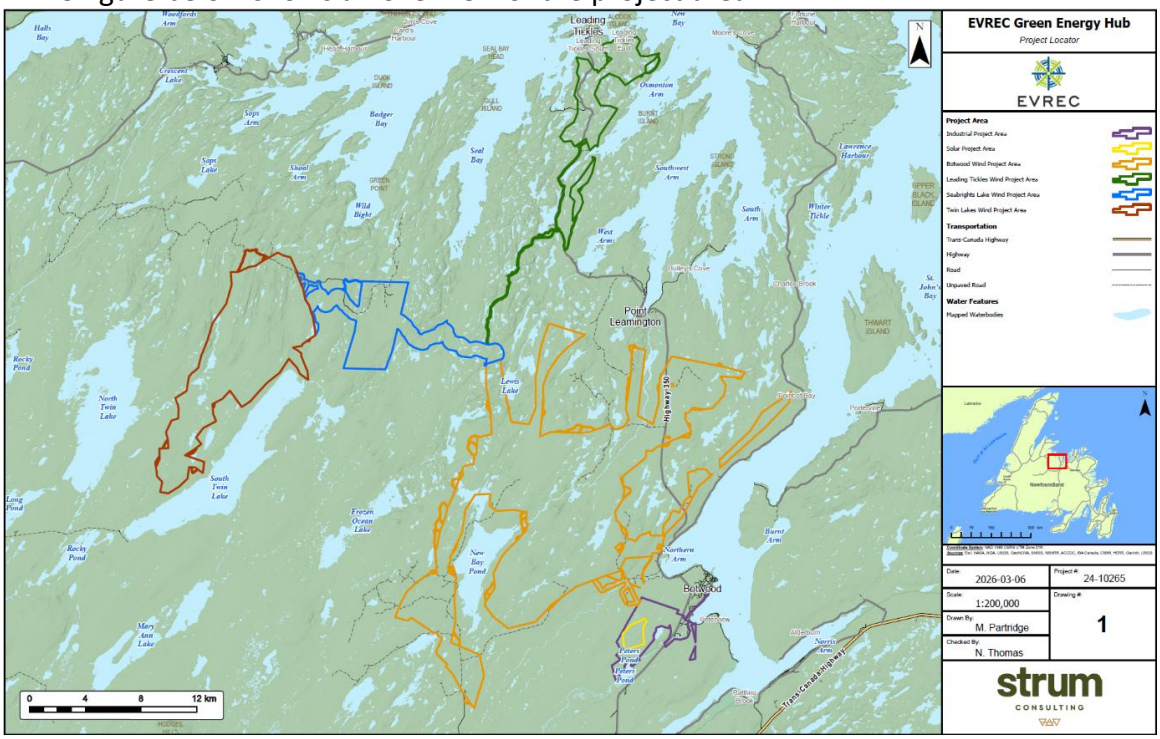

Figure 2.1: Overview of Project Lands

3. Environmental Legislation

This HMTP is designed to ensure compliance with all applicable federal and provincial legislation, regulations, and industry standards governing the handling, storage, transportation, and emergency response of hazardous materials.
EVREC recognizes that the safe management of hazardous substances requires strict adherence to both the legal framework and the company's own corporate HSE policies. Where requirements differ, the most stringent standard shall apply.

In all cases, if a discrepancy exists between this Plan and any regulatory permit, license, or approval, the conditions and limitations imposed by the relevant authority will take precedence.

3.1. Federal Legislation and Regulations

- Transportation of Dangerous Goods Act and Regulations (TDGA, S.C. 1992, c.34)
    - Establishes the legal requirements for classification, packaging, documentation, labelling, placarding, and training of personnel handling or transporting dangerous goods in Canada.
    - Mandates that all workers who handle, offer for transport, or transport dangerous goods receive approved TDG training and certification, and that records of certification be retained for at least three years.
- *Canadian Environmental Protection Act* (CEPA, 1999)
    - Governs pollution prevention and management of hazardous substances, including requirements for spill prevention and reporting under the Environmental Emergency Regulations.
- Workplace Hazardous Materials Information System (WHMIS 2015)
    - National system under the Hazardous Products Act and Hazardous Products Regulations requiring that all hazardous products used, stored, or handled in the workplace have proper labelling, SDS, and that employees receive WHMIS training and education appropriate to their work.
- *Fisheries Act* (R.S.C., 1985, c. F-14)
    - Prohibits the deposit of deleterious substances into waters frequented by fish.
    - Relevant to the management of spills or releases of hazardous materials that could affect aquatic environments.
- Canada Labor Code – Part II (Occupational Health **a**nd Safety)
    - Provides minimum standards for safe handling of hazardous substances and requires training to ensure worker competence.

3.2. Provincial Legislation and Regulations

- *Environmental Protection Act* (SNL 2002 cE-14.2)

    - Establishes the general environmental protection framework and requirements for the control, reporting, and remediation of spills of hazardous substances.
- Storage and Handling of Gasoline and Associated Products Regulations, 2003 (NL Reg. 58/03)
    - Defines standards for installation, operation, and inspection of fuel and chemical storage systems; includes operator and inspector competency expectations.
- Used Oil Control Regulations, 2002 (NL Reg. 82/02)
    - Governs collection, storage, and recycling of used oil and filters.
    - Requires trained personnel to manage storage and transfers safely.
- Occupational Health and Safety Act and Regulations (NL Reg. 5/12)
    - Requires employers to provide training, instruction, and supervision necessary to protect workers from exposure to hazardous materials.
    - Mandates that employers implement WHMIS 2015 training and maintain accessible SDS.
- *Water Resources Act* (SNL 2002 cW-4.01)
    - Applicable to emergency response and prevention of hazardous-material spills into water bodies, including permitting and contingency planning requirements.
- *Fire Protection Services Act* (SNL 2008 cF-11.01)
    - Defines requirements for hazardous materials emergency preparedness, fire suppression, and training certification.

3.3. Industry Standards and Guidance

EVREC will ensure that hazardous materials training and emergency-response programs meet or exceed the following recognized industry standards:

- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications (Awareness, Operations, Technician levels).
- NFPA 472 : Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.
- CSA Z731: Emergency Planning for Industry – establishes best practices for preparedness, response, and recovery training.
- CSA Z1006: Management of Work in Confined Spaces – for tasks involving hazardous-atmosphere entry.
- CSA B620/B621: Highway Tanks and Portable Tanks for Dangerous Goods – operator training for bulk transport of dangerous goods.
- ISO 45001: Occupational Health and Safety Management System – integration of training and competence into risk management frameworks.

3.4. Corporate and Project-Level Integration

EVREC's corporate HSEMS integrates all regulatory and training obligations into a single competency framework.
This HMTP aligns with the following companion documents and systems:

- Emergency Response Plan (ERP) – defines incident-level actions and drills.
- Waste Management Plan (WMP) – establishes coordination between hazardous waste handling and staff training.
- Erosion and Sediment Control Plan (ESCP) – sets spill-prevention expectations during earthworks.
- Environmental Effects Monitoring Plan (EEMP) – includes performance metrics and audit requirements for environmental training programs.
- Human Resources & Contractor Management Systems – maintain and audit training records, certificates, and expiry dates.

4. Roles and Responsibilities

Successful implementation of this HMTP requires a clear definition of roles, accountability, and communication between EVREC, its contractors, subcontractors, and training providers.

All personnel involved in the handling, storage, transport, or emergency response to hazardous materials must be trained, competent, and supervised in accordance with this Plan and the governing legislation identified in Section 2.

The organizational structure for hazardous materials training falls under the EVREC Health, Safety, and Environmental (HSE) Management System, with the Environmental Manager having overall responsibility for compliance.

4.1. EVREC

- Establish and maintain this HMTP as part of the corporate HSE framework.
- Ensure the Plan meets all applicable federal, provincial, and municipal regulatory requirements.
- Provide the necessary resources, personnel, and funding for implementation of training and competency programs.
- Oversee integration of hazardous materials training within EVREC's Environmental Management System (EMS) and ERP.
- Review and approve contractor and vendor training programs to ensure consistency with EVREC standards.
- Maintain corporate oversight of training documentation, audit results, and corrective actions.
- Communicate revisions and regulatory updates to all affected parties.

4.2. Environmental Manager / HSE Manager

- Act as the Plan Owner and authority for all training and competency verification.
- Coordinate the development, scheduling, and delivery of site-specific hazardous materials training.
- Ensure training content aligns with the TDG, WHMIS, NFPA, and CSA standards referenced in Section 2.
- Verify that all required certifications (TDG, WHMIS, spill response, first aid) are obtained prior to mobilization.
- Maintain the Master Training Record System (digital and hard copy), including certificates, expiry dates, and refresher schedules.
- Conduct annual audits of contractor training records and report findings to senior management.
- Liaise with the Fire Commissioner's Office or other authorities for approval of specialized training programs (e.g., HazMat Technician).
- Lead post-incident reviews and ensure lessons learned are incorporated into training materials.

4.3. Site Supervisors and Foremen

- Ensure that all employees and subcontractors under their supervision have received the required site-specific and task-specific training before handling hazardous materials.
- Conduct daily toolbox talks and reinforce training principles during field activities.
- Monitor compliance with hazardous materials handling, labelling, and storage requirements.
- Stop work immediately if untrained personnel are found handling or transporting hazardous substances.
- Participate in spill-response drills and provide feedback on the effectiveness of training.
- Document on-the-job training and report attendance to the Environmental Manager for recordkeeping.

4.4. Contractors and Subcontractors

- Develop and maintain their own Hazardous Materials Training Matrix that meets or exceeds the requirements of this Plan.
- Provide evidence of current and valid training certificates (TDG, WHMIS, spill response, etc.) for all personnel before commencing work.
- Deliver job-specific and site-specific training to their teams, in accordance with EVREC's HSE requirements.
- Maintain a training database for all employees and make it available for EVREC audits upon request.
- Notify EVREC immediately of any personnel changes that affect competency coverage.

- Participate in EVREC-led joint drills and emergency exercises.

4.5. Trainers and Third-Party Providers

- Deliver training programs approved by the EVREC Environmental or HSE Manager.
- Ensure instructors hold appropriate credentials or recognized qualifications (e.g., certified TDG/WHMIS trainers, NFPA 1072 instructor certification).
- Keep training materials current with regulatory and industry changes.
- Provide certificates, attendance sheets, and evaluation forms for all participants.
- Maintain clear documentation on course content, duration, and outcomes for audit purposes.

4.6. Employees and Workers

- Attend and actively participate in all required hazardous materials training sessions.
- Apply learned procedures in daily work, including safe storage, labelling, and handling of chemicals and fuels.
- Immediately report any spills, unsafe conditions, or gaps in training to supervisors.
- Maintain personal awareness of WHMIS symbols, SDS, and personal protective equipment (PPE) requirements for all hazardous materials in their work area.
- Carry valid training certificates (TDG/WHMIS) while on site, where required by regulation.
- Participate in periodic drills and refresher courses as scheduled.

4.7. Regulatory Authorities

- Provide oversight and inspection under applicable acts and regulations, including the TDG Regulations, WHMIS 2015, Occupational Health and Safety Act, and Environmental Protection Act.
- Review and approve certain specialized training programs or courses (e.g., HazMat Technician certification).
- Conduct audits and inspections to verify compliance.
- Issue guidance, notices of improvement, or enforcement actions as applicable.

5. Training Requirements and Competency

A comprehensive and multi-tiered training program has been developed to ensure that all EVREC personnel — including firefighters, hazardous-materials (HazMat) technicians, operations staff, and contractors — are fully equipped to safely manage, contain, and respond to incidents involving hazardous materials such as ammonia, hydrogen, oxygen, nitrogen, and process chemicals.

The program builds upon existing emergency-response capabilities within nearby municipalities and integrates the additional skill sets required for on-site emergency-response teams. Developed as a collaborative effort with a recognized Canadian fire college,

the program is specifically designed to meet the training and operational needs of a process-plant fire department.

Training is delivered through a step-by-step progression, ensuring that both EVREC personnel and participating community responders move through all required modules, drills, and recertification exercises in a logical and chronological sequence that culminates in certification to recognized national standards.

5.1. General Orientation

Before performing any work on an EVREC site, all personnel and visitors (employees, contractors, and subcontractors) must receive a Safety and Environmental Orientation, conducted in accordance with the EVREC Operations Management System (OMS) Site Orientation Guideline.

Each attendee must complete and sign an Orientation Acknowledgement Form confirming understanding of the topics covered.

The Site-Specific Orientation shall include, at minimum:

- Overview of the Project and facility layout;
- Site access routes and muster points;
- Incident and injury reporting procedures;
- Locations of first-aid stations and medical providers;
- Emergency phone numbers and communications protocol;
- Emergency-response and evacuation procedures;
- Identification of hazardous areas and restricted zones;
- PPE requirements; and
- Environmental aspects and spill-reporting expectations.

5.2. Health, Safety, and Environmental (HSE) Training

EVREC is responsible for training employees, contractors, and emergency responders in compliance with federal and provincial requirements, including TDG, WHMIS 2015, and Occupational Health and Safety Regulations (NL), as well as industry best practices and applicable NFPA standards.

5.2.1. Employee Training

All employees and visitors will receive Emergency Awareness Training during their site orientation. This training will include, but is not limited to:

- Emergency contacts and muster-point locations;
- Crisis-management procedures and emergency-evacuation plan;
- Ammonia Exposure Control Plan;

- Respiratory Protection and Fit Testing (as required);
- Incident and accident-reporting procedures;
- First-aid locations and trained responders;
- WHMIS 2015 fundamentals and SDS access;
- Spill-reporting and response procedures;
- Regulatory safety training (e.g., Working at Heights, Confined-Space Entry);
- Shelter-in-place and evacuation alarms;
- Hydrogen properties and combustion behaviour;
- Safety precautions for working with or near ammonia/hydrogen systems;
- Procedures for controlling or isolating leaks and fires; and
- Use of emergency communication and alarm systems.

An annual review of these topics will be completed with all employees to maintain awareness and competency.

5.2.2. Emergency Response Team (ERT) Training

EVREC will maintain an on-site Emergency Response Team (ERT) on a 24-hour standby basis to respond to fires, medical emergencies, spills, and chemical releases.

The ERT curriculum follows the NFPA 1072 (Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications) standard at Awareness and Operations levels, with advanced members trained to the Technician level as required.

Training elements include:

- Standard First Aid / CPR;
- High-Angle and Confined-Space Rescue;
- Structural and industrial fire-fighting;
- Mock-up and live-fire drills;
- Chemical Spill and Decontamination Response;
- Ammonia and Hydrogen Emergency Response; and
- Wind-turbine rescue and evacuation scenarios.

The three-year training cycle (Appendix A) details quarterly modules. The first two years focus on ERT core competencies; the third year concentrates on Emergency Coordinator qualifications and command-level exercises.

5.2.3. Provincial Regulatory HSE Training

All workers shall complete additional WorkSafe NL-approved courses, including but not limited to:

- Fall Protection;
- Confined-Space Entry and Rescue;
- First Aid / CPR Level C; and

- Any site-specific training required under permit conditions.

5.3. Training Records and Documentation

- Each participant must sign a Training Acknowledgement Form upon course completion.
- The Training Coordinator will collect, scan, and upload all certificates to the corporate digital database for retention and audit.
- Training logs will include participant name, course title, date, instructor/provider, validity period, and next refresher due date.
- Records will be maintained on-site and backed up electronically.

Regular audits of training records will be conducted to ensure certification validity and regulatory compliance.

5.4. Minimum Qualification Requirements

Before assuming the duties of a firefighter, HazMat responder, or technician, personnel must complete all required courses specified for their position.

Minimum qualification levels include:

- Completion of the NFPA 1072 Awareness and Operations modules;
- Completion of EVREC's Emergency Response Procedures and Plant-Specific Hazards training; and
- Demonstrated understanding of the Ammonia Exposure Control Plan and Hydrogen Safety Program.

No employee will be assigned to emergency-response duties until they have met the established minimum standards.

5.5. Proof of Competency

- The EVREC Management Team must maintain current licenses and proofs of training for all hazardous-materials responders and operators.
- Competency is determined through:
    - Written or electronic knowledge tests;
    - Demonstrated practical skills; and
    - Evaluation and sign-off by the Emergency Response Coordinator (ERC).
- Individuals must demonstrate competence before performing tasks independently.

5.6. Refresher and Supplemental Training

The objective of recertification training is to re-validate skills and maintain readiness.

- Members of the ERT will complete monthly eight-hour training sessions, combining theory and hands-on drills.
- Annual refresher courses will cover all mandatory topics (TDG, WHMIS, spill response, and rescue).
- Failure to complete required refresher training within the prescribed period will result in suspension of competency status until retraining is achieved.
- Supplemental training may be delivered when new materials, systems, or technologies are introduced to the facility.

6. Existing Resources and Training

This section summarizes the current emergency response capabilities, training assets, and human resources available within EVREC and in surrounding communities that can support hazardous materials (HazMat) training and response.

It provides the baseline for identifying gaps in competencies, equipment, and external support that will be addressed as part of the full implementation of this Hazardous Materials Training Plan.

6.1. Existing Emergency Response Resources

The EVREC Project will coordinate on-site resources with municipal and regional emergency services to ensure adequate coverage for hazardous-material incidents. The information below will be updated once coordination meetings and mutual-aid agreements are completed.

6.2. Training Programs

At this point, EVREC plans to implement its own response teams and equipment to service the Project area, including but not limited to on site fire protection, Emergency Response Teams, Medical and First Responders, Spill Response equipment, Fire response equipment, Haz Mat response, and associated rescue teams. Existing Training Programs

At this stage of project development, EVREC will establish appropriate training programs for all its employees and both internal and external resources will be utilized. These resources will establish the training programs and foundation for EVREC's training matrix and will jointly provide the training to all of its employees and contractors.

Table 7.1: Exiting Training Programs

Program / Course	Target Personnel	Frequency / Duration	Certification / Standard
WHMIS 2015	All site personnel	Annual	WHMIS 2015
Transportation of Dangerous Goods (TDG)	Drivers, ERT, logistics staff	Every 3 years	TDG Regulations

Program / Course	Target Personnel	Frequency / Duration	Certification / Standard
Spill Response / Awareness	All workers	Initial + refresher annually	CSA Z731 / internal
NFPA 1072 HazMat Awareness	All ERT members	Initial (1 day)	NFPA 1072
NFPA 1072 HazMat Operations	Designated responders	Initial (3 days)	NFPA 1072
NFPA 1072 HazMat Technician	ERT specialists	Initial (5 days min)	NFPA 1072
Fire-fighting Fundamentals	ERT & plant operators	Annual refresher	NFPA 1001 / 600
Hydrogen / Ammonia Handling	Operators & maintenance	Biannual	OEM / site-specific
First Aid / CPR	All personnel	Every 3 years	WorkSafe NL
Confined-Space Entry & Rescue	Maintenance, ERT	Every 3 years	WorkSafe NL
Incident Command System (ICS-100/200/700)	Supervisors, ERT leads	Initial + refresher 5 years	ICS Canada

6.3. Coordination with External Agencies

EVREC will pursue partnerships with recognized training institutions and regulatory agencies to supplement internal training capacity. These partnerships will enhance regional readiness and ensure certification is recognized under national and provincial frameworks.

Potential external partners include:

- Canadian Fire College
- WorkSafe NL Training Division
- NL Fire Commissioner's Office (for HazMat course approval)
- Municipal Fire Departments (Botwood, Grand Falls-Windsor, etc.)
- Private HazMat contractors and industrial-rescue specialists

Memoranda of Understanding (MOUs) or Mutual-Aid / Training Agreements will define roles, resource sharing, and cost-recovery arrangements.

7. Emergency Resources Required

Emergency response equipment and vehicles must be readily available and fully operational at all times to ensure a rapid and effective response to any hazardous materials incident. The type and quantity of equipment will be determined by risk assessment, facility size, and the potential scale of emergency scenarios (e.g., hydrogen or ammonia releases, fires, explosions, or spills).

Weekly inspections of all emergency response equipment will be performed by the ERT Leader or delegate to ensure readiness, maintenance, and accessibility.

Inspection records will be documented in the Emergency Equipment Register, and deficiencies corrected immediately.

7.1. Equipment Accessibility and Readiness

All emergency response equipment shall be:

- Located in strategic, accessible areas within the industrial facility, wind project areas, transmission corridors, and port interface;
- Clearly marked and signposted with reflective hazard symbols and operational instructions;
- Inspected, serviced, and documented per manufacturer and regulatory requirements; and
- Integrated with the ERP, ensuring equipment deployment aligns with incident command and communication procedures.

7.2. Primary Emergency Response Equipment

The following categories of emergency response equipment will be maintained for the Project. Specific models, capacities, and quantities will be finalized during FEED and commissioning.

Table 8.1: Primary Emergency Response Equipment Required

Category	Example Equipment / Description	Purpose / Function	Location / Responsibility
Personal Protective Equipment (PPE)	SCBA units, escape respirators, chemical suits (Level A/B), gloves, face shields, boots	Protection against ammonia, hydrogen, and other hazardous substances	Industrial facility / ERT lockers/ control rooms/evac centres
Gas Detection & Monitoring	Fixed and portable gas detectors (NH_3, H_2, O_2, LEL); calibration kits	Continuous and mobile gas monitoring	Control room / ERT vehicles/evac

Category	Example Equipment / Description	Purpose / Function	Location / Responsibility
			centres/PPE/, lunchrooms, camps
Fire Suppression Systems	Fire extinguishers (ABC, CO_2, dry chemical), hydrants, foam systems, monitors, hoses, nozzles	Fire control and suppression	Process areas, storage yards, critical areas
Spill Response Kits	Absorbent pads, booms, neutralizers, overpack drums, drain covers	Control and containment of chemical releases	Waste yard, storage tanks, port area, maintenance shops, warehousing, specialized response centers
Decontamination Systems	Portable decon showers, eye-wash stations, containment pools	Personnel and equipment decontamination	ERT stations, plant gates, medical centre, maintenance shops
First Aid & Medical Supplies	Trauma kits, stretchers, AEDs, oxygen kits	Initial medical response	ERT vehicles, offices, medical centre(s), ops camps, lunchrooms
Communications Equipment	Radios (UHF/VHF), satellite phones, loudhailers, PA system	Incident coordination and communication	Control room / ERT base, security offices, port, satellite areas
Lighting & Power	Portable lighting towers, generators, headlamps	Night operations and low-visibility conditions	Field response trailers, maintenance shops

7.3. Emergency Response Vehicles

EVREC's on-site and contracted ERT will maintain dedicated emergency vehicles equipped to support hazardous materials and fire incidents. Vehicles will be subject to regular maintenance and inspection under the site's Vehicle Maintenance Program.

Table 8.2: Emergency Repones Vehicles Required

Vehicle Type	Description / Equipment Onboard	Function / Role	Coverage Area
Rapid Response Vehicle (RRV)	Light-duty trucks with foam/water unit, gas detectors, first aid, spill kits	Initial responder for small-scale fires and spills	Industrial facility, offsite camps

Vehicle Type	Description / Equipment Onboard	Function / Role	Coverage Area
HazMat Trailer / Decon Unit	Level B suits, decon showers, containment pools, SCBA refilling station	Supports hazardous-material response operations	ERT base / shared with municipal services, offsite camp location
Fire Pumper Truck	1,000–1,500 GPM pump, foam proportioning, hose reels	Fire suppression and support for flammable-liquid fires	Plant site / port/ offsite main camps areas
Rescue Truck	Extrication tools, confined-space rescue gear, stretchers	Technical rescue (high-angle, turbine tower, confined space)	Wind farms / industrial site
Command Vehicle	Communications suite, incident command boards, radios	On-site command and control	All sites
Ambulance / First-Aid Vehicle	Basic life support, AED, oxygen, trauma supplies	Medical transport	Facility and port, wind park.

7.4. Maintenance and Inspection Program

- All emergency equipment will be inspected weekly, with detailed functional checks conducted quarterly or as per manufacturer's recommendations.
- Equipment maintenance logs will record inspection date, condition, service actions, and responsible person.
- Fire suppression systems (extinguishers, hydrants, sprinklers) will be tested according to NFPA 10, NFPA 25, and manufacturer standards.
- Gas detectors and calibration equipment will be checked monthly and calibrated per OEM specifications.
- Vehicles and trailers will undergo pre-use and monthly inspections under the Vehicle Maintenance Program.
- Any damaged or expired equipment will be removed from service immediately and replaced.

7.5. Inventory Management

- EVREC will maintain a centralized equipment inventory database within the HSE management system, linked to the Emergency Equipment Register.
- The database will track:
    - Equipment ID / serial number;
    - Location;
    - Service and inspection dates;
    - Calibration/expiry dates; and
    - Assigned custodian or department.

- The database will generate automatic reminders for calibration, inspection, and recertification due dates.
- Annual physical verification of all inventory will be performed during the ERT readiness audit.

7.6. Storage and Security

- Emergency response equipment and vehicles shall be housed in secure, climate-controlled facilities or dedicated ERT bays.
- Access will be limited to trained personnel.
- Flammable or compressed-gas cylinders will be stored per NFPA 55, TDG, and CSA B51 requirements.
- Keys or access cards to emergency vehicles will be controlled by the ERT Lead.
- Periodic security inspections will be logged to ensure no tampering or unauthorized removal.

7.7. Decontamination and Waste Interface

- Each major response area (industrial site, wind farms, and port) will have access to decontamination equipment, including showers, eyewash stations, neutralizing agents, and containment pools.
- Waste resulting from cleanup or decontamination will be handled per the Waste Management Plan (WMP), ensuring proper segregation, labelling, and disposal via licensed facilities.
- Contaminated water from decontamination operations will be collected for treatment at the on-site effluent treatment system or disposed of through approved waste contractors.

8. Monitoring, Auditing, and Continuous Improvement

EVREC will monitor the effectiveness of the HMTP through routine checks, periodic audits, drills, and performance reviews. Results will be used to improve training content, scheduling, and competency verification so that hazardous-materials risks remain ALARP and regulatory compliance is maintained.

8.1. Objectives

- Verify that required training (WHMIS, TDG, NFPA, CSA, OEM) is completed and current for all applicable roles.
- Confirm that the ERT can perform to defined standards (Awareness/Operations/Technician) during drills and real events.
- Identify gaps and implement corrective actions within defined timelines.
- Provide transparent reporting to management and regulators where required.

8.2. KPIs Measured

EVREC will track, at minimum, the following indicators. Thresholds/targets will be finalized during FEED.

Table 9.1: KPIS Measured Through Continuous Monitoring

KPI	Definition	Target / Threshold	Reporting
Training Completion Rate	% of required courses completed by role	≥ 95% per quarter	Monthly to HSE / Quarterly to leadership
Certification Currency	% of TDG/WHMIS/NFPA certs within validity	➢ 90%	Monthly
Drill Performance	Annual # of HazMat/fire drills	100 percent to be completed annually	After each drill
Corrective Action Closure (CAR)	% of CARs closed within 45 days	≥ 95%	Monthly
ERT Readiness	Equipment Inspections	≥ 90% inspected	As defined by PM Program
Incident Learnings	# actions from incidents embedded in training	100% closed	Quarterly

8.3. Drills and Exercises

A progressive exercise program will validate competency, interoperability, and command/control.

- Table-tops (semi-annually): ICS roles, notification flow, decision-making.
- Functional drills (annually): spill/decon setups, gas monitoring, rescue elements.
- Full-scale (annual): live-fire/HazMat scenario with municipal partners and port interface.
- Night/shift variation (annual): test response and communications after hours.

For each exercise, EVREC will produce an After Action Report (AAR) with findings, corrective actions, owners, and due dates.

8.4. Inspections & Record Reviews

- Monthly record review: training matrix currency, upcoming expiries, late items.
- Quarterly spot checks: observation of donning/doffing, decon line setup, gas-meter bump/cal checks.
- Annual file audit: sample of certificates, attendance sheets, competency sign-offs, and provider credentials.

Findings will be logged in the Corrective Action Register (CAR) and integrated into refresher planning.

8.5. Audit Program

- Internal audit (annual): Led by Environmental/HSE Manager against this HMTP, ERP, and legislative requirements.
- External audit (as required): Fire Commissioner/insurer/regulatory or independent third-party for NFPA alignment and response capability.

Audit outputs will include a graded scorecard, CARs with due dates, and management sign-off.

8.6. Competency Maintenance & Recertification

- The Training Coordinator will issue automated reminders (e.g., T-90/T-30 days) for certificates nearing expiry.
- Personnel with lapsed certifications will be removed from duty until requalified.
- Changes to process, chemicals, or equipment trigger change-management training (MOC) prior to use.

8.7. Reporting and Management Review

- Monthly: HMTP dashboard to HSE leadership (KPIs, gaps, drills).
- Quarterly: Management Review—trends, significant risks, resource needs, and training plan updates.
- Annual: Consolidated training performance appended to the Environmental/HSSE Annual Report and, where applicable, to regulatory submissions.

8.8. Continuous Improvement

- Lessons learned from incidents, near misses, and exercises will be embedded into training content within 30 days.
- Training modules will be updated when standards or permits change (e.g., NFPA revisions, TDG updates).
- Feedback loops: post-course surveys, ERT debriefs, and contractor input inform course refinements.

8.9. Plan Revision Control

Revisions to this HMTP may be initiated by any plan holder; all changes require approval by the Plan Owner (Environmental/HSE Manager).

Each revision will include: revision number, date, changed pages, summary of changes, and distribution to controlled-copy holders.

9. Company Information

Contact information for EVREC is provided below:

Exploits Valley Renewable Energy Corporation
Contact: Dean Comand

Mailing Address:
181 Bay Street
Toronto, ON M5J 2V1
Telephone: 1 709 257 2344
Email: info@evrec.ca

10. Document Management

The Hazardous Materials Training Plan is a controlled distribution document. The HSE Manager is responsible for Hazardous Material Training Plan distribution and administration. Requests for copies and suggestions for revisions to this document are to be submitted in writing to the HSE Manager.

11. Distribution

The Hazardous Materials Training Plan distribution list includes all those involved in the work scope of the Project, management personnel, and regulators. All parties will receive copies of amendments and updates as they are produced.

In order to ensure that all Hazardous Materials Response & Training Plan documents in circulation are current, the Hazardous Materials Response & Training document is not to be photocopied or distributed without the prior permission of the HSE Manager.

12. Reference Documents

The following documents were used or are referenced in the development of the Hazardous Materials Training Plan:

- NFPA 1001 Standard for Firefighter Professional Qualifications
- NFPA 1072 Hazardous Materials (HazMat) Awareness & Operations
- DOC-2022-1022 Environmental Assessment Guidance
- CAN/CSA-Z731-95 Emergency Planning for Industry
- Newfoundland and Labrador: Occupational Health and Safety Regulations, 2012

List of Abbreviations

Abbreviation	Definition
AAR	After Action Report
AED	Automated External Defibrillator
ALARP	As Low As Reasonably Practicable
CAR	Corrective Action Register
CEPA	Canadian Environmental Protection Act
CO_2	Carbon Dioxide
CSA	Canadian Standards Association
EEMP	Environmental Effects Monitoring Plan
EIS	Environmental Impact Statement
EMS	Environmental Management System
ERC	Emergency Response Coordinator
ERP	Emergency Response Plan
ERT	Emergency Response Team
ESCP	Erosion and Sediment Control Plan
EVREC	Exploits Valley Renewable Energy Corporation
GHG	Greenhouse Gas
GW	Gigawatt
H_2	Hydrogen
HMRTP	Hazardous Materials Response and Training Plan
HMTP	Hazardous Materials Training Plan
HSE	Health, Safety, and Environmental
HSEMS	Health, Safety, and Environmental Management System
ICS	Incident Command System
ISO	International Organization for Standardization
KPI(s)	Key Performance Indicator(s)
LEL	Lower Explosive Limit
MARPOL	Marine Pollution Convention
MOC	Management of Change
MOU(s)	Memorandum(s) of Understanding
MW	Megawatt
NFPA	National Fire Protection Association
NH_3	Ammonia
NL	Newfoundland and Labrador
O_2	Oxygen
OEM	Original Equipment Manufacturer
OMS	Operations Management System
PPE	Personal Protective Equipment
PV	Photovoltaic

RFNBO	Renewable Fuels of Non-Biological Origin
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets
TDG	Transportation of Dangerous Goods
TDGA	Transportation of Dangerous Goods Act
TWh	Terawatt-hour
UHF / VHF	Ultra/Very High Frequency
WHMIS	Workplace Hazardous Materials Information System
WMP	Waste Management Plan

APPENDIX Q.12
Waste Management Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

WASTE MANAGEMENT PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers <u>all information</u> submitted in its response as "Confidential", and requests that all reasonable steps be taken to ensure that information contained in this response will be made available only to the receiving party, it's professional advisers and contract staff who are specifically engaged in the project.

CONTENTS

Contents 2
1. Introduction 5
1.1. Guidelines Requirements 5
1.2. Purpose of This Document 5
1.3. Aims And Objectives 6
1.4. Hierarchy and Application 6
2. Project Description 7
2.1. Site Location 9
3. EVREC Environmental Policy 10
3.1. Waste Storage and Logistics 11
3.2. Waste Management Context 11
4. Environmental Legislation 11
4.1. Federal 12
4.2. Provincial 12
4.3. Municipal 12
4.4. Other 12
4.5. Standards, Guidelines and Industry Codes 12
5. Roles and Responsibilities 13
5.1. EVREC 13
5.2. Environmental Manager / Environmental Management Team (EMT) 14
5.3. Construction Manager / Contractors / Subcontractors 14
5.4. Operations & Maintenance Team (O&M) 15
5.5. Procurement / Supply Chain 15
5.6. Health, Safety, and Environment (HSE) Team 15
5.7. Waste Transporters and Receiving Facilities 15
5.8. Regulatory Authorities 16
6. Waste Management System 16
6.1. Waste Management Hierarchy 16
6.2. Prevention 16
6.3. Minimization 17

6.4. Reuse 17
6.5. Recycle 18
6.6. Disposal 18
7. Waste Classification 19
8. Waste Management Procedures 21
8.1. General Procedures 22
8.2. Hazardous Materials Storage and Handling 22
8.3. Waste Transportation and Logistics 23
8.4. Waste Verification and Record Keeping 24
9. Contingency Plans 24
9.1. Extreme Weather Conditions 25
9.2. Fires and Explosions 25
9.3. Fuels and Hazardous Material Spills 26
9.4. Improper Disposal 26
9.5. Wildlife Interactions 27
10. Training & Competency 27
10.1. Training Framework 27
10.2. Refresher Sessions and Updates 28
10.3. Job-Specific Training 28
10.4. Records and Verification 28
10.5. Mandatory Certifications 29
10.6. Competency Assessment 29
10.7. External and Specialized Training 29
11. Monitoring and Record Keeping 29
11.1. Monitoring and Inspections 30
11.2. Data Management and Reporting 31
11.3. Auditing 31
11.4. Revising the Waste Management Plan 31
11.5. Continuous Improvement 32
12. Company Information 32
12.1. Document Management 32
12.2. Distribution 33

13. References.....33
14. List of Abbreviations.....33

1. INTRODUCTION

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5-gigawatt (GW) green hydrogen Project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3,5 gigawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. Guidelines Requirements

The Environmental Impact Statement (EIS) Guidelines required a Waste Management Plan (WMP) that shall describe all liquid and solid waste expected to be generated during construction, operation and maintenance, decommissioning, and rehabilitation for all components of the Project, and methods to reduce, reuse, recycle, recover, and/or manage residual waste through disposal.

1.2. Purpose of This Document

This WMP sets out EVREC's methods to identify, plan for, minimize, segregate, store, transport, treat and track all Project liquid and solid wastes for construction, operation & maintenance (O&M), and decommissioning & rehabilitation, including the wind farms, collection/gathering/transmission, industrial facility (electrolyzers, air separation unit, ammonia trains, utilities, battery energy storage system [BESS]), water intake/pipeline, warehousing/laydown, and port interface.

The EVREC Environmental Management Team will provide oversight and guidance throughout the Project to ensure all activities are planned and executed in accordance with applicable environmental regulations, corporate policies, and the Project's goal of environmental excellence.

1.3. Aims And Objectives

Overall, this WMP provides guidance on the acceptable practices for the management of liquid and solid waste associated with Project activities during construction, operation, and decommissioning. It is intended to be both a reference document for Project personnel in the planning and execution of Project-specific activities, and a guidance document for contingency planning.

This WMP currently focuses on the construction and operation of the Project. As the Project nears the end of its operational timeline, subsequent revisions will incorporate detailed procedures for the decommissioning and rehabilitation stages consistent with the Asset Retirement Obligation (ARO) Plan.

The Plan shall be made available to all EVREC staff, contractors, and subcontractors to ensure that each understands and fulfills their responsibilities to reduce, reuse, recycle, recover, and properly dispose of all waste streams generated throughout the Project lifecycle.

Specifically, this WMP will:

- Provide a reference to applicable legislative requirements and guidelines governing waste management, transportation, and disposal under Newfoundland and Labrador and federal legislation;
- Document the environmental concerns associated with waste generation and outline appropriate protection measures to prevent pollution and minimize impacts on land, water, and air;
- Provide clear, concise instructions to Project personnel for the handling, segregation, storage, and disposal of all waste categories (hazardous, non-hazardous, recyclable, and special waste);
- Serve as a reference for supervisors and environmental personnel when planning and/or conducting specific field activities and working in environmentally sensitive areas; and
- Establish a revision and communication process to ensure that changes to the waste management program, regulatory requirements, or approved facilities are consistently communicated to all responsible parties.

1.4. Hierarchy and Application

The waste management procedures outlined in this document shall be followed together with the terms and conditions of all permits, licenses, and approvals issued under provincial or federal legislation and consistent with the corporate Environmental Policy. In any instance of any inconsistency or conflict, the conditions and limitations imposed by the regulating authority (provincial or federal) shall take precedence over this WMP.

2. PROJECT DESCRIPTION

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 Terawatt-hour (TWh) of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce approximately 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peters Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres (L) per year will be fully supplied from this source

Hydrogen will react with nitrogen in two 2,500 tonnes per day Haber-Bosch reactors to produce approximately 1 million tonnes of certified green ammonia every year. Nitrogen for the process will be sourced by two Air Separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- A 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen,
- 1,100 MWh of battery storage for critical loads; and
- A 150 MW solar PV plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to ensure that electrolyzer feedwater quality requirements are met and that treated discharge water complies with federal and provincial regulatory standards prior to being discharge back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 above ground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below-ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former Asarco wharf, enabling simultaneous offloading of up to two vessels.

2.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood. Approximate coordinates: Lat: 49.128°, Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant. Approximate coordinates: Lat: 49.111°, Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood. Approximate coordinates: Lat: 49.1347°, Long: -55.346°.
- The marginal wharf is located at the former Asarco wharf at the Port of Botwood. Approximate coordinates: Lat: 49.1442°, Long: -55.3381°.
- Freshwater supply will come from Peters Pond. Approximate coordinates: Lat: 49.088°, Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabright's Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°
    - Twin Lakes: 49.3041°, -55.7968°
    - Seabright's Lake: 49.3231°, -55.6567°
- The Leading Tickles wind farm area lies north of Botwood. Approximate coordinates: Lat: 49.4871°, Long: -55.4291°.

The figure below shows an overview of the project area.

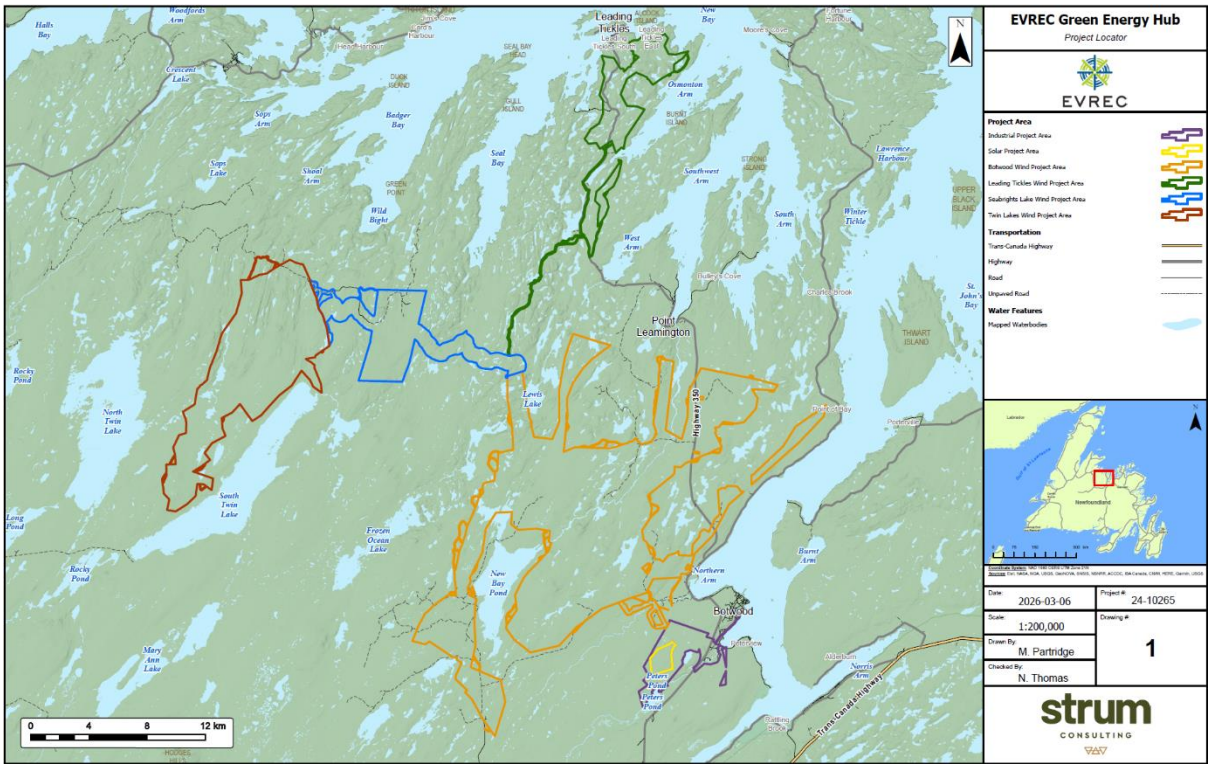

Figure 1: Overview of Project Lands

3. EVREC ENVIRONMENTAL POLICY

EVREC is dedicated to fostering a cleaner, healthier environment. Our commitment to this mission is driven by the expectations of our customers, stakeholders, and the communities in which we operate. We understand that economic prosperity is intrinsically linked to environmental protection.

EVREC recognizes that our business activities, like many other human endeavors, have environmental impacts, including the utilization of natural resources, the generation of waste, and the use of hazardous materials. We acknowledge that these impacts require responsibility and conscientious action on our part. We pledge to be responsible environmental stewards, guided by the following principles:

- Adhering to all applicable legal and legislative requirements
- Implementing operational strategies that prioritize safety and environmentally sound outcomes, which includes preventing risks of spills, fires, and accidental discharges to the natural environment
- Promoting sustainability through energy efficiency, conservation, and the utilization of renewable energy technologies
- Providing comprehensive training to employees, ensuring they are well-versed in our environmental policies, and are aware of their individual and collective responsibility for environmental matters
- Setting and adhering to performance targets for environmental protection and sustainability
- Committing to continuous improvement in our environmental performance

Management will ensure the development and adoption of policies, procedures, and training programs that safeguard our environment. Employees and representatives are responsible for working in compliance with all legal and Company rules, policies, and procedures related to the environment. All contractors and subcontractors must maintain an equivalent level of environmental responsibility as EVREC.

Our commitment to environmental responsibility is based on the following key principles:

- Protection of the Environment is a Core Value and a high priority.
- Protection of the Environment is everyone's responsibility.
- Our business will be conducted in an environmentally responsible manner.
- Environmental metrics are key indicators of organizational excellence.

EVREC mandates that environmental aspects are considered in every decision we make and in every activity we perform. Employees are empowered to be involved in decisions that impact the environment, whether individually or as a group.

Our Environmental Policy provides the framework for setting and reviewing environmental objectives and targets. Our Environmental Policy is documented, implemented, maintained, and communicated to all employees.

3.1. Waste Storage and Logistics

Main waste storage areas for hazardous and non-hazardous waste will be located within the industrial facility site at Botwood. These collection zones will be designed for accessibility by both users and collection vehicles, located on hard-surfaced or imperviable lined areas, bermed, secured and graded pads with covered (local or general) containment for hazardous and liquid materials.

The logistics of off-loading, segregation, and replacement of containers (including dedicated waste oil tanks, scrap metal bins, general refuse compactors, and segregated recyclables) will be finalized with the completion of the detailed process-facility layout and process plant auxiliaries' design.

Temporary satellite collection points will also be established at major construction laydowns, wind-farm substations, general construction sites, custom clearance yards, warehousing, quarries, camps and transmission/wind tower work sites. All such areas will comply with provincial Waste Management Regulations (2003), Transportation of Dangerous Goods (TDG) standards, and the Fire Commissioner's spacing requirements for flammable and combustible storage.

3.2. Waste Management Context

Waste generation will occur across all phases of the Project:

- **Construction**: clearing, excavation, concrete and steel works, turbine foundation pours, cable and substation installation, mechanical erection, packaging, and temporary camp/domestic wastes.
- **Operation & Maintenance**: process-related wastes (filters, membranes, catalysts, oils), maintenance scrap, domestic waste, and effluent sludges from treatment plants.
- **Decommissioning & Rehabilitation**: large-component dismantling (wind turbines, towers, transformers, tanks), demolition debris, scrap metal recycling, composite blade management, and site restoration materials.

4. ENVIRONMENTAL LEGISLATION

The Project will comply with all applicable federal, provincial, and municipal regulatory requirements applicable to waste generation, storage, transport, treatment, and disposal during all project phases. Copies of all approvals, authorizations, licenses, and permits shall be obtained and kept on file. EVREC is responsible for ensuring that all relevant legislation is followed prior to waste generation.

Where any inconsistency arises between this WMP and a condition of a license/permit/approval, the regulatory instrument prevails. EVREC will maintain auditable records of manifests, weigh tickets, acceptance certificates, and training per the requirements listed below.

4.1. Federal

The following federal regulatory requirements apply to waste management for the Project:

- *Canadian Environmental Protection Act* (CEPA);
- *Canada Shipping Act;*
- *Fisheries Act;*
- *Hazardous Materials Information Review Act*; and
- *Transportation of Dangerous Goods (TDG) Act*.

4.2. Provincial

The following provincial regulatory requirements apply to waste management for the Project:

- Air Pollution Control Regulations;
- *Dangerous Goods Transportation Act*;
- Environmental Control Water and Sewage Regulations;
- Newfoundland and Labrador *Environmental Protection Act* (NL EPA);
- *Occupational Health and Safety Act*;
- Occupational Health and Safety Regulations;
- Storage and Handling of Gasoline and Associated Products Regulations;
- Used Oil Control Regulations;
- Waste Diversion Regulations;
- Waste Management Regulations; and
- *Water Resources Act*.

4.3. Municipal

The Project will be in compliance with local municipal bylaws and the *Urban and Rural Planning Act* for any waste handling, storage, and disposal taking place within any municipal borders.

4.4. Other

The Project will be in compliance with other applicable legislation which includes:

- International Convention for the Prevention of Pollution from Ships;
- International Maritime Dangerous Goods (IMDG) Code; and
- International Air Transport Association (IATA).

4.5. Standards, Guidelines and Industry Codes

In the absence of specific legislation EVREC will comply with the most stringent Canadian or International standards, guidelines and industry codes:

- Canadian Council of Ministers of the Environment (CCME) guidance (e.g., Water Quality Guidelines for the Protection of Aquatic Life; relevant for monitoring water quality near waste areas and washout controls).
- National Fire Protection Association (NFPA) codes relevant to hazardous materials storage/spacing (integration with the Hazardous Materials Response and Training Plan).
- Canadian Standards Association (CSA) Z731 (Emergency Planning for Industry) and Workplace Hazardous Materials Information System (WHMIS) 2015 training/labels/safety data sheet (SDS) availability for waste chemicals and secondary containment areas.
- Company standards and EIS companion plans.

5. ROLES AND RESPONSIBILITIES

Effective implementation of this WMP depends on clear accountability and communication between EVREC, its contractors, subcontractors, vendors, and regulators. Roles, responsibilities, and lines of communication are structured to ensure compliance with regulatory requirements and the consistent application of the waste hierarchy — reduce, reuse, recycle, recover, dispose — across all Project components.

EVREC will maintain an Environmental Management Team (EMT) led by the Environmental Manager, supported by qualified Environmental Coordinators, Waste Officers, and site-specific Environmental Monitors. The team will work in close coordination with construction, operations, maintenance, and health & safety divisions throughout the Project lifecycle.

5.1. EVREC

- Maintain and oversee the corporate Waste Management Program, policies, and approvals system.
- Ensure this WMP is integrated into all contracts, tenders, and scopes of work, and that its requirements are binding on contractors and subcontractors.
- Appoint qualified environmental professionals (QEPs) to oversee implementation and monitoring.
- Review and approve all Waste Management Reports, manifests, and disposal facility acceptance certificates.
- Maintain regulatory correspondence and ensure reporting of any spills, exceedances, or waste non-compliances to NL Department of Environment, Conservation and Climate Change (NLECCC), NL Department of Government Services (NLGS), or Environment and Climate Change Canada (ECCC) as applicable.
- Provide the Waste Register and maintain central records of waste generation, transport, and disposal (in coordination with the Environmental Coordinator).

- Conduct quarterly audits of contractor compliance and track Key Performance Indicators (KPIs) for waste diversion, recycling rates, and hazardous waste management.
- Update the Plan when design changes, new waste streams, or regulatory amendments arise.

EVREC will be accountable for the review and acceptance of the WMP. All employees, contractors, and visitors to the Project will be made aware of the WMP during orientation.

The following roles have specific duties regarding waste management:

5.2. Environmental Manager / Environmental Management Team (EMT)

- Lead site-level implementation of the WMP.
- Develop and maintain the Waste Register and Waste Yard Layout Plans for each active site (industrial facility, wind farm clusters, and transmission corridors).
- Coordinate with contractors to ensure proper segregation, labeling, and storage of all waste streams.
- Review and verify waste tracking documentation (manifests, weigh tickets, and certificates of destruction/recycling).
- Conduct regular site inspections and maintain a log of deficiencies, corrective actions, and follow-up activities.
- Prepare monthly waste summary reports and contribute to quarterly environmental KPI reviews.
- Liaise with NLECCC and other regulators regarding approvals, manifests, and audits.
- Deliver waste management awareness sessions as part of site induction and toolbox talks.
- Participate in spill response and clean-up verification, in collaboration with the Health, Safety, and Environment (HSE) Team and HazMat Response personnel.

5.3. Construction Manager / Contractors / Subcontractors

- Prepare and implement Task-Specific Waste Management Plans (TSWPs) for each contract or work package, consistent with this WMP and regulatory requirements.
- Provide adequate resources, bins, labels, storage areas, and transportation arrangements for waste generated under their scope.
- Ensure all employees and subcontractors receive waste management training, understand segregation procedures, and comply with site signage and storage rules.
- Maintain daily waste logs and provide weekly/monthly reports to the EVREC Environmental Coordinator.
- Arrange transportation of waste using licensed carriers and approved facilities only.
- Immediately report any spills, leaks, or damage to waste containment systems to the Environmental Coordinator and HSE representative.
- Participate in audits, inspections, and meetings related to waste performance.
- Remove temporary waste facilities and restore storage areas to baseline conditions upon demobilization.

5.4. Operations & Maintenance Team (O&M)

- Maintain steady-state waste management during plant operation, including hazardous waste storage, process sludges, filters, catalysts, membranes, and packaging.
- Manage vendor take-back programs (PEM stacks, reverse osmosis /UF/EDI modules, catalysts, air separation unit sieves) and maintain records of shipment and recovery certificates.
- Oversee domestic and maintenance waste segregation within the industrial facility, solar facility, and wind project service areas.
- Conduct annual waste inventory updates and revise handling procedures to reflect changes in plant equipment or chemicals.
- Report operational waste quantities in the annual Environmental Performance Report to regulators.

5.5. Procurement / Supply Chain

- Integrate packaging minimization and take-back clauses into all procurement contracts, prioritizing reusable or recyclable packaging materials.
- Require suppliers and vendors to provide SDS for all chemicals and to pre-approve disposal pathways for consumables and spent media.
- Ensure that original equipment manufacturers (OEMs) for electrolyzers, air separation units, and ammonia catalysts have extended producers' responsibilities or vendor take-back agreements in place.
- Maintain a register of approved waste vendors and carriers.
- Audit supplier and hauler compliance with permit conditions, certifications, and expiry dates.

5.6. Health, Safety, and Environment (HSE) Team

- Support waste management through hazard identification, risk assessment, and emergency preparedness for spills or releases from waste storage areas.
- Verify that all waste handling and storage areas are equipped with spill kits, fire extinguishers, and emergency eyewash/shower stations, as appropriate.
- Maintain records of Hazardous Waste Training and TDG certifications for all relevant personnel.
- Conduct joint HSE–Environmental inspections of waste yards and hazardous material storage areas.
- Participate in incident investigations involving waste mismanagement or contamination.

5.7. Waste Transporters and Receiving Facilities

- Hold valid licenses and permits issued under provincial and federal regulations.
- Maintain compliance with TDG and Waste Management Regulations (2003) for classification, labeling, manifesting, and transport.

- Provide EVREC with copies of manifests, weigh slips, and certificates of disposal/recycling.
- Notify EVREC immediately of any incidents during transport.

5.8. Regulatory Authorities

- **NLECCC**: issue and enforce Certificates of Approval, conduct inspections and audits.
- **NLGS (Waste Management Section)**: issue waste system approvals and oversee transportation of hazardous waste.
- **Municipal Authorities**: grant local permits for storage pads and road use.
- **ECCC (Federal)**: oversight for interprovincial movement, CEPA manifests, and International Convention for the Prevention of Pollution from Ships (MARPOL)/port waste compliance.

6. WASTE MANAGEMENT SYSTEM

6.1. Waste Management Hierarchy

Waste management control hierarchy requirements include the identification of waste streams, estimations and monitoring of waste volumes generated, segregation and provision of suitable on-site waste storage facilities, and an understanding of locally available treatment and disposal options.

EVREC's approach to waste management uses the following hierarchy:

1. Prevention
2. Minimization
3. Reuse
4. Recycle
5. Disposal

Each tier of the hierarchy is integrated into project design, procurement, construction methods, and operational practices, ensuring continuous reduction of waste generation and maximizing material recovery. The subsections below describe how each tier is applied across the Project lifecycle.

6.2. Prevention

Goal: Eliminate waste generation at the source by design and operational choices.

Measures:

- Design Efficiency: Standardize foundation types and optimize road design to avoid excess excavation, backfill, and spoil generation.
- Civil Works Sequencing: Schedule bulk earthworks and drainage early to reduce rework and sediment clean-out waste.

- Equipment Specification: Use air-cooled systems instead of water-cooled to prevent cooling-water blowdown waste.
- Digital Management: Use Building Information Modelling (BIM) and digital take-offs to control material ordering and minimize surplus.
- Contracting Approach: Require construction and service contractors to include waste-prevention provisions in all task-specific plans and method statements.
- Procurement: EVREC will engage with its OEMs and suppliers to minimize waste generation, wherever possible, including reducing packaging at the source, consolidating shipments to eliminate packaging, and streamlining the purchase of materials to eliminate excess product waste.
- Operational: Waste streams will be segregated to the extent possible at the source to ensure appropriate management, minimize downstream processing, and prevent unnecessary contamination of other, less hazardous waste. Segregation is also important to prevent chemically incompatible waste from inadvertently coming in contact and causing an unwanted reaction. Proper segregation practices must also be in place for the storage of all chemicals.

6.3. Minimization

Goal: Reduce unavoidable waste generation to the lowest practicable volume.

Measures:

- Procurement Controls: Use returnable and bulk packaging (e.g., reels, pallets, intermediate bulk containers [IBCs]); consolidate orders to reduce container count. Use recyclable products instead of non-recyclable ones. Use longer-life consumables to reduce waste and to ensure the oldest product is used first to reduce the chance of expiry.
- Batch Management: Optimize concrete and grout batching to minimize washout residuals; size cable and rebar deliveries precisely to design.
- Construction Practices: At-source segregation and dedicated laydown areas to avoid cross-contamination; on-site chipping of clean brush where permitted.
- Maintenance Optimization: Preventive maintenance programs to avoid leaks/spills that would generate contaminated absorbents.
- Inventory Control: “First-in, first-out” for chemicals and consumables to reduce expiry waste.
- Operational: Reduction of volumes and toxicity of waste generated is to be reviewed prior to disposal.

6.4. Reuse

Goal: Reuse materials on site or within the local community before considering recycling or disposal.

Measures:

- Earth Materials: Reuse stripped topsoil and overburden for grading and rehabilitation where quality permits.

- Infrastructure Reuse: Repurpose formwork, scaffolding, pallets, and cable reels.
- Timber: Reuse cleared merchantable timber for construction cribbing or donate to community/forestry programs.
- Containers and Drums: Clean and reuse for compatible materials or return to the supplier under deposit schemes.
- Process Water: Recirculate treated water (from effluent system) for dust suppression and non-potable use, in coordination with water-quality approvals.

6.5. Recycle

Goal: Maximize diversion from landfill through recycling, energy recovery, and certified regeneration processes.

Measures:

- Segregation: Provide clearly labeled bins for recyclables (metals, cardboard, plastics, glass, clean wood).
- Off-site Recycling: Contract licensed facilities for scrap metals, e-waste, batteries, lamps, and oil recycling.
- Specialized Recovery:
    - Precious-metal recovery from PEM stacks, catalysts, and membranes.
    - Regeneration of ASU sieves, adsorbents, and spent catalysts.
- Fiber reenforced plastic (wind blades) co-processing in cement kilns or composite recyclers.
    - Used oil re-refining by registered processors.
- Energy Recovery: Consider biomass use of clean wood residues where feasible and permitted.
- Education and Awareness: Education and awareness are necessary components of a recycling program since contamination of recycling bins can lead to the whole bin being disposed of as general waste.

6.6. Disposal

Goal: Dispose of residual waste safely and legally only after all feasible recovery options have been exhausted.

Measures:

- Maintain manifests, weigh tickets, and certificates of disposal for each load.
- Test and classify all waste before disposal; keep analytical certificates on file.
- Prohibit on-site burial, dilution, or open burning.
- For contaminated soil or sludge, select engineered landfills with leachate collection or authorized hazardous-waste cells.
- Record all disposal quantities in the Waste Register and include in quarterly KPI reporting.
- Operational: Material not deemed acceptable for reuse or recycling will be disposed of via a Waste Management Contractor for the safe transportation of solid waste to an approved facility. Materials that can be recycled will be sorted and taken to an

approved facility. Burning of rubbish and waste materials on site will not be permitted. Rubbish and waste materials will not be buried on site.

7. WASTE CLASSIFICATION

Materials are considered waste when it can no longer be used for its original purpose. The types of waste considered in this category include non-hazardous waste and hazardous waste.

Waste classification though analytical and physical testing may be required to confirm waste properties and to inform management methods and treatment/disposal options. Such tests are typically required by the recycling, treatment or disposal facilities to ensure that the materials meet the facility's specific acceptance requirements. In Newfoundland and Labrador, classification and acceptance requirements for various waste streams are established for each waste facility under a facility operating approval. For many waste categories, it will not be necessary to do any sampling as the management and disposal will not be dependent on the exact chemical composition of the material. Frequently, the reason for sampling and analyzing waste is to determine if a potential treatment (or disposal) option is suitable for the particular waste and to monitor the success of the treatment process.

In Newfoundland and Labrador, Waste Dangerous Goods / Hazardous Wastes (WDG/HW) are linked to the classification systems established in the federal Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWHRMR) schedules, or those which have dangerous good characteristics as described under the TDG Act and the Transportation of Dangerous Goods Regulations (TDGR) or are hazardous based upon other scientific documentation. A determination of WDG/HW will be based upon generator knowledge or laboratory analysis.

Currently there are approved disposal facilities for the disposal of WDG/HW within the province. Generators of WDG/HW are required to be registered with the Department prior to transporting waste. All exports of WDG/HW must be manifested during transport and copies returned to NL DECC.

The Dangerous Goods Transportation Act (TDG) administered by Transport Canada, applies to substances that fall under the definition of "dangerous goods" in the TDG. In general, oily waste is not expected to be classified as either dangerous goods or waste dangerous goods, but may be included under the following TDG Hazard classes:

- **Class 3**: Flammable and combustible liquids (flashpoint < 60°C);
- **Class 4.1**: Flammable solids (readily combustible under normal conditions of transport);
- **Class 6.1**: Toxic substances (substances that are liable to cause death or serious injury or to harm human health if swallowed or inhaled or if they come into contact with human skin); and
- **Class 9**: Miscellaneous products.

The Interprovincial Movement of Hazardous Waste Regulations (IMHWR) issued under Canadian Environmental Protection Act 1999 (CEPA) established requirements for waste manifests for all shipments of hazardous waste between Canadian provinces. The goal of the IMHWR is “to ensure that the Canadian manifest tracking and hazards classification conditions for waste, formerly set out in the TDG, are maintained for the interprovincial movements of hazardous wastes". Interprovincial shipments of waste dangerous goods destined for disposal must comply with the requirements of these regulations and the hazard classifications under the TDGR. Generators of waste exports from Newfoundland and Labrador are subject to registration and manifesting requirements.

Waste generated throughout the Project will be classified according to composition, origin, and hazard to determine the appropriate handling, storage, transportation, and disposal method. Classification follows the Newfoundland and Labrador Environmental Protection Act, Waste Management Regulations (2003), and the TDG, which adopt hazard classes consistent with CEPA 1999 and United Nations (UN) Recommendations on the Transport of Dangerous Goods.

The EVREC EMT will maintain a Waste Code List and Register detailing for each stream:

- Source and process area;
- Waste description and physical state;
- TDG Class / UN Number / Packing Group (if applicable);
- Storage requirements;
- Disposal or recycling pathway; and
- Approved transporter and receiving facility

7.1.1. Non-Hazardous Waste

Non-hazardous waste includes waste (Table 7.1) that is not considered dangerous goods under the TDG, the IMDG Code, and the IATA. They can be safely handled with standard personal protective equipment (PPE) and containment. They represent the majority of materials generated during construction and routine maintenance.

Table 7.1: Project Specific Non-Hazardous Waste Streams

Category	**Examples / Sources**	**Typical Management**
Inert Materials	Excavated soils, clean rock, concrete rubble, asphalt, brick, and ceramics	Reuse as fill / aggregate; otherwise, inert landfill disposal
Construction & Demolition (C&D)	Formwork, pallets, plastics, packaging, insulation, scrap lumber, general debris	Segregate by material type; recycle where markets exist
Metals	Rebar, structural steel, cable offcuts, conduit, turbine components	Recycle via licensed scrap recycler
Domestic Waste	Food waste, paper, cardboard, office trash, sanitary waste	Collected in covered bins; municipal collection or approved landfill
Vegetative Material	Brush, non-merchantable trees, grass cuttings	Chip/mulch on-site (if permitted) or compost / approved landfill

Category	Examples / Sources	Typical Management
Process Residuals – Non-Hazardous	Dewatered effluent sludge meeting Schedule A limits of the NL Water and Sewage Regulations (2003); spent filter media classified non-DG	Containerize and send to approved landfill or compost facility as per permit criteria

7.1.2. Hazardous Waste

Hazardous waste (Table 7.2) includes those regulated as waste dangerous goods under the *TDG Act*, the IMDG and the IATA:

- Class 2 – Compressed Gases: Hydrogen, oxygen, nitrogen, ammonia vapor, propane.
- Class 3 – Flammable Liquids: Diesel, gasoline, solvents, paints.
- Class 4 – Flammable Solids: Certain metal powders / catalysts.
- Class 5 – Oxidizers & Organic Peroxides: Oxygen release compounds, peroxide cleaners.
- Class 6 – Toxic & Infectious: Chemical additives, laboratory reagents.
- Class 8 – Corrosives: Acids, caustics, water-treatment chemicals.
- Class 9 – Miscellaneous Hazardous Materials: PCB articles, lithium-ion batteries, spent catalysts

Table 7.2: Project Specific Hazardous Waste Streams

Process Area	Waste Type / Description	Handling / Disposal Pathway
Electrolyser Plant	Spent RO/UF membranes and EDI modules; PEM stacks and frames	OEM take-back / metal recovery recycler
Hydrogen Purification	Spent deoxo / adsorbent media	Return to vendor for regeneration or DG facility disposal
ASU (air separation)	Spent molecular sieves and filters	Vendor regeneration / hazardous landfill if beyond spec
Ammonia Train & Utilities	Spent catalysts, process oils, solvents, refrigerants	Certified recycler / hazardous waste processor
Electrical / BESS	Spent Li-ion modules, lead-acid batteries, transformer oil	OEM take-back / EPR program / used-oil recycler
Construction & Maintenance	Paints, solvents, adhesives, aerosols, waste fuels, fuel filters, oily rags, empty chemical containers, paint residues, paint thinners, aerosol cans, empty drums containing waste chemicals, acids, medical wastes	Containerize & ship to licensed hazardous facility
Wind Turbines & Blades	Composite materials, resins, oils, hydraulic fluids.	FRP recycler / cement kiln / hazardous landfill last resort
Laboratory / Water Treatment	Spent acids, bases, lab chemicals, sludges	Neutralize on-site (if approved) or ship to licensed facility

8. WASTE MANAGEMENT PROCEDURES

Contractors and subcontractors are responsible for implementing the following waste-management procedures during construction, operation, and decommissioning of the

Project. These procedures apply to all waste streams and complement the hierarchy described in Section 6.

8.1. General Procedures

8.1.1. Containment and Collection

- All waste generated during Project activities shall be placed in suitable containers and removed weekly (or more frequently as required) to an approved disposal or recycling facility, with the consent of the site owner/operator.
- Each work area must remain free of accumulated waste or debris; upon completion, surplus materials and temporary structures will be removed and the site restored.

8.1.2. Segregation and Sorting

- All solid waste, including construction materials, will be sorted for reuse, recycling, composting, or disposal at provincially approved facilities.
- Waybills and Certificates of Disposal shall be retained for all hazardous-waste shipments and presented to EVREC on request.

8.1.3. Storage

- Segregated waste shall be stored to prevent degradation, windblown litter, burning, or burial.
- Storage areas must be accessible, fenced where necessary, and sited away from watercourses or wetlands (>30 m).
- Permanent storage areas (e.g., drum yards, used-oil tanks) shall be clearly identified and signed.

8.1.4. Temporary Sewage Systems

- Portable or temporary sewage systems used during construction shall comply with the *NL Environmental Protection Act* and associated Environmental Control Water and Sewage Regulations (2003).
- A licensed septic-pumping contractor will service these units; waybills will be kept on file.

8.2. Hazardous Materials Storage and Handling

All EVREC contractors are responsible for ensuring that all provincial and federal regulations are followed in relation to the storage and handling of hazardous materials, including spills and releases. The NL requirements are specified in the Storage and Handling of Gasoline and Associated Products Regulations, 2003 (NL Regulation 58/03) and the Used Oil Control Regulations 2002 (NL Regulation 82/02), pursuant to the NL EPA. All spills to water are reportable as per the *Fisheries Act.* Reporting requirements can be found in the Emergency Response Plan.

8.2.1. Equipment and Maintenance

- Keep all equipment in good working order; inspect regularly; repair any leaks immediately.

- Conduct maintenance at designated service pads equipped with high-density polyethylene (HDPE) liners and spill containment; no servicing within 30 m of waterbodies.
- Used lubricants and filters will be collected in sealed, labeled containers for recycling.

8.2.2. Fuel and Chemical Storage

- Storage areas require secondary containment sized to hold 110% of the largest vessel or 25% of total volume, whichever is greater.
- Clearly identify storage zones and keep access unobstructed.
- Maintain SDS for each product on-site; post hazard signage.
- Provide fire extinguishers and spill kits at each fuel/chemical location.

8.2.3. Refueling and Field Operations

- Follow all stipulations under the Policy for Land and Water Related Developments in Protected Public Water Supply Areas (PPWSA).
- Prohibit refueling within 30 m of any watercourse, wetland, or private well.
- Where field refueling is unavoidable, use drip trays and absorbent pads, and keep fully stocked spill-response kits at hand.
- Conduct refueling under the supervision of trained personnel.

8.2.4. Brush and Vegetation Disposal

- Brush may be chipped/shredded for reuse or burned only with approval from the NL Department of Forestry, Agriculture and Lands (FAL), Forestry and Wildlife Divisions.
- Do not use tires, waste oil, or other accelerants to ignite brush piles.
- Burn permits must be retained on-site.

8.2.5. Emergency Response and Training

- Each contractor shall follow the EVREC Emergency Response Plan (ERP) for spills/releases of fuel, oil, drill muds, or other hazardous substances.
- Provide training and drills for all staff in spill-response procedures.
- Spill kits must be available and maintained at every storage and fueling location.

8.2.6. Secondary Containment and Drum Storage

- Use drip trays or spill pallets during all refueling and decanting.
- Store drums upright in designated, roofed containment areas; clearly label each drum with contents, hazard symbol, and accumulation date.
- Keep SDS available at the storage site; ensure no incompatible wastes are mixed.
- Before moving drums, verify seals and nozzles are tight and no leaks are visible.

8.3. Waste Transportation and Logistics

The waste material generator will ensure wastes are properly segregated, packaged, labeled, and manifested to meet TDG /IMDG/IATA requirements prior to shipment. The logistics coordinator will arrange for the shipment of waste and advise the receiver of the shipment quantity and classification.

8.3.1. Packaging and Labeling

- Waste must be properly segregated, packaged, labeled, and manifested before shipment.
- Use UN-rated packaging for hazardous wastes and TDG labels matching their hazard class.
- Non-hazardous wastes will also be labeled by type and destination.

8.3.2. Manifests and Documentation

- A Waste (Dangerous Goods) Manifest shall accompany each hazardous shipment.
- When multiple waste consignments share one vehicle, a single manifest may list multiple waste codes, provided all are consigned to the same facility.
- Retain all manifest copies and disposal receipts in the Waste Register; closure copies must be returned to EVREC within 30 days.
- If waste samples are shipped by air for laboratory analysis, follow the IATA Technical Instructions for the Safe Transport of Dangerous Goods by Air.

8.3.3. Roles and Responsibilities

- Waste Generator (Contractor): Ensures segregation, packaging, labeling, manifest accuracy, and regulatory compliance.
- Logistics Coordinator: Arranges transport with licensed haulers, verifies manifests, notifies receivers of shipment details, and checks for discrepancies before departure.
- Transporter: Maintains TDG license, vehicle placards, emergency contacts, and insurance; immediately reports any incidents to the Logistics Coordinator and NLECCC.
- Receiver: Signs final manifest, provides acceptance certificate, and returns copy to EVREC.

8.4. Waste Verification and Record Keeping

- Keep electronic and hard copies of all manifests, weigh tickets, disposal certificates, and laboratory analyses for at least three years or as required by permits.
- The Environmental Coordinator shall audit shipping documents monthly and reconcile them against waste yard records.
- Deviations or rejected loads must be reported within 24 hours and investigated.
- KPIs — waste diversion %, hazardous tonnage, spills related to waste — will be reviewed quarterly by EVREC's Environmental Manager.

9. CONTINGENCY PLANS

As part of the Emergency Response Plan (ERP), contingency plans have been developed to minimize adverse effects from accidents, unplanned incidents, or extreme events that may affect waste management operations. These plans will be reviewed and updated throughout the life of the Project to reflect lessons learned, new risks, or changes in facility layout or waste storage locations.

The following contingency plans have been developed for this Project and are summarized in the subsections below:

- Extreme Weather Conditions
- Fires and Explosions
- Fuel and Hazardous Material Spills
- Improper Disposal
- Wildlife Interactions

9.1. Extreme Weather Conditions

Extreme weather events in Newfoundland and Labrador include severe storms, high winds, ice storms, and hurricanes/tropical systems. Winter storms bring snow, freezing rain, and ice accumulation, while summer and fall months can experience strong winds, heavy rainfall, and localized flooding. Although tornados are rare, they are considered a potential risk.

Preventive and response measures include:

- Monitor Environment Canada alerts; suspend non-essential waste handling during storm warnings.
- Secure loose materials; tie down bins, close lids, and move small to medium waste containers indoors or into covered storage.
- Elevate hazardous-material containers above flood-prone areas and ensure containment berms are clear of snow/ice.
- Delay waste shipments until safe transport conditions are restored.
- Maintain emergency lighting and backup power in the main waste yard during outages.
- Inspect all storage areas post-event and document any damage, spills, or loss of containment.

9.2. Fires and Explosions

Fire or explosion incidents involving waste may arise from improper storage of flammable materials, spontaneous combustion of oily rags, or ignition sources in waste yards.

Preventive measures include:

- Restrict smoking to designated areas only.
- Segregate flammables from oxidizers and ignition sources; maintain spill-proof lids.
- Ensure all flammable waste is in approved containers (NFPA/Underwriters Laboratories [UL]-rated).
- Provide and maintain fire-fighting equipment (extinguishers, hose reels, sand buckets) per manufacturer and NFPA standards.
- Conduct annual fire-safety training for personnel and maintain records.
- Maintain clear access lanes (minimum 4 m width) around waste yards for emergency vehicles.

Response measures include:

- Activate alarms and evacuate the immediate area.
- Notify the Emergency Response Unit and follow procedures in the ERP.
- Shut off ignition sources if safe to do so; prevent run-off of contaminated fire-water into drains or surface water.
- Document and report the incident to the Environmental Manager and HSE within 24 hours.

9.3. Fuels and Hazardous Material Spills

Any unintentional or unauthorized discharge of a substance to air, water, or ground is considered a reportable spill under the NL *Environmental Protection Act* and the federal *Fisheries Act*.

Immediate actions include:

- Stop the source if safe to do so.
- Contain the spill using absorbent booms, berms, or pads.
- Notify the Environmental Manager and HSE immediately.
- Consult the SDS to determine appropriate PPE and cleanup method.
- For large or water-reaching spills, follow ERP escalation and notify regulators (NLECCC, Fisheries and Oceans Canada, and ECCC).

Cleanup and disposal actions include:

- Contaminated materials (soil, pads, PPE, neutralizers) are classified as hazardous waste and managed accordingly.
- Collect and store cleanup waste in labeled, sealed drums within secondary containment until removed by a licensed hazardous-waste carrier.
- Complete spill reports and update the Waste Register with cleanup quantities and destinations.

9.4. Improper Disposal

Improper segregation or unauthorized disposal of waste can lead to environmental harm, regulatory non-compliance, and wildlife attraction.

Procedures include:

- Any instance of improper disposal (e.g., mixing hazardous with non-hazardous waste, dumping outside approved containers) must be reported immediately to the Environmental Manager.
- Conduct an incident investigation to identify cause, responsible party, and corrective action.
- Provide refresher training to staff or contractors involved.

- Materials from cleanup of improperly disposed waste are to be treated as hazardous waste until tested and confirmed otherwise.
- Maintain records of incidents and corrective actions in the Corrective-Action Log.

9.5. Wildlife Interactions

Wildlife may be attracted to waste storage areas, particularly food scraps or odourous waste, leading to stress or injury for animals and safety risks for personnel.

Preventive measures include:

- Keep working areas free of food waste and garbage; store all waste in wildlife-resistant containers or secured bins with lids closed.
- Remove waste from remote work areas daily where feasible; otherwise, cover and secure until pickup.
- Clean food and garbage bins regularly; remove residues that attract wildlife.
- Personnel shall never feed wildlife or leave food unattended outdoors.
- Report wildlife encounters to the Environmental Coordinator, who will record incidents and consult local wildlife authorities if necessary.

Response actions include:

- If an animal becomes trapped or injured, stop work in the area and contact the NLFAL Wildlife Division immediately for direction.
- Follow any instructions for relocation or containment provided by authorities.

10. TRAINING & COMPETENCY

EVREC will ensure that all employees and contractors receive adequate training to safely and effectively implement this WMP.

Training will include a combination of formal classroom instruction, site-specific orientation, and on-the-job coaching to ensure that personnel understand their environmental responsibilities and are competent to perform waste management tasks in compliance with federal and provincial legislation and EVREC policies.

10.1. Training Framework

10.1.1. Site-Specific Orientation

- Before mobilization, all personnel will attend an Environmental and Waste Management Orientation, which includes:
    - Overview of EVREC's Environmental Policy and objectives;
    - Waste hierarchy (reduce → reuse → recycle → recover → dispose);
    - Segregation rules, bin colors, and signage;

    - Location of waste storage areas and emergency response equipment; and
    - Spill response procedures and reporting channels.
- Orientation will also cover applicable sections of the ERP related to waste spills and fire safety.

10.2. Refresher Sessions and Updates

- Whenever the WMP is revised, EVREC will issue a formal communication and toolbox talk highlighting the changes.
- Annual refresher training will be mandatory for all workers and supervisors.

10.2.1. Awareness and Continuous Improvement

- Waste minimization, proper segregation, and environmental stewardship topics will be incorporated into routine safety meetings, toolbox talks, and internal audits.
- Lessons learned from audits or incidents will be fed back into training materials.

10.3. Job-Specific Training

EVREC and its contractors will provide **task-specific training** based on job function and exposure risk. Examples are provided in the table below:

Table 10.1: Job Specific Training

Role / Function	**Training Requirements**
General labour, construction, O&M staff	WMP orientation, waste segregation, spill prevention, emergency reporting
Environmental Coordinator / Waste Officer	Waste classification, TDG, manifesting, inspection & recordkeeping
Equipment operators / drivers	TDG awareness, spill prevention, refuelling practices, waste loading/unloading
Hazardous-waste handlers	TDG certification, WHMIS, PPE and confined-space awareness (if applicable)
Supervisors / foremen	Audit procedures, incident investigation, environmental reporting
Contractors' logistics personnel	Waste segregation, manifest completion, receiving-facility interface

Contractors shall maintain a Training Matrix showing the required courses and certifications for each employee position. EVREC's Environmental Manager or delegate will review and approve contractor matrices prior to site access.

10.4. Records and Verification

- All contractors must maintain a training database of employee credentials, expiry dates, and course providers.
- EVREC will audit this database quarterly to ensure training remains current.

- Workers without valid training or refresher documentation will not be permitted to handle hazardous materials or waste.
- The Environmental Manager will maintain a master site training log (digital and hard copy) showing attendance records and certification status.
- Training records will be stored in the same repository used for environmental documentation (e.g., SharePoint/Procore).

10.5. Mandatory Certifications

- WHMIS (2015): Required for all workers, regardless of whether they handle chemicals, to ensure awareness of symbols, labelling, and SDS interpretation.
- Transportation of Dangerous Goods (TDG): Required for anyone who packages, loads, or transports hazardous materials, or who supervises such activities.
- Supervisor Competency: Supervisors overseeing waste operations must hold valid TDG awareness and spill-response training.
- Spill Response & Fire Safety: Key personnel (operators, drivers, waste yard staff) must be trained in spill containment, fire extinguisher use, and evacuation protocols.

10.6. Competency Assessment

- Competency will be evaluated through practical observation by supervisors and Environmental Coordinators during field tasks (waste segregation, handling, manifesting).
- Any observed gaps will trigger targeted coaching or re-training.
- Evaluation results will be documented in the training database and incorporated into annual performance reviews.

10.7. External and Specialized Training

- EVREC may engage accredited training providers for TDG, WHMIS, spill response, and hazardous-waste handling courses.
- Specialized vendor-led training will be provided for:
    - PEM electrolyzers (stack removal and packaging);
    - RO/UF/EDI membranes;
    - BESS modules;
    - Catalyst and adsorbent change-outs; and
    - FRP (composite) component dismantling

11. MONITORING AND RECORD KEEPING

Effective monitoring and documentation are critical to verifying that waste management activities are being implemented in accordance with this WMP, permit conditions, and applicable legislation.

EVREC will conduct both formal and informal monitoring to ensure compliance, identify non-conformances, and drive continuous improvement throughout all phases of the Project.

11.1. Monitoring and Inspections

11.1.1. Monitoring Objectives

- Verify compliance with EVREC's WMP and all relevant environmental legislation.
- Evaluate waste segregation, storage, labelling, and disposal practices.
- Track waste generation rates and diversion performance.
- Identify deficiencies, corrective actions, and opportunities for improvement.

11.1.2. Monitoring Activities

Inspections and audits will be performed on all components of the WMP to minimize non-compliance and identify adjustments that may be required. Monitoring will include both scheduled and ad-hoc reviews of personnel, equipment, and contractors.

Typical monitoring tasks include:

- Verifying the locations, signage, and condition of on-site waste bins and storage areas;
- Reviewing waste collection, transportation, and handling practices by all personnel and subcontractors;
- Confirming that waste volumes and manifests are properly recorded and reconciled with the Waste Register;
- Ensuring hazardous waste is segregated, labeled, and shipped to licensed facilities with the correct manifests;
- Checking that recycling and diversion targets are being met; and
- Verifying that spill kits, fire extinguishers, and secondary containment are maintained in good condition.

11.1.3. Monitoring Frequency

- Construction: Monthly inspections and quarterly internal audits.
- Operations: Quarterly inspections and annual environmental audit.
- Decommissioning: Weekly inspections during active dismantling.

11.1.4. Corrective Actions

If monitoring identifies deficiencies, the Environmental Manager or delegate will issue a Corrective Action Report (CAR) specifying the required measures, the responsible person, and the completion date.

The Logistics Coordinator will maintain a record of corrective measures to track follow-up actions and verify close-out.

All findings, corrective actions, and verification notes will be logged in the Corrective Action Register.

11.2. Data Management and Reporting

All inspection, audit, and monitoring data will be stored electronically in EVREC's environmental data repository (SharePoint/Procore or equivalent).

Each monitoring event will generate a record that includes:

- Date, location, and description of inspection;
- Name of inspector(s) and participants;
- Observations, deficiencies, and corrective actions;
- Photographs and supporting documentation; and
- Follow-up verification details.

Reporting cadence:

- Monthly: Environmental Coordinator submits waste KPI summary to Environmental Manager.
- Quarterly: Environmental Manager issues consolidated Waste Management Summary to EVREC leadership and includes data in the EEMP Report.
- Annually: A Waste Management Review will be completed and appended to the Annual Environmental Performance Report for regulatory submission.

11.3. Auditing

Audits are used to verify system effectiveness and regulatory compliance.

- Internal audits: Conducted by the Environmental Manager or delegate at least once per year or after major construction milestones.
- External audits: May be conducted by regulatory agencies or third-party consultants to validate compliance with permit requirements and EIS commitments.
- Findings and recommendations from audits will be recorded, tracked, and addressed through the Corrective Action Log.
- Repeat findings will trigger targeted training or procedural reviews.

Audit results will be retained with supporting documents and shared with management during Environmental Review Meetings.

11.4. Revising the Waste Management Plan

This WMP is a controlled document. Revisions may only be made by the Environmental Manager or authorized delegate.

Revisions may result from:

- Feedback or observations from site monitoring and audits;
- Changes to Project design, operations, or decommissioning activities;
- Regulatory updates or new permit conditions; or
- Requests or recommendations from regulatory authorities or stakeholders.

Proposed revisions may be submitted in writing by any plan holder to the Environmental Manager. All proposed changes will be reviewed, and if accepted, incorporated into the next revision of the WMP.

Each revision will include a Revision Control Sheet that:

- Summarizes revision instructions;
- Lists affected sections;
- Provides the revision number and date; and
- Includes an updated Table of Contents.

Controlled copy holders are responsible for inserting updated pages and removing superseded versions.

11.5. Continuous Improvement

- Lessons learned from monitoring, audits, and incident investigations will be used to strengthen procedures and training.
- EVREC will benchmark waste generation and diversion data annually to identify reduction opportunities.
- Findings will be presented at management review meetings and communicated through toolbox talks and refresher training.

12. COMPANY INFORMATION

Contact information for EVREC is provided below.

Exploits Valley Renewable Energy Corporation
Contact: Dean Comand

Mailing Address:
181 Bay Street
Toronto, ON M5J 2V1
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12.1. Document Management

The WMP is a controlled distribution document. The Environment Manager is responsible for WMP distribution and administering WMP. Requests for copies and suggestions for revisions to this document are to be submitted in writing to the Environment Manager as per Section 5.2.

12.2. Distribution

The WMP distribution list includes all those involved in the work scope of the Project, management personnel, and regulators. All parties will receive copies of amendments and updates as they are produced.

In order to ensure that all WMP documents in circulation are current, the WMP document is not to be photocopied or distributed without the prior permission of the Environment Manager.

13. REFERENCES

Canadian Environmental Protection Act, 1999 (CEPA)
Fisheries Act (R.S.C., 1985, c. F-14)
Transportation of Dangerous Goods Act, 1992 and Regulations
Newfoundland and Labrador Environmental Protection Act
Waste Management Regulations, 2003 (NL Reg. 56/03)
Used Oil Control Regulations (NL Reg. 82/02)
Storage and Handling of Gasoline and Associated Products Regulations (NL Reg. 58/03)
Water Resources Act (NL)

14. LIST OF ABBREVIATIONS

Abbreviation	Definition
ARO	Asset Retirement Obligation
ASU	Air Separation Unit
BESS	Battery Energy Storage System
C&D	Construction and Demolition
CAR	Corrective Action Report
CCME	Canadian Council of Ministers of the Environment
CEPA	Canadian Environmental Protection Act
CSA	Canadian Standards Association
ECCC	Environment and Climate Change Canada
EDI	Electrodeionization
EIHWHRMR	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations
EIS	Environmental Impact Statement
EMT	Environmental Management Team
EPR	Extended Producer Responsibility
EVREC	Exploits Valley Renewable Energy Corporation
FRP	Fibre Reinforced Plastic
GHG	Greenhouse Gas
GW	Gigawatt
HDPE	High-Density Polyethylene
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IMHWR	Interprovincial Movement of Hazardous Waste Regulations

Abbreviation	Definition
KPI(s)	Key Performance Indicator(s)
MW	Megawatt
NFPA	National Fire Protection Association
NL	Newfoundland and Labrador
NLECCC	Newfoundland and Labrador Department of Environment, Conservation and Climate Change
NLGS	Newfoundland and Labrador Government Services
O&M	Operations and Maintenance
OEM	Original Equipment Manufacturer
PEM	Proton Exchange Membrane
PPE	Personal Protective Equipment
PPWSA	Protected Public Water Supply Area
PV	Photovoltaic
QEP(s)	Qualified Environmental Professional(s)
RFNBO	Renewable Fuels of Non-Biological Origin
RO	Reverse Osmosis
SDS	Safety Data Sheets
TDG	Transportation of Dangerous Goods
TDGR	Transportation of Dangerous Goods Regulations
TSWP(s)	Task-Specific Waste Management Plan(s)
TWh	Terawatt-hour
UF	Ultrafiltration
UL	Underwriters Laboratories
UN	United Nations
WDG/HW	Waste Dangerous Goods / Hazardous Waste
WHMIS	Workplace Hazardous Materials Information System
WMP	Waste Management Plan

APPENDIX Q.13
Water Management Plan
(For Construction and Post Construction Phase)

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

Water Management Plan

(For Construction And Post Construction Phase)

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, it's professional advisers and contract staff engaged on the project that is specificically engaged in the project.

Table of Contents

Table of Contents 2
1. Introduction 5
1.1. EIS Guidelines Requirements 5
1.2. Purpose of this document 5
1.3. Aims and Objectives 6
1.4. Hierarchy and Application 7
2. Project Description 7
2.1. Site Location 8
2. 2 EVREC Environmental Policy 9
3. Environmental Legislation 10
3.1. Federal 11
3.2. Provincial 11
3.3. Municipal 12
3.4. Standards, Guidance and Industry Best Practices 13
4. Requirements for Water Management and Monitoring 13
4.1. Construction Activities 13
4.2. Operation Activities 17
4.3. Decommissioning Activities 19
5. Proposed Management and Monitoring 19
5.1. Stormwater/Rainwater and Water Diversion 19
5.2. Effluent Treatment 20
5.3. Production Water 21
5.4. Cooling Water 22
5.5. Make-up/Auxiliary Water 22
5.6. Potable Water 22
5.7. Sanitary Water Systems 22
5.8. Construction Water Use, Hydrotesting, and Temporary Discharges 23
5.9. Linear Infrastructure Water Management (Access roads, Transmission, Pipelines) 23
5.10. Decommissioning Water Management Measures 24

6. Roles and Responsibilities 24
6.1. EVREC 24
6.2. Water Resources Lead / Qualified Environmental Professional (QEP) 24
6.3. Environmental Manager / Environmental Management Team (EMT) 24
6.4. Construction Manager / Contractors / Subcontractors 25
6.5. Site Environmental Coordinator(s) / Environmental Inspectors 25
6.6. Operations & Maintenance Team (O&M) 25
6.7. Procurement / Supply Chain 25
6.8. All Personnel 25
7. Resources Specific Protection Procedures 25
7.1. Streams and Watercourses 26
7.2. Wetlands and Peatlands 26
7.3. Fish and Fish Habitat (where present) 26
7.4. Watercourse Crossings (Design, Installation, Maintenance) 26
7.5. Erosion and Sediment Control Installation and Maintenance 26
7.6. Dewatering Controls 27
7.7. Concrete and Grout Works 27
7.8. Fueling and Equipment Maintenance 27
7.9. Chemical Storage and Handling 27
7.10. Port / Marine Terminal Water Protection Measures 27
7.11. Peters Pond Source Water Protection 27
8. Contingency Plans 28
8.1. Extreme Weather Conditions 28
8.2. Fires and Explosions 28
9. Training & Competency 30
10. Monitoring and Record Keeping 30
10.1. Monitoring Framework 30
10.2. Data Management and Reporting 32
10.3. Auditing 32
10.4. Revising the Water Management Plan 32

10.5. Continuous Improvement 33
10.6. Document Management 33
10.7. Distribution 33
11. Company Information 33
12. References 33
13. List of Abbreviations 34

1. Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt (GW) green hydrogen project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3.5gigawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.1. EIS Guidelines Requirements

This EIS shall include a Water Management Plan prepared for Project components and infrastructure including wind farms, solar farms, access roads, transmission lines, hydrogen and ammonia production facilities and the marine terminal and port to evaluate the effects of the Project's construction and operation on streams, waterbodies, and wetlands.

1.2. Purpose of this document

The purpose of this Plan is to identify the methods by which EVREC will manage water interfaces encountered by the project during construction, operation and decommissioning of the project.

The EVREC environmental management team will provide direction and guidance throughout the Project to ensure that work is planned, designed, constructed, operated and decommissioned to be consistent with environmental regulations, policies of the Federal government and the Province of Newfoundland.

This Water Management Plan has been prepared to evaluate the effects of the Project's construction, operation and decommissioning on streams, waterbodies, and wetlands within the project area. This Plan includes the following:

- all streams, waterbodies, and wetlands within the Project boundary or identified on 1:2,500 scale community mapping (within municipal boundaries) as well as a developed modelled stream layer to better understand and plan water-related infrastructure;
- details on how stormwater drainage will be managed from each wind farm, solar farm, the hydrogen and ammonia production facilities, and the port facilities; and
- all stream crossings within the wind farms and solar farms are designed for a 1 in 50-year climate change flow and the wind farm and solar farm access road system stream crossings have been designed for a 1 in 100-year climate change flow.

1.3. Aims and Objectives

Overall, this Water Management Plan provides guidance on the acceptable practices for the management of water associated with Project activities during construction, operation, and decommissioning. It is intended to be both a reference document for Project personnel in the planning and execution of Project-specific activities, and a guidance document for contingency planning.

This WMP currently focuses on the construction and operation of the Project. As the Project nears the end of its operational timeline, subsequent revisions will incorporate detailed procedures for the decommissioning and rehabilitation stages consistent with the Asset Retirement Obligation (ARO) Plan.

The Plan shall be made available to all EVREC staff, contractors, and subcontractors to ensure that each understands and fulfills their responsibilities outlined in the WMP throughout the Project lifecycle.

Specifically, this WMP will:

- Provide a reference to applicable legislative requirements and guidelines governing water management under Newfoundland and Labrador and federal legislation;
- Document the environmental concerns associated with water management and outline appropriate protection measures to prevent pollution and minimize impacts on land, and water;
- Serve as a reference for supervisors and environmental personnel when planning and/or conducting specific field activities and working in environmentally sensitive areas; and

- Establish a revision and communication process to ensure that changes to the water management program, regulatory requirements, or approved facilities are consistently communicated to all responsible parties.

1.4. Hierarchy and Application

The water management procedures outlined in this document shall be followed together with the terms and conditions of all permits, licenses, and approvals issued under provincial or federal legislation and consistent with the corporate Environmental Policy. In any instance of any inconsistency or conflict, the conditions and limitations imposed by the regulating authority (provincial or federal) shall take precedence over this Water Management Plan.

2. Project Description

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5GW onshore wind farm, spread across 4 sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peters Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source

Hydrogen will react with nitrogen in two (2) 2500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two (2) Air Separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include;

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen,
- 1100 MWh of battery storage for critical loads; and,
- a 150 MW solar PV plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to ensure that electrolyzer feedwater quality requirements are met and that treated discharge water complies with federal and provincial regulatory standards prior to being discharge back into the natural environment.

Liquified ammonia will be stored in two (2) 75,000 m3 above ground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below-ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1. Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood. Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant. Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood. Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood. Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peters Pond. Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabright's Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabright's Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood. Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

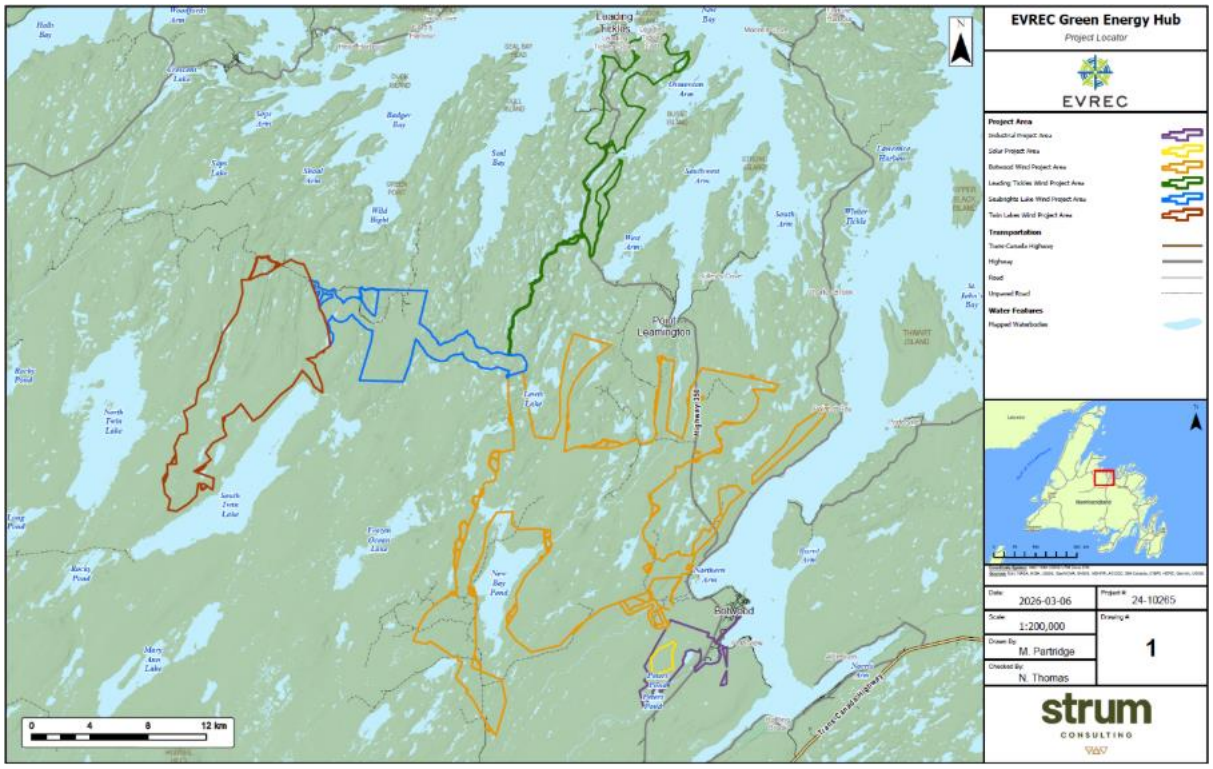

Figure 1: Overview of project lands

2. 2 EVREC Environmental Policy

EVREC is dedicated to fostering a cleaner, healthier environment. Our commitment to this mission is driven by the expectations of our customers, stakeholders, and the communities in which we operate. We understand that economic prosperity is intrinsically linked to environmental protection.

EVREC recognizes that our business activities, like many other human endeavors, have environmental impacts, including the utilization of natural resources, the generation of waste, and the use of hazardous materials. We acknowledge that these impacts require responsibility and conscientious action on our part. We pledge to be responsible environmental stewards, guided by the following principles:

- Adhering to all applicable legal and legislative requirements
- Implementing operational strategies that prioritize safety and environmentally sound outcomes, which includes preventing risks of spills, fires, and accidental discharges to the natural environment
- Promoting sustainability through energy efficiency, conservation, and the utilization of renewable energy technologies

- Providing comprehensive training to employees, ensuring they are well-versed in our environmental policies, and are aware of their individual and collective responsibility for environmental matters
- Setting and adhering to performance targets for environmental protection and sustainability
- Committing to continuous improvement in our environmental performance

Management will ensure the development and adoption of policies, procedures, and training programs that safeguard our environment. Employees and representatives are responsible for working in compliance with all legal and Company rules, policies, and procedures related to the environment. All contractors and subcontractors must maintain an equivalent level of environmental responsibility as EVREC.

Our commitment to environmental responsibility is based on the following key principles:

- Protection of the Environment is a Core Value and a high priority.
- Protection of the Environment is everyone's responsibility.
- Our business will be conducted in an environmentally responsible manner.
- Environmental metrics are key indicators of organizational excellence.

EVREC mandates that environmental aspects are considered in every decision we make and in every activity we perform. Employees are empowered to be involved in decisions that impact the environment, whether individually or as a group.

Our Environmental Policy provides the framework for setting and reviewing environmental objectives and targets. Our Environmental Policy is documented, implemented, maintained, and communicated to all employees.

3. Environmental Legislation

EVREC will comply with all applicable federal, provincial, and municipal requirements relevant to water management across all Project phases (construction, operations, decommissioning). Where there is any inconsistency between this Water Management Plan and a permit, approval, authorization, licence, certificate, order, or regulatory direction, the regulatory instrument and its conditions take precedence**.**

EVREC will maintain a Water Compliance Register (controlled document) that consolidates:

- All water-related permits, approvals, authorizations, and conditions (federal/provincial/municipal)
- Required monitoring parameters, frequencies, locations, and reporting obligations
- Roles/responsibilities for implementing each condition

- Documented evidence of compliance (inspection reports, monitoring results, corrective actions, regulator correspondence)

This register will be updated whenever:

- New approvals/conditions are issued
- Project design changes affect water management systems (e.g., outfalls, treatment, crossings, drainage)
- Monitoring indicates adaptive management is required
- Regulatory requirements are amended

3.1. Federal

3.1.1. Fisheries Act (Canada)

The federal Fisheries Act includes prohibitions related to:

- Harmful alteration, disruption or destruction (HADD) of fish habitat (section 35), and
- Requirements to plan and execute works to avoid harm, and where necessary, obtain authorizations and comply with conditions.

3.1.2. Canadian Navigable Waters Act (CNWA) and Navigation Protection Program

The CNWA regulates works that may interfere with navigation in navigable waters, and Transport Canada's Navigation Protection Program sets out when approvals are required (including for "major works").

3.1.3. Species at Risk Act (SARA)

SARA includes prohibitions and a permitting framework where activities may affect listed species and/or critical habitat, including aquatic species (permits/approvals may be required depending on species/location).

3.1.4. Impact Assessment Act (IAA) and Physical Activities Regulations (Project List)

While the Project is proceeding through the provincial EA/EIS pathway, the federal IAA framework may be relevant if a project is designated (including via discretionary designation) or if federal authorities require federal authorizations that trigger federal review requirements/conditions.

3.2. Provincial

3.2.1. Water Resources Act (NL)

The Water Resources Act provides the legal framework for water resource management in Newfoundland and Labrador, including approvals/controls related to watercourse alterations, water use, and protection of water resources.

3.2.2. Environmental Control Water and Sewage Regulations, 2003 (NLR 65/03)

These regulations are made under the Water Resources Act and establish requirements/limits and administrative provisions for discharges and sewage/effluent controls (including referenced schedules and sampling/testing expectations).

3.2.3. Environmental Protection Act (NL) and Related Regulations

The Environmental Protection Act provides broad authority for environmental protection in NL and supports the issuance of approvals and regulatory requirements relevant to pollution prevention and environmental management.

Water-related relevance includes, as applicable:

- Controls for pollutants that could affect water resources (spill prevention/response requirements are typically implemented through approvals, conditions, and companion plans)
- Requirements connected to storage/handling of substances that could contaminate water

3.2.4. Environmental Assessment Regulations, 2003 (NLR 54/03)

These regulations under the Environmental Protection Act establish the NL environmental assessment process and requirements relevant to undertakings undergoing EA/EIS review.

3.2.5. Storage and Handling of Gasoline and Associated Products Regulations, 2003 (NLR 58/03)

These regulations include requirements intended to prevent petroleum releases to the environment (including water resources), including storage tank system requirements and operational controls.

3.2.6. Waste Management Regulations, 2003 (NLR 59/03) (water interface)

While primarily a waste framework, these regulations remain relevant to water protection where wastes (sludges, spent media, contaminated materials) could create leachate/runoff risks or require containment controls.

3.2.7. Pesticides Control Regulations, 2012 (NLR 26/12)

If vegetation management (including ROW maintenance) uses herbicides/pesticides, these regulations govern licensing, use, storage, and related controls.

3.3. Municipal

Municipal requirements may apply where Project infrastructure intersects municipal boundaries or where municipal permits/approvals are required (e.g., for certain developments, servicing, construction access, or bylaw compliance). The Urban and Rural

Planning Act, 2000 provides the framework for municipal planning and development controls.

3.4. Standards, Guidance and Industry Best Practices

Where legislation/permits do not prescribe a specific method, EVREC will apply recognized standards and guidance appropriate to Newfoundland and Labrador conditions and the receiving environments (freshwater and marine).

Key guidance/standards typically used to support a defensible water management approach include:

- CCME Water Quality Guidelines for the Protection of Aquatic Life (freshwater and marine) – used as a benchmark for monitoring interpretation and receiving environment protection (as applicable).
- ISO/IEC 17025 – used for laboratory accreditation expectations for parameters such as TSS (when laboratory analysis is required by monitoring plans/permit conditions).
- Fisheries and aquatic protection guidance supporting Fisheries Act compliance (policy/guidance for fish and fish habitat protection and authorizations).
- Transport Canada navigation guidance for works in navigable waters (CNWA / Navigation Protection Program).

4. Requirements for Water Management and Monitoring

4.1. Construction Activities

Construction activities are planned to occur in the vicinity of waterbodies and wetlands, including (but not limited to) culvert upgrades and installations, access road construction/widening, temporary bridges, transmission line construction, water pipeline construction, water diversion to support industrial facilities, and port/terminal works. Water management requirements for construction are structured around four core principles:

- Avoid disturbance to water resources where feasible (routing, siting, timing, and method selection).
- Minimize disturbance where avoidance is not possible (smallest footprint, shortest duration, least-invasive method).
- Control and treat runoff, dewatering discharges, and wastewater prior to release.
- Verify through inspection and monitoring, and correct issues quickly through adaptive management.

4.1.1. Pre-construction planning and approvals

Prior to initiating any work that could interact with streams, wetlands, waterbodies, or their buffers, EVREC will implement the following planning and controls:

- Water Resources Inventory & Constraints Mapping:
    - Maintain a consolidated GIS layer and field-verified mapping of streams, wetlands, waterbodies, and drainage features within the Project footprint (including wind farms, solar farm, access roads, transmission lines, the industrial facility, and the marine terminal/port).
    - Identify watercourse crossings and “near-water” work zones, including buffer requirements and any permit/authorization triggers.
- Construction Water Management Package (per work area/work package): For each work package (e.g., road segment, crossing installation, transmission segment, turbine string, port work), prepare a package containing:
    - Site plan and drainage plan (existing and temporary).
    - Specific permit requirements (if relevant)
    - Erosion and Sediment Control Plan (ESCP) details and standard drawings.
    - Dewatering approach and discharge location(s).
    - Spill prevention measures and staging of response equipment.
    - Inspection and monitoring requirements (including rainfall-triggered inspections).
- In-stream work controls:
    - No work will occur below the high-water mark or associated regulated buffers without required notifications, assessments, and approvals/authorizations as applicable.
- Where in-stream works are required, methods will prioritize:
    - Isolation of the work area (cofferdam, diversion, temporary culvert, pump-around).
    - Fish and fish habitat protection measures including fish rescue as required.
    - Turbidity and sediment control at source and at the water’s edge.

4.1.2. Buffer Zones and Setbacks

Buffer zones are non-disturbed areas or natural vegetation maintained along waterbodies and environmentally sensitive receptors. Buffers reduce erosion, sediment transport, thermal impacts, and accidental releases to water.

- Buffers will be established and clearly marked in the field (flagging, signage) prior to clearing and grading.

- Any buffer encroachment must be planned, justified, minimized, and supported by enhanced controls (e.g., additional sediment barriers, reduced exposed soil area, shortened duration, and increased monitoring frequency).
- Equipment staging, refueling, and storage areas will be located outside buffers wherever feasible.

4.1.3. Erosion and Sediment Control Requirements

- Erosion and sediment controls will be implemented using a “treatment train” concept—multiple measures in series to manage runoff, reduce flow velocity, trap sediment, and prevent discharge of sediment-laden water.
- Minimum requirements:
- Install ESCP measures before stripping/grubbing and earthworks.
- Maintain controls through the duration of disturbance, including winter conditions where relevant.
- Stabilize exposed soils progressively (mulch, seed, erosion control blankets, riprap armoring, and/or other suitable methods).
- Provide sediment capture and treatment for:
    - Road ditch discharges,
    - Turbine pad drainage,
    - Laydown/staging areas,
    - Borrow areas and stockpiles,
    - Linear infrastructure corridors (transmission/pipeline).

4.1.4. Watercourse Crossings and Near-Water Works

Watercourse crossings present risks to fish and fish habitat, channel stability, and water quality. EVREC will:

- Prefer crossing types that reduce footprint and disturbance (e.g., clear-span bridges where practicable).
- Work to design roads to meet watercourses at a 90 degree angle and at a straight section of stream to reduce environmental impact where possible.
- For culverts:
    - Size, embed, and align to maintain natural channel function and passage (where fish passage is relevant).
    - Include erosion protection at inlet/outlet and energy dissipation where required.
- Maintain water conveyance during and after works, with special consideration to:
    - High-flow and storm events,

- Spring freshet/snowmelt,
- Low flow fish passage
- Freeze-up and ice conditions.

4.1.5. Dewatering and Discharge Management

Any dewatering effluent (excavations, trenches, foundation works, and construction sumps) will be managed to prevent sediment and contaminants from entering waterbodies.

- Dewatering discharges will be routed through treatment as needed (settling, filtration, turbidity control measures, vegetated infiltration areas) prior to release.
- Discharge locations will be selected to avoid erosion (stable, vegetated areas; energy dissipation; avoid steep slopes).
- Direct discharge to fish-bearing waters will be avoided where feasible; where unavoidable, enhanced treatment and monitoring will be applied.

4.1.6. Concrete, Grout, and Washwater Controls

Concrete/grout washwater is highly alkaline and harmful to aquatic life. Controls include:

- Designated, lined washout areas located away from water resources and drainage pathways.
- No washout to ground, ditches, wetlands, streams, or storm drains.
- Hardened concrete waste handled and disposed/reused appropriately per approved waste pathways.

4.1.7. Fuels, Oils, and Hazardous Materials Near Water

To prevent releases:

- Refueling and maintenance will occur in designated areas away from water resources where feasible.
- Spill kits will be available at fueling areas and near-water work zones.
- Equipment entering near-water zones will be inspected for leaks and maintained in good condition.
- Any release to water will trigger immediate response and regulatory notification as required.
- Implement the Hazardous Materials and Training Plan

4.1.8. Surface Water Quality Monitoring (Construction)

A construction-phase monitoring program will verify the effectiveness of mitigation and confirm compliance with regulatory/permit conditions.

Parameters (minimum):

- Turbidity (field/in situ)
- Total Suspended Solids (TSS) (lab)
- pH (field and/or lab)
- Visual monitoring (sheen, discoloration, sediment deposition)

Monitoring design:

- Establish reference/background conditions where feasible (upstream or outside influence).
- Monitor at downstream compliance points where project influence could occur.
- Use event-based monitoring during in-stream works and after rainfall events that may mobilize sediment.

Frequency (minimum expectations):

- During active in-stream works: pre-work baseline (same day), during work (at defined intervals), and post-work verification.
- During near-water earthworks: regular inspections and monitoring at a frequency appropriate to risk (higher frequency during wet weather, snowmelt, or high-disturbance phases).

QA/QC:

- Laboratory analysis (e.g., TSS) will be performed by an accredited laboratory (ISO/IEC 17025 or equivalent).
- Sampling methods will follow documented SOPs including chain-of-custody.

Performance expectations:

- Controls will be managed so that water quality objectives and applicable guidelines/permit limits are achieved.
- If exceedances or visible impacts occur, corrective actions will be implemented immediately.

4.2. Operation Activities

Operational water management must address:

- Water withdrawal and supply reliability,
- Process water treatment,

- Stormwater management,
- Sanitary wastewater management,
- Effluent treatment and discharge compliance,
- Protection of receiving environment (freshwater and/or marine, depending on final discharge design).

Key operational requirements:

- Maintain separation of “clean runoff” and “contact water” systems.
- Maintain integrity of containment and drainage systems.
- Treat wastewater/effluent to meet regulatory limits and relevant guidelines prior to discharge.
- Implement routine inspection, maintenance, and monitoring for ponds, ditches, sumps, outfalls, and the water intake.

4.2.1. Effluent Water Quality Monitoring (Operations)

Effluent monitoring will confirm compliance with applicable provincial requirements (e.g., Schedule A parameters where applicable) and other relevant guidelines/permit conditions including the CCME Guidelines.

Effluent streams to be characterized and managed (project-specific):

- Treated process wastewater from the industrial facility (including water treatment residuals as applicable),
- Sanitary wastewater effluent following treatment,
- Stormwater from industrial areas (clean vs contact water),
- Cooling system blowdown and boiler blowdown where applicable,
- Any other regulated wastewater stream (e.g., vehicle wash, maintenance washwater) if used.

Monitoring approach:

- Define compliance sampling points at the final discharge point(s) (outfall/weir/ditch discharge and/or marine outfall, depending on final design).
- Include flow measurement/estimation to support load calculations and compliance evaluation.
- Implement routine monitoring frequency based on regulatory requirements, risk, and discharge variability (with increased frequency during start-up, commissioning, and process changes).

Receiving environment monitoring (as required):

- Where permits/approvals require, monitor receiving waters upstream/downstream (or at appropriate marine stations) to confirm no adverse effects attributable to discharges.

4.3. Decommissioning Activities

Decommissioning water management will prevent sedimentation and contamination during dismantling, demolition, excavation, and site rehabilitation.

Core requirements:

- Implement decommissioning-specific ESCP measures prior to disturbance.
- Manage dewatering and demolition water (if applicable) with treatment and controlled discharge.
- Maintain buffer zones unless explicitly approved to encroach for removal activities.
- Stabilize disturbed areas promptly and complete rehabilitation to restore drainage function and reduce long-term erosion risk.

4.3.1. Surface Water Quality Monitoring (Decommissioning)

Surface water monitoring requirements during decommissioning will mirror construction-phase monitoring, scaled to decommissioning risks.

Minimum parameters: turbidity, TSS, pH, and visual monitoring.

Monitoring frequency: event-based and risk-based, with increased monitoring during in-stream removal works and high-risk earthworks periods.

5. Proposed Management and Monitoring

Planning to properly manage surface water resources prior to disturbance and conducting monitoring during and after disturbances to surface water related to the Project is used to assess effectiveness of mitigation and management measures, and to identify Project effects that may require further mitigation. Compliance monitoring is required to ensure that applicable regulatory requirements and conditions of permits/authorizations are met, and to verify the accuracy of environmental effects predictions.

5.1. Stormwater/Rainwater and Water Diversion

Diverted surface water from around the Industrial Facility will be rerouted around the site in a perimeter ditch. This ditch will collect water from the south (upgradient) side and will drain west and then north via gravity feed and join into the north (downstream)

watercourse. Two mapped watercourses located within the footprint of the Industrial Facility will be lost to accommodate the development of the facility. Provincial and Federal Permitting will be completed as required to support the loss of these watercourses.

Within the footprint of the Industrial Facility, stormwater and rainwater runoff from un-contained and unpaved areas outside of ISBL and OSBL units with no risk of surface contamination will be directed to an evaporation pond, which will overflow, if necessary via ditch or pipe to the stormwater/effluent pond pior to discharge.

Offsite roads, pipe rack, parking lots, building areas, and undeveloped areas are considered clean water areas. Typically, the storm water drainage system will be sized for peak runoff based on a minimum 10-year/24 hour storm frequency. All surfaces in uncontaminated surface water runoff areas shall be sloped to catch basins and conveyed in ditches or underground pipe to evaporation pond and then to the permitted outfall (stormwater/effluent pond).

Areas where uncontaminated surface water can be collected must slope away from areas served by dedicated contact surface water sewers, chemical sewers, and chemical storage areas. Surface water from the Balance of Plant pipe racks, transformers, and other facilities without rotating equipment or other means of leaking may be drained to the uncontaminated drainage system.

Stormwater will be diverted away from project infrastructure via natural and graded ditches. Graded ditches will divert runoff into catchment areas that drain into the evaporation and then directed, as required, to the on-site stormwater/effluent water pond. This water may be used for fire water.

The Project will consider a dedicated rainwater collection system from the roofs of applicable buildings at the Industrial Facility. This water will be collected and potentially segregated into the new water staging pond and will be used to reduce water drawn from Peters Pond, promoting sustainability. The anticipated rainfall in the area is forecasted to be 1,208 mm annually.

5.2. Effluent Treatment

An effluent treatment package is specified at the Pre-FEED stage to treat all facility effluent prior to discharge. The effluent treatment process will consist of neutralization, clarification, and filtration (if required). Acid and caustic feed systems will supply the necessary reagents to the neutralization tank containing the various effluents. A polymetric flocculant may be added to improve sedimentation with added pH adjustment as needed.

The treated water will then be discharged into sedimentation/stormwater ponds or, if required, pumped through filters to remove fine particles before discharge. Removed solids will be collected as sludge and will be disposed of at an off-site discharge facility. As part of the FEED phase, a comprehensive waste management plan shall be developed. This plan will

detail how sludge is to be managed, stored, treated, and finally disposed of, ensuring all processes align with recommended best practices and regulatory demands. The facility must also adhere to municipal waste requirements. Different municipalities might have varying stipulations based on their local needs, environmental factors, and infrastructure

There are different types of effluents that will either be discharged directly or passed through appropriate treatment as prescribed by regulatory standards in place, before being discharged. While 73% of the raw water volume is expected to be utilized in processing and other processes, the reverse osmosis process will strip various concentrations of water quality parameters from the raw water and re-introduce them at different concentrations upon treatment and discharge (27%).

Effluent is proposed to be released from the stormwater/effluent water pond through an overflow/underflow weir structure through an open ditch directed into a linear watercourse located to the north of the Industrial Facility.

Any water discharged to the environment will be treated to meet parameters in Schedule A of the Newfoundland and Labrador Environmental Control Water and Sewage Regulations (2003). Before effluent is discharged into the receiving waterbody, the facility will adhere to the guidelines set out by the Canadian Council of Ministers of the Environment (CCME). This ensures that any effluent released into the environment is treated to a standard that safeguards both the environment and public health. All waste originating from the Industrial Facility is mandated to align with national and local regulation standards to ensure both environmental protection and human health. Table 2.3 lists the potential contaminants and their concentrations that could be released into the environment following processing. Projected discharges are all below the limits established by NLECCC and CCME.

Water supply for the Project will be obtained from Peters Pond, which will require the installation of a new water intake structure and pipeline to transport water from Peters Pond to the industrial facility. A raw water tank will store approximately 22,000 m^3 that will be used by the facility.

5.3. Production Water

The electrolyzer system requires water that is filtered, purified, and demineralized. As such, the raw water will be treated via:

- Ultrafiltration (UF) to remove suspended fine colloidal (insoluble) particles using a semipermeable membrane. The UF system will be designed to treat raw water for both process and potable water supply to the Industrial Facility.
- Reverse osmosis (RO) will serve as a backwash water source for the UF system and a feed source for the RO system. RO uses a high-pressure process to force the raw water through a semipermeable membrane, removing unwanted contaminants (i.e., salts, bacteria, metals, etc.).

- Electro-deionization (EDI) removes ionized or ionizable substances from water using ion exchange membranes, electrically active media (ion exchange resin), and a direct current (DC) electric potential.

5.4. Cooling Water

Several processes will require the use of cooling water to avoid overtemperature and to maintain stable and efficient operations. Cooling water will be utilized for removing excess heat generated during electrolysis and various stages of the ammonia production process. The cooling water will be used in a closed-loop, non-contact heat exchangers to maintain optimal operating temperatures and prevent overheating of equipment (compressors, generators, electrical equipment, pumps, seals, vacuum systems).

5.5. Make-up/Auxiliary Water

The Project will entail several closed-loop water systems in which there will be a requirement for auxiliary water to be introduced to support these systems' operation. This will include water for makeup, chemical treatment, and maintenance purposes. Although the closed-loop systems are designed to recirculate water continuously, over time they will experience small losses due to leaks, evaporation, or routine maintenance activities. As such, auxiliary water will be added to replenish these losses and maintain the required water volume and pressure within the system.

Auxiliary water will also be required for the ammonia plant boiler feedwater system, in which this closed-loop system will require a blowdown of water to maintain water quality to prevent corrosion, scaling, and biological growth. Purified water along with chemical additives will be introduced into these systems.

Like the boiler feed water systems, flushing and cleaning of closed-loop water systems will require flushing to remove accumulated debris, sediment, or chemical byproducts. Auxiliary water will also be required during maintenance procedures to clean systems, ensuring operability and plant efficiency.

5.6. Potable Water

All potable water will meet the Health Canada Guidelines for Canadian Drinking Water Quality (2022), ensuring it is safe for consumption and personal hygiene. Treatment will include ultrafiltration (UF), as described above, to remove suspended fine colloidal (insoluble) particles using a semi-permeable membrane

5.7. Sanitary Water Systems

Sanitary wastewater generated at the Industrial Facility will be collected and treated at the sanitary wastewater treatment facility and effluent water will be discharged with other treated water streams into the storm/effluent water pond.

The anticipated sanitary water treatment facility process consists of a biofiltration process that will remove contaminants from wastewater using biological processes. The intent is that naturally occurring microorganisms will be used to degrade and metabolize organic pollutants, through filter beds, microorganisms, aeration, clarification, and disinfection (if required). The wastewater will then be discharged directly, or combined with, an on-site stormwater pond and discharged. Removed solids will be collected as sludge in designated containers for off-site disposal at an approved disposal facility.

Sanitary wastewater from human-occupied buildings such as the associated accommodation camp at the Industrial Facility and temporary washroom facilities will be collected and conveyed to an on-site sanitary wastewater treatment facility. In areas in which there are significant volumes, the Project will implement specific sanitary treatment facilities. Accumulated sludges will be periodically removed and disposed of at an off-site approved disposal facility.

5.8. Construction Water Use, Hydrotesting, and Temporary Discharges

Construction activities may require water for dust suppression, concrete works, equipment washing (where permitted), hydrostatic testing, and other temporary uses.

Requirements:

- Use only approved water sources and approved withdrawal methods.
- Avoid discharging untreated construction water to waterbodies.
- Hydrotest water (if applicable) will be:
    - Characterized (additives, pH, turbidity, hydrocarbons),
    - Treated if required,
    - Discharged to approved locations using erosion controls and monitoring, or hauled off-site if necessary.

5.9. Linear Infrastructure Water Management (Access roads, Transmission, Pipelines)

For long linear corridors, EVREC will implement corridor-specific water management measures including:

- Breaks in ditch grades (check dams/grade controls),
- Frequent cross-drainage where needed to prevent concentration of flows,
- Stable outlet protection and sediment controls at discharge points,
- Seasonal controls during spring freshet and heavy rainfall periods,
- Rapid stabilization and progressive reclamation of disturbed areas.

5.10. Decommissioning Water Management Measures

Decommissioning will include:

- Site-specific decommissioning ESCP measures,
- Controlled dismantling to prevent debris and sediment mobilization,
- Dewatering controls for excavations and removals,
- Rehabilitation plans restoring stable drainage patterns, vegetation, and erosion resistance.

6. Roles and Responsibilities

Effective implementation of this WMP depends on clear accountability and communication between EVREC, its contractors, subcontractors, vendors, and regulators. Roles, responsibilities, and lines of communication are structured to ensure compliance with regulatory requirements and the consistent application of water regulations across all Project components.

EVREC will maintain an Environmental Management Team (EMT) led by the Environmental Manager, supported by qualified Environmental Coordinators and site-specific Environmental Monitors. The team will work in close coordination with Construction, Operations, Maintenance, and Health & Safety divisions throughout the Project lifecycle.

6.1. EVREC

- Ensure adequate resources (personnel, training, equipment) are available to implement water management controls.
- Ensure water management commitments and permit conditions are integrated into construction and operations planning.

6.2. Water Resources Lead / Qualified Environmental Professional (QEP)

- Provide technical oversight of water-related mitigation, monitoring design, and interpretation of results.
- Support permitting/authorization requirements and effects assessment.
- Provide input on crossing design requirements, discharge controls, and adaptive management triggers.

6.3. Environmental Manager / Environmental Management Team (EMT)

- Overall owner of the Water Management Plan implementation.

- Ensure regulatory requirements and permit conditions are translated into site procedures.
- Approve monitoring plans, inspection schedules, and corrective actions.
- Maintain communication with regulators as required.

6.4. Construction Manager / Contractors / Subcontractors

- Integrate water management requirements into work planning and sequencing.
- Ensure contractors implement ESCP and water controls before and during construction work.
- Coordinate response to non-compliances, including stopping work when required.

6.5. Site Environmental Coordinator(s) / Environmental Inspectors

- Conduct routine inspections and monitoring (construction and commissioning).
- Document findings, maintain records, and issue corrective actions and follow-up verification.
- Provide field direction to crews on water protection measures.

6.6. Operations & Maintenance Team (O&M)

- Operate and maintain stormwater, sanitary, and effluent treatment systems.
- Conduct routine sampling and inspections per the monitoring program.
- Maintain readiness for contingency events (storms, spills, system failures).

6.7. Procurement / Supply Chain

- Implement controls as designed and maintain them in working order.
- Participate in required training and comply with buffer zones and no-go areas.
- Report spills, releases, erosion failures, and water quality issues immediately.

6.8. All Personnel

- Comply with the requirements of this plan and report concerns immediately.
- Participate in training and follow site procedures near water resources.

7. Resources Specific Protection Procedures

This section provides practical, field-ready procedures to protect specific water-related receptors.

7.1. Streams and Watercourses

- Maintain marked buffers and avoid disturbance unless authorized.
- Use designated crossing locations only; prohibit “ad hoc” crossings.
- Stabilize banks and disturbed soil immediately.
- Install outlet protection at culverts/ditches to prevent scouring.

7.2. Wetlands and Peatlands

- Avoid wetland disturbances where feasible through micro-siting and routing.
- Where crossings are required:
    - Minimize footprint,
    - Use temporary matting/corduroy only where approved,
    - Prevent rutting and sediment-laden runoff into wetland features.
- Maintain natural hydrologic connectivity; prevent drainage channelization through wetlands.

7.3. Fish and Fish Habitat (where present)

- Avoid in-stream works where feasible; schedule to minimize risk periods.
- Use isolation and pump-around methods where required.
- Keep equipment out of the water wherever feasible.
- Complete fish rescue as required by permitting
- Prevent sediment deposition in habitat areas via upstream controls and monitoring.
- Implement immediate corrective actions if turbidity or sediment deposition is observed.

7.4. Watercourse Crossings (Design, Installation, Maintenance)

- Confirm crossing type and design criteria prior to construction (bridge/culvert type, embedment, alignment).
- Install erosion controls before excavation.
- Maintain flow during construction (diversion/temporary culvert).
- Rehabilitate banks and approaches, including stabilization and revegetation.
- Inspect after storms and spring freshet; repair erosion and scour promptly.

7.5. Erosion and Sediment Control Installation and Maintenance

- Install perimeter controls and slope controls before stripping/grubbing.
- Use check dams/ditch controls in long or steep ditch runs.

- Maintain sediment controls (remove accumulated sediment when capacity is reduced).
- Stabilize exposed soils progressively and prior to winter shutdown.

7.6. Dewatering Controls

- Discharge through treatment as required (settlement/filtration) and into stable areas.
- Use energy dissipation to prevent erosion.
- Monitor turbidity visually and instrumentally as required for higher-risk discharges.

7.7. Concrete and Grout Works

- Maintain designated washout areas.
- Protect waterways from alkaline water and uncured concrete.
- Store cementitious materials away from drainage pathways.

7.8. Fueling and Equipment Maintenance

- Use designated fueling areas with spill kits and secondary containment where appropriate.
- Inspect equipment daily for leaks before entering near-water work zones.
- Prohibit storage of fuels/chemicals within buffers unless specifically approved and controlled.

7.9. Chemical Storage and Handling

- Secondary containment for bulk storage.
- Controlled transfer procedures and trained personnel only.
- Immediate containment and response for any release.

7.10. Port / Marine Terminal Water Protection Measures

- Manage wharf runoff to prevent hydrocarbons and chemicals from entering marine waters.
- Provide spill response equipment staged for marine response where applicable.
- Implement inspection and maintenance for drainage, sumps, and containment areas.

7.11. Peters Pond Source Water Protection

- Protect intake area from contamination (no fueling/maintenance at shoreline unless controlled).

- Maintain monitoring station and operational triggers for low water levels and water quality changes.
- Maintain secure access and signage to reduce risk of accidental releases near the intake.

8. Contingency Plans

8.1. Extreme Weather Conditions

Extreme weather (heavy rain, flooding, snowmelt, freeze-up, drought) can overwhelm drainage systems, mobilize sediment, and threaten containment systems. EVREC will maintain an Extreme Weather Readiness Procedure that includes:

8.1.1. Preparation

- Inspect and clear ditches, culverts, and catch basins.
- Verify storm/effluent pond freeboard and outlet function.
- Secure stockpiles and install additional sediment controls where needed.
- Stage pumps, hoses, and spill response equipment as appropriate.

8.1.2. Response

- Increase inspection frequency of high-risk areas (crossings, steep ditches, pond outlets).
- Suspend high-risk earthworks near water when conditions exceed safe/control thresholds.
- Implement additional controls (temporary berms, extra sediment barriers, pump-around).

8.1.3. Recovery

- Inspect all crossings, ditches, outlets, and controls for damage.
- Repair erosion/scour promptly and document corrective actions.
- Conduct additional water quality monitoring where risk of impact is elevated.

8.1.4. Drought / Low Water Supply Contingency

- Implement withdrawal management and operational adjustments to protect source water and maintain compliance with permits and commitments.

8.2. Fires and Explosions

Fire events can generate contaminated firewater runoff. EVREC will:

- Where feasible, contain firewater in designated containment areas or ponds.
- Prevent contaminated runoff from leaving controlled areas unless treated and verified compliant.
- Coordinate with emergency responders and environmental staff to protect receiving waters.

8.2.1. Fuels and Hazardous Materials Spills

Spill response is based on “stop the source, contain, protect water, recover, report.”

Immediate actions:

1. Stop work and eliminate ignition sources (as safe/appropriate).
2. Stop the source of the spill if it can be done safely.
3. Contain using absorbents/booms/berms; prioritize protection of waterways and drainage pathways.
4. Notify site supervision and Environmental staff immediately.
5. Implement cleanup and disposal using approved methods and facilities.
6. Complete incident reporting, investigation, and corrective actions.

8.2.2. Non-compliant Discharge / Water Quality Exceedance

If monitoring indicates a potential exceedance or visible impact:

- Suspend discharge where feasible (hold/recirculate).
- Identify and correct the cause (treatment upset, equipment failure, runoff control failure).
- Increase monitoring frequency to confirm return to compliance.
- Notify regulators where required by permit/approval conditions.
- Document corrective actions and implement prevention measures.

8.2.3. Intake Water Quality Degradation / Supply Interruption

If source water quality degrades (e.g., high turbidity, contamination event) or the intake/pumps fail:

- Implement operational contingency (reduce demand, use storage reserves).
- Investigate cause and implement repairs/mitigation.
- Increase monitoring and document event and resolution.
- Implement public/community interface measures if relevant.

9. Training & Competency

Training ensures consistent implementation of water protection measures across all project phases.

9.1.1. Required Training (Minimum)

All personnel working on-site will receive:

- Environmental orientation (buffers, no-go zones, reporting requirements).
- Spill prevention and response basics.
- Erosion and sediment control awareness (what controls are present, why they matter, what failures look like).

9.1.2. Role-Specific Training

- Environmental staff: sampling SOPs, instrument calibration, chain-of-custody, reporting.
- Construction supervisors: ESCP implementation, stop-work authority, incident management.
- Operators: stormwater/effluent system operation, alarm response, and discharge controls.
- Personnel handling chemicals: WHMIS/SDS comprehension, containment and transfer procedures.
- Equipment operators near water: near-water operating practices and leak prevention.

9.1.3. Records and Verification

- Maintain training records (attendance, competency verification where applicable).
- Verify contractor training equivalency and keep records available for audit.
- Refresh training periodically and after significant incidents or procedure changes.

10. Monitoring and Record Keeping

Monitoring and documentation are critical to verifying that water management activities are implemented in accordance with this Water Management Plan, permit conditions, and applicable legislation.

10.1. Monitoring Framework

10.1.1. Monitoring Objectives

- Verify compliance with the Water Management Plan and applicable approvals/permits.

- Confirm effectiveness of erosion/sediment and runoff controls.
- Confirm treated effluent and stormwater discharges meet applicable limits/guidelines.
- Identify deficiencies early and implement corrective actions.
- Support adaptive management and continual improvement.

10.1.2. Monitoring Activities (Construction and Decommissioning)

Typical tasks include:

- Inspect ESCP controls (integrity, sediment accumulation, bypassing, erosion).
- Inspect crossings, ditches, outlets, and water diversion structures.
- Conduct water quality monitoring during in-stream works (turbidity/TSS/pH/visual).
- Conduct event-based inspections following rainfall and snowmelt events.

10.1.3. Monitoring Activities (Operations)

Typical tasks include:

- Inspect stormwater systems (catch basins, ditches, separators, ponds, outfalls).
- Inspect effluent treatment systems and sanitary systems.
- Conduct routine effluent sampling and maintain laboratory records.
- Monitor intake withdrawals and source water conditions as required.

10.1.4. Monitoring Frequency

Monitoring frequency will be risk-based and will increase during:

- Active earthworks near water,
- In-stream work windows,
- Heavy rainfall and snowmelt periods,
- Commissioning/start-up of treatment systems,
- Any time non-compliance is suspected.

10.1.5. Corrective Actions

If deficiencies are identified:

The Environmental Manager (or delegate) will issue a Corrective Action Report (CAR) describing:

- Issue description and location,
- Required corrective action(s),
- Responsible party,

- Timeline,
- Verification requirements.

Corrective actions will be tracked to close-out and retained in the project record.

10.2. Data Management and Reporting

All inspection and monitoring data will be stored in EVREC's environmental data repository.

Each monitoring event record will include:

- Date/time, location, and activity context,
- Inspector(s) name(s),
- Observations and findings,
- Photos and supporting documentation,
- Corrective actions and follow-up verification.

Reporting cadence (typical; confirm with permit conditions):

- Construction: weekly summaries during high-risk periods; monthly reporting as required.
- Operations: routine compliance reporting per permits/approvals; internal monthly/quarterly performance summaries.

10.3. Auditing

Audits verify effectiveness and compliance:

- Internal audits at defined intervals and after major milestones.
- External audits/inspections as required by regulators or third parties.

Audit findings will be documented and managed through the corrective action process.

10.4. Revising the Water Management Plan

This plan will be reviewed and revised when:

- Project design advances (e.g., FEED updates that change drainage, treatment, outfalls),
- New permits/conditions are issued,
- Significant non-compliances or incidents occur,
- Monitoring indicates changes are needed to protect water resources.

10.5. Continuous Improvement

Lessons learned will be captured through:

- Regular environmental review meetings,
- Trend analysis of monitoring results,
- Post-incident reviews,
- Updates to procedures and training.

10.6. Document Management

- This Water Management Plan is a controlled document.
- Revisions will be tracked (revision number, date, summary of changes, approvals).
- Only the current revision will be available as the “controlled” version in the document management system.

10.7. Distribution

- Controlled copies will be available to EVREC staff and contractors via the designated document repository.
- Key requirements will be communicated through training, toolbox talks, and work package briefings.

11. Company Information

Contact information for EVREC is provided below.

Exploits Valley Renewable Energy Corporation
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13. List of Abbreviations

Abbreviation	Definition
CAR	Corrective Action Report
CCME	Canadian Council of Ministers of the Environment
CNWA	Canadian Navigable Waters Act
DC	Direct Current
EDI	Electro-deionization
EIS	Environmental Impact Statement
EMT	Environmental Management Team
ESCP	Erosion and Sediment Control Plan
EVREC	Exploits Valley Renewable Energy Corporation
FEED	Front-End Engineering Design
GHG	Greenhouse Gas
GIS	Geographic Information System
GW	Gigawatt
HADD	Harmful Alteration, Disruption or Destruction
IAA	Impact Assessment Act
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MW	Megawatt
NL	Newfoundland and Labrador
O&M	Operations and Maintenance
PV	Photovoltaic
QA/QC	Quality Assurance / Quality Control
QEP	Qualified Environmental Professional
RFNBO	Renewable Fuels of Non-Biological Origin

Abbreviation	Definition
RO	Reverse Osmosis
SARA	Species at Risk Act
SDS	Safety Data Sheets
SOP(s)	Standard Operating Procedure(s)
TSS	Total Suspended Solids
TWh	Terawatt-hour
UF	Ultrafiltration
WHMIS	Workplace Hazardous Materials Information System
WMP	Water Management Plan

APPENDIX Q.14
Workforce and Employment Plan

Prepared by: Exploits Valley Renewable Energy Corporation

ENVIRONMENTAL IMPACT STATEMENT
EVREC Green Energy Hub
Exploits Valley Renewable Energy Corporation

WORKFORCE AND EMPLOYMENT PLAN

May 2026

CONFIDENTIALITY NOTICE

Exploits Valley Renewable Energy Corporation considers all information submitted in its response as "Confidential", and requests that all reasonable steps to ensure that information contained in this response will only be made available to the receiving party, it's professional advisers and contract staff engaged on the project that is specificically engaged in the project.

Contents

1. Introduction 3
1.2 Guideline Requirements 3
1.3 Purpose of tis Document 3
2. Project Description 4
2.1 Site Location 6
3. Purpose and Objectives 7
3.1 Overview 9
4. Introduction 10
4.1 What is a Human Resource Strategy? 10
4.2 Current State 10
4.3 Compensation Strategy 11
4.4 Outcome 12
4.5 Benefits 12
5. HR Compliance and Policy 12
5.1 Diversity Equity and Inclusion Policy and Plan 12
5.2 Recruitment Strategy and Workforce Planning 14
5.4 HR Systems and Data Management 15
5.5 Learning and Development (Training) 15
6. Monitoring, Auditing, and Continuous Improvement 17
7. Company Information 17
8. References 17
9. List of Abbreviations 18

1. Introduction

Exploits Valley Renewable Energy Corporation (EVREC) is proposing the development of EVREC Green Energy Hub (the "Project"), a 3.5 gigawatt (GW) green hydrogen project in central Newfoundland and Labrador (NL), located near the town of Botwood, NL. The Project includes an approximate 3.5gigawatt (MW) wind project, a 150 megawatt (MW) solar project, and an industrial facility to process hydrogen ammonia, and produce approximately 925,000 to 1,040,000 tonnes of ammonia per year, shipped from the Port of Botwood.

The Project will include the development of an onshore renewable energy system consisting of up to 534 wind turbines throughout four wind project areas and a 150-megawatt (MW) solar photovoltaic facility, together with associated on-site and off-site infrastructure. Supporting infrastructure will include access roads, collector substations, and electrical transmission and grid interconnections, as well as quarries, laydown areas, and accommodations throughout the construction period.

The industrial component of the Project will be located within the Botwood Municipal Planning Area and include water supply and treatment systems, electrical and utility infrastructure, energy storage, ammonia storage and export systems, associated support buildings, roads, warehousing, worker accommodations, quarry area, fuel storage, and other ancillary infrastructure required for construction, operation, maintenance, and eventual decommissioning of the facility.

1.2 Guideline Requirements

"The EIS shall include a Workforce and Employment Plan for the construction, operation and maintenance, decommissioning and rehabilitation phases of the Project, which shall be developed in consultation with the Department of Immigration, Population Growth and Skills.

1.3 Purpose of tis Document

The employment plan shall include, but not be limited to the following information for each phase of the Project:

a. National Occupation Classification codes (NOC 2021 or most recent available) at the 5-digit level associated with each position (including the number of positions associated with each NOC code);

b. approximate timelines for each of the positions. This would include the number of positions for each 5-digit NOC 2021 code (or most recent available) throughout the

Project at specified time intervals (monthly or at least quarterly) which would show levels of employment throughout the Project timeline;

c. an indication of whether the positions are full-time equivalent or if they are the actual number of positions; if they are indeed the actual number of positions, how many are full time versus part-time;

d. an estimate of the number of apprentices (by level and trade/5-digit NOC 2021 code, or most recent available) and journeypersons required;

e. e) qualifications, certifications and other requirements, including the need for, location and availability of related training opportunities (e.g., post-journeyperson training) associated with key positions;

f. anticipated source of the workforce, including an estimate of local employment (local area, provincial), an estimate of foreign worker or immigrant employment, and any strategies for recruitment, including both domestic and international. Clarification on whether the Proponent expects to apply to use one of more of the Newfoundland and Labrador Provincial Nominee Program, Atlantic Immigration Program, federal Temporary Foreign Worker Program or federal International Mobility Program. This should also include clarification on which positions would be direct hires, and which would be from companies contracted to carry out Project work;

g. a commitment to provide quarterly summary reports. These reports would include information on the number employed by 5-digit NOC 2021 (or most recent available), the number of full-time/part- time employees, the number of apprentices (by level) and journeypersons for each applicable 5-digit NOC code, gender and source of the workforce; and

h. h) a commitment to develop a Benefits Agreement, including a Gender Equity, Diversity, and Inclusion Plan (GEDIP) that meets the approval of the Minister of Industry, Energy and Technology."

2. Project Description

EVREC plans to produce cost-effective renewable (green) electrolytic hydrogen and RFNBO-certified (Renewable Fuels of Non-Biological Origin) ammonia for export to global markets

to meet growing demand, supporting the reduction in greenhouse gas (GHG) emissions and the global energy transition.

The industrial facility will be powered by 100% renewable energy generated from a 3.5 GW onshore wind farm, spread across four sites:

- Botwood Wind Farm
- Twin Lakes Wind Farm
- Seabrights Lake Wind Farm
- Leading Tickles Wind Farm

Approximately 12 TWh of electricity generated at the wind farms will be collected and transmitted to the industrial facility's main electrical substation. This electricity will be used to produce c. 180,000 tonnes of electrolytic hydrogen per year, using PEM electrolyzer technology.

Freshwater for the facility will be sourced from Peter's Pond, located approximately 5 km from the site. The facility's total water demand of approximately 8 million litres per year will be fully supplied from this source.

Hydrogen will react with nitrogen in two 2,500 tons per day Haber-Bosch reactors to produce approximately 1 million tons of certified green ammonia every year. Nitrogen for the process will be sourced by two air separation plants at the facility.

To mitigate fluctuations in energy generation from the wind farm, the facility will include:

- a 200,000 tonne above-ground hydrogen storage facility for compressed gaseous hydrogen;
- 1000 MWh of battery storage for critical loads; and
- a 150 MW solar photovoltaic (PV) plant to help keep the batteries charged.

The project will also include a water supply and treatment facility to achieve the electrolyzer feedwater quality requirements, and that treated discharge water complies with regulatory standards prior to being discharged back into the natural environment.

Liquified ammonia will be stored in two 75,000 m^3 aboveground ammonia storage tanks prior to shipment. Export of liquefied ammonia will be carried out through the Port of Botwood via a new ammonia export jetty, to be constructed at the site of the former Irving Oil jetty. A below ground ammonia pipeline will connect the ammonia storage tanks at the facility to the export jetty. The new jetty will be a mixed-use finger pier that will allow for equipment import and offloading during the construction phase. It will be

complemented by a new marginal wharf which will be built at the site of the former ASARCO wharf, enabling simultaneous offloading of up to two vessels.

2.1 Site Location

- The industrial plant is located approximately 5 km west of the Town of Botwood.
    - Approximate coordinates: Lat: 49.128° Long: -55.3967°.
- The solar PV farm is located in the vicinity of the industrial plant.
    - Approximate coordinates: Lat: 49.111° Long: -55.4207°.
- The ammonia export jetty is located at the former Irving Oil Jetty at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1347° Long: -55.346°.
- The marginal wharf is located at the former ASARCO wharf at the Port of Botwood.
    - Approximate coordinates: Lat: 49.1442° Long: -55.3381°.
- Freshwater supply will come from Peter's Pond.
    - Approximate coordinates: Lat 49.088° Long: -55.4268°.
- The Botwood, Twin Lakes, and Seabrights Lake wind farms lie west of the Town of Botwood. Approximate coordinates:
    - Botwood: 49.2082°, -55.5077°.
    - Twin Lakes: 49.3041°, -55.7968°.
    - Seabrights Lake: 49.3231°, -55.6567°.
- The Leading Tickles wind farm area lies north of Botwood.
    - Approximate coordinates: Lat: 49.4871° Long: -55.4291°.

The figure below shows an overview of the project area.

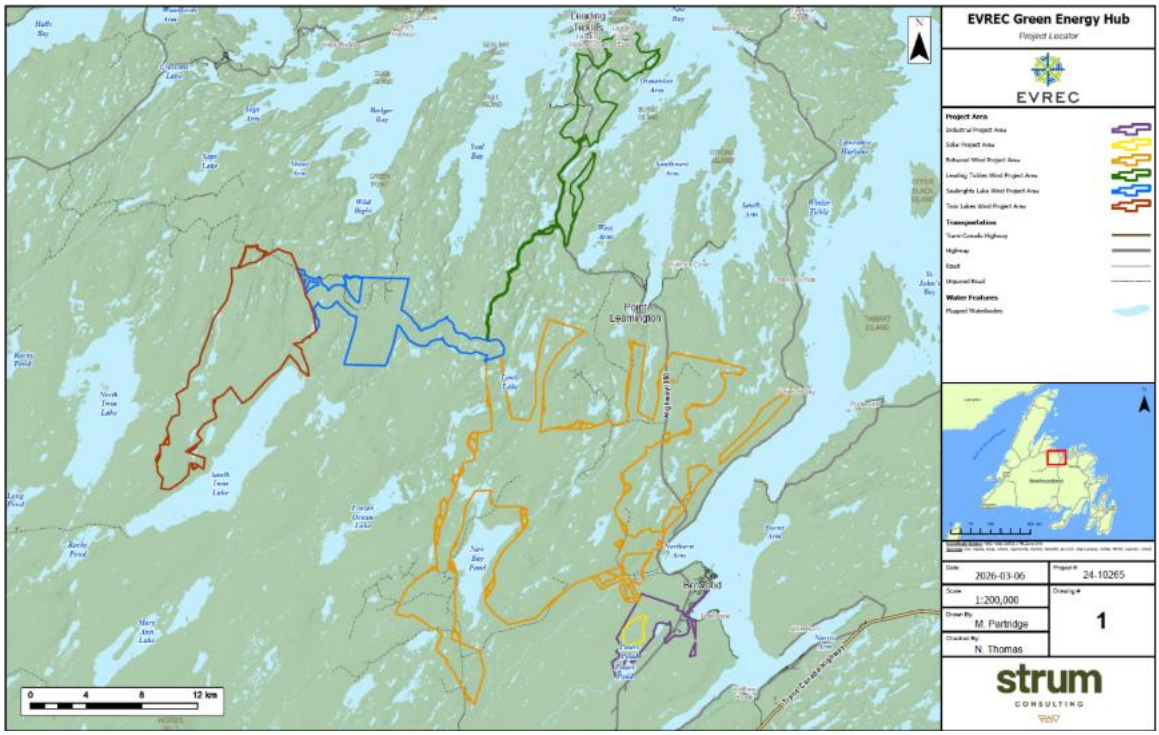

Figure 2.1: Overview of Project Lands

3. Purpose and Objectives

The purpose of this Plan is to identify the methods by which EVREC will manage employment and its workforce during construction, operation and decommissioning.

The EVREC Human Resources Leadership team will provide direction and guidance throughout the Project to ensure that work is planned, designed, and constructed to be consistent with all industry regulations, policies, learning and development to deliver to our goal of excellence.

The primary role of Human Resources is to mitigate risks to the organization, secondly, have a healthy culture and a retained workforce supported with great employee benefits, and thirdly provide the organization with opportunities for continued growth and learning at all levels.

Key risks for mitigation are establishing appropriate provincial and federal policies in addition to operational policies. Establishing the right culture mitigates Human Rights risks, employment risk, disciplinary risk, payroll risk, data management breach, privacy risk, and termination risks.

As Exploits Valley Renewable Energy Corporation ("EVREC") is now on its course towards EA, permitting and construction HR foundational practices and various HR disciplines are required for EVREC to achieve its goal of establishing itself in Newfoundland, surrounding communities of Botwood. Our goal is to be an employer of choice.

Listed are the critical disciplines of Human Resources that necessitate the implementation of HR strategies to meet the evolving needs of the EVREC project.

- **Compensation**: It is critical to establish a compensation framework for all levels of the organization and based on current market salary surveys. This will enable EVREC to develop compensation strategies, performance management systems and compensation based on job and role structures which align with NOC job codes. EVREC will be better positioned to negotiate pay and benefit packages with potential employees. Internal equity, fairness, regulatory requirements, and consistency will be key.

- **Benefits**: Defining Health Care Benefit options for EVREC and sourcing potential providers for employee Health Care Benefits. The purpose of the review is to identify the key competitive benefits that are likely to attract quality candidates and retain the workforce. A key benefit, identified by many candidates in all industries is a pension/ registered retirement plan program. Sourcing potential providers is underway.

- **Recruitment**: The success of EVREC largely depends on the workforce employed, and it is essential that the right people are hired for the right role at the right time. Workforce Planning, and a Recruitment strategy aligned with the various stages of the organization development has been created and the WFP is attached. EVREC recognizes we will need to differentiate ourselves in a competitive market for talent. We will work within our local and Indigenous communities, educational institutions,

and with all stakeholders to ensure we hire locally and provincially with diversity and accommodation to support our organizational needs.

  - A recruitment strategy is currently underway and identifies initially, participating in job fairs for company recognition, working with the local educational trade schools, colleges and universities for future co-op and internship programs. A key focus of our recruitment strategy will be apprentice candidates and the supporting programs with outcomes of certifications and industry seals.
  - EVERC's recruitment strategy involves working with various search organizations locally, supported by social media, job fairs and job boards. An effective recruitment tool is also the local manpower employment offices and radio advertising in additional to local paper. As the project progress and we are prepared to source applicants, our career page will be active and tied to an applicant tracking system

- **HR Policy**: Policies mitigate risk. Policies provide guidance, consistency, accountability, efficiency, and clarity on how an organization operates. HR policies will need to align with our Corporate Governance policies and be tested during audit and compliance. EVREC has developed a Gender Equity, Diversity and Inclusion Plan that will encompass a fully integrated approach in all functions of HR. EVREC will have a culture that supports DEI, and in particular recruitment, development, compensation, and performance for all levels of employees and contractors.

HR contributes significantly to the corporate decision-making process, which includes assessments for current employees and predictions for future ones. The following pages provide details on the critical HR disciplines and supporting strategies required in the first quarter of 2026 with additional secondary HR priorities for the following years.

3.1 Overview

This document sets out the need for a formal Human Resource function and HR strategy for the next three years. Key HR functions have been identified and prioritized with the aim of assisting EVREC in achieving its strategic and community goals from project to steady state operations.

EVREC has been successful in positioning itself to develop a world class green energy project. In a proactive measure, EVREC is preparing for the evolution of the organization, with a key focus on people, processes, and programs. Metrics will be established within all disciplines for effectiveness, accountability and responsiveness.

The key stakeholders; operationally focussed executives, and future managers and employees, will require people resources, structures, programs, and policies to deliver and support the goals of a fully operational energy organization and be recognized as employer of choice.

4. Introduction

4.1 What is a Human Resource Strategy?

A Human Resource strategy is a business's overall plan for managing its human capital to align it with its business activities. In the following pages, the proposed Human Resource strategy's intention is to set the direction for all the key areas of HR, including Recruitment, Employee Relations, Compensation, Benefits, Policy Governance, Legal Requirements, Privacy, HR Software & Systems, and Learning & Development. The HR strategy is a long-term plan that drives culture and accountability through the right HR practices, throughout the organization.

This HR strategy is "A Base to Build On". Disciplines and programs aligned with company goals. HR is the conscience of the organization and a key supporter and influencer of culture. Setting cultural standards high and maintaining a sustainable framework for the future. People are essential to the success of any business. The recruitment of the right people with the right skills at the right time. The performance of employees can be a liability or asset to a company. Learning and Development with Training is a necessity for safety, career advancement, recruitment and retention of the workforce at all levels.

HR provides the organization all of the fundamentals of Human Resources through People, Processes and Programs.

4.2 Current State

The organization is working through the planning stage and preparing for the construction phase.

Critical roles and skilled talent are being identified to support next phases of the project. Planning and the process to recruit will be vital, particularly with commitments locally.

Our current compliment of personnel are consultants with expertise and tenure is currently effective but not sustainable. We have worked out the required skills in the workforce requirements, and we are working on developing the appropriate people/ process frameworks.

A recruitment strategy under development will support and mitigate any risks to our workforce needs, as we approach identifying, validating and securing the required skills within our local communities, with our Indigenous communities and within Newfoundland.

Deliverable

- Developing a framework of foundational and sustainable HR disciplines, with the identification of critical strategies which, once implemented will evolve, expand, and align with the stages of growth for EVREC.
- These critical HR strategies will provide a base to identify, develop and build a skilled workforce, strong leaders, a great place to work. A focus on local, communities and Indigenous resources, will enable the organization to be agile in continuing to meet the various stages of growth.

4.3 Compensation Strategy

Making the right offer of pay is a key part of attracting the best talent. This must be balanced with the budget and finances of the company and the local labour markets.

It is critical to establish structure to ensure fairness and justification, and competitiveness in the market. The goal here is to reward people equitably, appropriately, competitively, and with motivation.

Deliverable

- Understand the current pay structures in the local market by participating or purchasing a compensation market survey for all positions and roles, co-op programs, new grad and apprenticeships.
- A focus on Total Compensation to ensure we are competitive in the market:
    - Annual Base Salary
    - Short Term Incentive Plan
    - Potential Retention Plan for key critical roles
    - Learning and development Initiatives
- Participation in various market and industry salary surveys.
- Establishing structure and grade system by defined roles including apprenticeships and co-op programs, aligning with and including NOC workforce position codes.
- Develop educational support for Management regarding “Pay for Performance” and provide consultation, where requested, around pay gap strategies, with supporting resources for leaders and personnel.
- Prepare market comparison and assist in identifying potential market gaps.
- Develop a Concept for Short Term Incentive Plan to support Total compensation competitive with the market.
- Introduce various incentives for recruitment of personnel.
- Develop Compensation Philosophy which provides a governance model with defined and approved administration of all compensation activities; STIP, (LTIP) annual and promotions.

4.4 Outcome

- Support Management by introducing tools and resources for compensation practices for job evaluation, performance management, annual salary reviews, promotion matrix and appropriate salary movement, while tied to budget.
- Strategic approach to compensation with internal equity, transparency, and consistency.
- Enhanced ability to compete for talent in the market.
- Recommended Actions- tie salary survey to NOC job codes.
- Compensation metrics.

4.5 Benefits

- Benefit programs have become a required standard offering for companies. They are a critical element to pro-actively support the health and wellbeing of our workforce. As we are planning for the future workforce, it is imperative to have a benefit plan and structure in place prior to recruitment.
- A key requirement of any candidates for recruitment is a pension type plan or Registered Retirement Saving Plan. Staying competitive is of prime importance when trying to attract the best talent.

Goal
Provide an enhanced yet competitive benefits programs to support recruitment. Further enhanced benefit offering can evolve in the future as the company grows.

5. HR Compliance and Policy

5.1 Diversity Equity and Inclusion Policy and Plan

EVREC is committed to promoting equal opportunity and diversity within a workplace that is free of discrimination. We will consult with the Minister of Industry, Energy and Technology and the Minister Responsible for the Status of Women prior to Project construction to develop a Gender Equity and Diversity Plan that meets with their approval.
A preliminary Plan is included in Appendix D.

The Gender Equity and Diversity Plan will specifically consider business and employment access for members of underrepresented populations. Renewable energy training will be offered to provide local workers with training appropriate to the growing renewables industry in eastern Canada. The cornerstone of the Gender Equity and Diversity Plan will be EVREC's Equity, Diversity and Inclusion Policy (Appendix D), which states that EVREC maintains a policy of inclusion in support of disadvantaged persons in society, particularly women, Indigenous peoples, members of visible minorities, and persons with disabilities.

As a starting point, it's important to have a series of Human Resources polices and Governance Policies that are documented and approved by both Senior Management and the Board of Directors.

The polices should comply with the Human Rights Code, Provincial Employment Standards, Newfoundland Workplace and Occupational Health and Safety and all relevant legislations applicable to the Energy Sector, and the province of Newfoundland.

Human Resources is responsible for ensuring good governance, implementation, training and understanding of Company policies. HR policy management minimizes financial, employer and employee risk as well as reputational risk. Once the policies are developed, they should be reviewed and revised through on-going audit, updates, and an annual employee review and acknowledgement.

Certain federal and provincial policies require education, training and understanding of policies and accessibility of all policies to all employees such as EVREC's Anti Harassment, Violence and Discrimination Policy in addition to EVREC's Diversity Equity and Inclusion Policy.

Learning and training plans for these and other critical policies have been developed for roll out. Current personnel have read, signed, and acknowledged receipt and understanding. This process also meets our metrics and audit requirements. All of our policies will be tracked and documented.

Goal

- Develop clear and effective HR policies which meet Federal and Provincial compliance, and which balance the interests of both management and employees.
- Provide training and education of all critical policies.

Initiatives

- We have developed a Policy Governance model: naming and numbering of policies by department, ownership of policies, review process, approvals, and publication
- Implement bi-annual learning sessions on critical regulated policies; (Anti-Workplace violence, Discrimination and Harassment, DEI, Health and Safety, Code of Conduct etc.)
- Introduced an annual audit and annual review and acknowledgment of critical policies and retain for audit and compliance purposes.
- Policies to be Introduced through a new employee onboarding Employee Handbook as well policies provided on EVREC Company webpage/ employee portal.
- EVREC has attached in the appendix the Diversity, Equity and Inclusion Policy.

5.2 Recruitment Strategy and Workforce Planning

Attraction and retention of talented personnel and professionals in a start-up takes more effort than in established businesses. Recruiting candidates and selecting the right candidates to come and work with EVREC is a key HR responsibility along with functional leaders.

The right people are the lifeblood of the organization and finding the best fit is a key task. Industries nationally, are facing a competitive labor market due to improvements in unemployment, competing opportunities, and shifting skill demands. The pandemic has caused the "Great Resignation" where experienced and skilled professionals and others are making lifestyle changes and leaving their careers. Organizations will be challenged to attract and retain skilled personnel. Our goal is to stand out amongst our competitors with demonstrated recruitment activities, demonstrated learning and development opportunities supported by benefits and the right culture.

- The development a robust recruitment strategy which involves community stakeholders, Indigenous partners, government, education institutions and social media as well as outsourced recruitment organizations. This recruitment strategy aligns with our current workforce plans and timing as well as use of the NOC labour positions.
- The various recruitment processes and strategy will also include working with local universities, colleges, trade schools and training centres. We have established relationships with the local colleges and universities.
- We are planning to attend upcoming job fairs and events to introduce EVREC and future opportunities.
- A career web page on our corporate website, promoting EVREC, and opportunities is underdevelopment and will link to our HR Recruitment applicant tracking system.
- HR has commenced development of a hiring tool kit, and resources for hiring managers. These resources align with provincial and federal human rights, learning resources for unbiased recruitment awareness and job-related specific interview resources.
- HR has prepared interview training guides and resources for our leaders.
- A key component of recruitment will be our best in class learning and training programs which will also be supported by a best in class mentoring program across the organization.
- Implement recruitment metrics- time to hire, cost to hire, and tracking methodology for recruitment and reporting through the applicant tracking and other HR recruitment processes. The recruitment metrics will start with weekly reports and ultimately be a monthly metric. The recruitment statistics will be provided to all levels of management and align with the priority workforce plan.

Actions

- Recruitment Strategy currently under development for implementation Q1 2027

5.4 HR Systems and Data Management

The Human Resources Information System provides practical solutions for HR through technology by providing appropriate data to assist management and operational departments. The systems comply with all legal requirements and provide trends in the workforce. The following HR data is provided through HR systems to support the organization: payroll and benefits, costs related to budget, headcounts, turnover, and promotions. Operationally, the HR systems can provide operational leadership with tool to track employee time, compliance, training, vacancies, staffing structure people and position management.

HR acknowledges the critical role of technology and systems in various aspects of HR, particularly in recruitment, policy, privacy, and employee administration and the protection of data security. This is most critical to privacy and breach of confidentiality for HR related documents and information, as well as corporate and operational data. We need to mitigate risk from a breach of privacy and protection of confidential employee data.

Outcome

- HR transactions are performed consistently and in compliance with all legal regulations.

Action

- Align with Finance and Operations for ERP selection which provides and meets Human Resources data management requirements, which also includes a Learning and Development function and LMS (Learning Management System) for competency-based learning, tracking, and reporting of skill development.

5.5 Learning and Development (Training)

People are the product of life experiences, the era they grow up in, and a range of cultural influences. Learning and development (training) ensures that employees adapt to changes in processes, technology, and operational or legal shifts. The goal of learning and development is to ensure employees are successful in their learning.

As EVREC evolves and grows, it will be evident that enhancing and developing skills and competencies will mitigate risk, particularly in regulatory compliance around Health and

Safety, high risk roles, hazardous materials, first response, and all operational activities. Development of supervisors and other leaders will be an operation wide responsibility.

EVREC plans to launch a best-in-class competency-based learning/training program. The methodology is a blended approach to learning; on the job learning, on the job coaching, classroom as required and supported and tracked through the LMS.

The new methodology would include structured adult learning instructional design, an approved learning and evaluation process; one on one coaching, competency-based Skill Checks, and the appropriate technologies required to support the program. The LMS would be launched formally for side wide employees and would include Corporate employees in the future. EVREC will be recognized in Newfoundland as having the best learning and development programs and will be the envy of our competitors.

Goal

- EVREC will be recognized by its peers and employees for have a Learning and Development infrastructure that is able to demonstrate a measurable, sustainable and a consistent method of acquiring, retaining, developing, and transferring technical and safety knowledge and capabilities.
- EVREC will create an environment where readiness of skilled and capable individuals meets organizational opportunity.

Initiatives:

- Develop a learning and development strategy.
- Leverage and align with First Nations for grants and resources.
- Source and partner for educational training resources/colleges/university for required energy learning.
- Implement Hazardous materials and safety training as a priority.

Outcome

- Improved safety knowledge and compliance to health and safety regulatory requirements
- Increase operational capabilities to execute operational standard operating procedures and initiatives that will result in increased production and safety compliance.
- Enhance and improve employee alignment with strategic corporate objectives.
- Recruitment and company brand enhancement due to L&D offering.

EVREC believes that our learning and development strategy can be shared within the communities we engage with and be a source of support for community development of future workforces.

6. Monitoring, Auditing, and Continuous Improvement

EVREC will monitor the effectiveness of the HMTP through routine checks, periodic audits, drills, and performance reviews. Results will be used to improve training content, scheduling, and competency verification so that hazardous-materials risks remain ALARP and regulatory compliance is maintained.

7. Company Information

Contact information for EVREC is provided below:

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Government of Newfoundland and Labrador. Apprenticeship and Certification Act, SNL 1999, c. A-3.1.

Government of Newfoundland and Labrador. Department of Immigration, Population Growth and Skills workforce development policies and guidance.

9. List of Abbreviations

Abbreviation	Definition
ALARP	As Low As Reasonably Practicable
DEI	Diversity, Equity, and Inclusion
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERP	Enterprise Resource Planning
EVREC	Exploits Valley Renewable Energy Corporation
GEDIP	Gender Equity, Diversity, and Inclusion Plan
GHG	Greenhouse Gas
GW	Gigawatt
HMTP	Hazardous Materials Training Plan
HR	Human Resources
L&D	Learning and Development
LMS	Learning Management System
LTIP	Long-Term Incentive Plan
MW	Megawatt
MWh	Megawatt-hour
NL	Newfoundland and Labrador
NOC	National Occupational Classification
PEM	Proton Exchange Membrane
PV	Photovoltaic
RFNBO	Renewable Fuels of Non-Biological Origin
SOP(s)	Standard Operating Procedure(s)
STIP	Short-Term Incentive Plan
TWh	Terawatt-hour