

City of St. John's Rennies River Flood Mitigation Portugal Cove Road to Kings Bridge Road



Project No. 203063 • January 2021

	Final		Loretta	2021/01/26	Melissa
			Hardwick		Rutherford
	Draft		Loretta	2021/01/20	Melissa
			Hardwick		Rutherford
	Issue or	' Revision	Reviewed By:	Date	Issued By:
C	BCL	This document was prepared for herein. The material and informat document reflects CBCL Limited's judgment based on the informat time of preparation. Any use of t reliance on its content by third party responsibility of the third party. O accepts no responsibility for any as a result of third party use of th	the party indicated ation in the s opinion and best ion available at the his document or arties is the CBCL Limited damages suffered his document.		

Report:203063.00



187 Kenmount Road, St. John's, NL A1B 3P9 709-364-8623 | CBCL.ca | info@CBCL.ca



Platinum member

January 26, 2021

Joanne Sweeney Dept. of Municipal Affairs and Environment PO Box 8700 St. John's, NL A1B 4J6

Dear Ms. Sweeney:

RE: City of St. John's – Rennies River Flood Mitigation Environmental Assessment (EA) Registration Document CBCL Project # 203063.00

Enclosed is our application and associated materials required for your review of the Environmental Assessment Registration Document for the above noted project. If you have any questions or require clarification, please contact me.

Yours very truly,

CBCL Limited

Prepared by: Melissa Rutherford Environmental Scientist Direct: 902-421-7241 Ext. 2574 E-Mail: <u>mrutherford@cbcl.ca</u>

<u>Herrord@cbci.ca</u>

Project No: 203063.00

E. Ahepp

Reviewed by: Greg Sheppard, P. Eng. Senior Civil Engineer Direct: 709-364-8623 E-Mail: gregs@cbcl.ca

This document was prepared for the party indicated herein. The material and information in the document reflects CBCL Limited's opinion and best judgment based on the information available at the time of preparation. Any use of this document or reliance on its content by third parties is the responsibility of the third party. CBCL Limited accepts no responsibility for any damages suffered as a result of third party use of this document.

Contents

Table	of Concorda	ncev
Chap	oter 1 Intro	duction1
1.1	Project and P	Proponent Information1
Chap	ter 2 The L	Indertaking3
2.1	Name of the	Undertaking3
2.2	Purpose/Rati	onale/Need for the Undertaking3
2.3	Alternatives.	4
Chap	oter 3 Descr	ription of the Undertaking7
3.1	Geographic L	ocation7
3.2	Physical Feat	ures of the Undertaking10
	3.2.1	Description of the Project10
	3.2.2	Physical and Biological Setting12
3.3	Construction	
	3.3.1	Environmental Impacts and Potential Sources of Pollutants19
	3.3.2	Potential Causes of Resource Conflict During Construction
3.4	Operations	
	3.4.1	Environmental Impacts during Operation27
	3.4.2	Potential Causes of Resource Conflict During Operation27
3.5	Occupations	
	3.5.1	Employees During Construction Phase
	3.5.2	Employees During Operations Phase28
	3.5.3	Employment Equity28
3.6	Public Consu	Itation
3.7	Project Relate	ed Documents32
	3.7.1	Reference Documents
	3.7.2	Project Specfic Studies
Chap	oter 4 Appro	oval of Undertaking
Chap	oter 5 Scheo	dule
Chap	oter 6 Fund	ing

Tables

Proponent Contact Information	1
2 Project Consultant Contact Information	2
1 Scenarios for Floodplain Comparison to Existing 1:100 AEP CC	6
1 Berm Coordinates	.10
2 Conceptual Berm Specifications	.12
3 Results of AC CDC Search	.17
Potential Concerns, Environmental Impact and/or Source of Pollutants that	t
may Arise as a Result of Construction	.20
5 Summary of the Hydrologic and Hydraulic Conditions for Flood Protection	
Berms and the pre and post Construction 1:100 AEP CC	.21
5 Anticipated Positions / Occupations Required during Construction Phase	.29
7 Summary of Questions and Concerns from Public Information Meetings an	۱d
Location Addressed in the EA Registration	.31
List of Permits, Approvals, Authorization or Reviews for the Project	.37

Figures

Figure 3.1	Project Location	8
Figure 3.2	Project Area	9
Figure 3.3	Project Layout	11
Figure 3.4	1:100 AEP Climate Change Boundaries	15
Figure 3.5	1:100 AEP Climate Change Boundaries and Post Berm Construction	22

Appendices

Α	Flood	Mitigation	Studies
---	-------	------------	---------

- B Site Photographs
- C Atlantic Canada Conservation Data Centre (AC CDC) Search Results
- D Birds Detected in Vicinity to the Project Area in Newfoundland and Labrador
- E Mitigation Measures
- F Public Meeting Documents



Table of Concordance

Checklist for Prescribed Information

Please see the report sections indicated in the table below to find the required information for registration of an undertaking pursuant to the *Environmental Protection Act* and the *Environmental Assessment Regulations*.

Name of UndertakingChapter 1Project NameChapter 1ProponentChapter 1	
Project NameChapter 1ProponentChapter 1	
Proponent Chapter 1	
(i) Name of Corporate Body Section 1.1	
(ii) Address Section 1.1	
(iii) Chief Executive Officer and contact information Section 1.1	
(iv) Principal Contact Persons for purposes of environmental Section 1.1	
assessment and contact information	
The Undertaking	
(i) Name of the Undertaking Chapter 1 and Section 2.1	.1
(ii) Purpose/Rationale/Need for the Undertaking Section 2.2	
Description of the Undertaking Chapter 3	
(i) Geographical Location Section 3.1	
a. Description of the proposed site Section 3.1	
b. Map at large scale (e.g. 1:12,500) original base map(s) Figure 3.2	
and/or recent air photos. The National Topographic	
Survey edition should be affixed to the map(s).	
(ii) Physical Features Section 3.2	
a. Major physical features of the undertaking Section 3.2.1	
b. Area to be affected by the undertaking Section 3.2.1	
c. Conceptual drawing layout Figure 3.3	
d. Physical and biological environments within the area Section 3.2.2	
potentially affected by the project Appendix A	
Appendix B	
Appendix C	
Appendix D	
(iii) Construction Section 3.3	
a. Approximate Construction Stages and total construction Section 3.3 period	
b. Date of first proposed physical construction related Section 3.3	
activity on site	
c. Potential sources of pollutants during the construction Section 3.3.1 period(s)	
d. Potential causes of resource conflicts Section 3.3.2	
(iv) Operation Section 3.4	
a. Description of how the undertaking will operate Section 3.4	
b. Period of operation, if not a permanent facility Section 3.4	

Required Information	Section
 Potential sources of pollutants during the operating period 	Section 3.4.1
d. Potential causes of resource conflicts	Section 3.4.2
(v) Occupations	Section 3.5
a. Estimate the number of employees required for the construction and operation of the project, including the expected duration of employment	Section 3.5.1, and 3.5.2
b. Enumeration and breakdown of occupations according to the National Occupational Classification	Section 3.5.1, and 3.5.2
c. Identification of employment type (direct hiring and/or contracting out.)	Section 3.5.1, and 3.5.2
 Approach to employment equity will be addressed relative to age and gender. 	Section 3.5.3
(vi) Project Related Documents:	Section 3.7
a. Bibliography of all project-related documents	Section 3.7.1
b. Copies of reports on environmental studies and	Section 3.7.2
surveys.	
Approval of the Undertaking	
(i) Main permits, licences, approvals and authorizations	Chapter 4
required for the undertaking, including issuing authorities	
Schedule	
(i) Project Schedule including construction and operations	Chapter 5
(ii) Rational for the selection of Project Schedule	Chapter 5
Funding	
 Government agencies (federal, provincial or other) providing funding, including name and address of the department or agency from which funds have been 	Chapter 6
(ii) Estimate of the capital costs of the project	Chapter 6
Additional Information	
Descriptions of any consultations undertaken prior to application	Section 3.6
Alternatives to the Project	Section 2.3
Mitigation Measures	Appendix E

Chapter 1 Introduction

The City of St. John's (the City) is proposing to construct flood mitigation berms (the Project or Undertaking) as part of the overall stormwater management along Rennies River in St. John's, Newfoundland and Labrador (NL). The primary objective of the Project is to provide protection from flooding that occurs as a result of extreme precipitation events, and reduce potential damage to infrastructure and properties.

CBCL Limited (CBCL) has prepared this document for submission to NL Environment, Climate Change and Municipalities (NLECCM) as an Environmental Assessment Registration Document (EARD) to meet, or exceed, the requirements of the NL *Environmental Protection Act* (EPA) and *Environmental Assessment Regulations* (EA Regulations). The EA Regulations designate undertakings that must be registered, including construction of a dyke, levee or other flood control structure. For this Project, two berms (dykes or levees) are proposed between Portugal Cove Road and Kings Bridge Road along Rennies River.

1.1 Project and Proponent Information

The proposed Project title is the "Rennies River Flood Mitigation Project - Portugal Cove Road to Kings Bridge Road". The contact information for the proponent is provided in Table 1.1 and contact information for the consultant of this EARD is provide in Table 1.2.

Role	Name / Title	Address/Contact Info
Proponent	City of St. John's	10 New Gower Street St. John's, NL A1C 5M2
Principal Contact Representative	Scott Winsor, P. Eng. Director of Engineering	10 New Gower Street, St. John's, NL A1C 5M2 Telephone No: 709-576-8258 Email: swinsor@stjohns.ca
Mayor	Danny Breen Mayor	10 New Gower Street, St. John's, NL A1C 5M2 Telephone No: 709-576-8477 E-mail: mayor@stjohns.ca

Table 1.1 Proponent Contact Information



Table 1.2Project Consultant Contact Information

Role	Name / Title	Address/Contact Info
CBCL Limited Project Lead	Greg Sheppard Senior Civil Engineer	187 Kenmount Rd, St. John's, NL A1B 3P9 Telephone No: 709-364-8623 Email: gregs@cbcl.ca
CBCL Limited Regulatory and Environmental Lead	Melissa Rutherford Environmental Scientist	1505 Barrington Street, Suite 901 Box 606 Halifax, NS B3J 2R7 Telephone No: 902-421-7241 x 2574 Email: mrutherford@cbcl.ca



Chapter 2 The Undertaking

The City is proposing to carry out this Undertaking to reduce flooding and associated effects along the Rennies River between Portugal Cove Road to Kings Bridge Road. This chapter identifies the purpose, rationale, and need for the Project.

2.1 Name of the Undertaking

The City of St. John's Rennies River Flood Mitigation Project - Portugal Cove Road to Kings Bridge Road.

2.2 Purpose/Rationale/Need for the Undertaking

The Undertaking consists of two earth berms and erosion control measures along Rennies River between Portugal Cove Road and Kings Bridge Road (Section 3.2.1). The Rennies River is part of the greater 32 km² Rennies River watershed. The Rennies River spans approximately 3 km through the City, connecting Long Pond to Quidi Vidi Lake, and ultimately discharges to the Atlantic Ocean.

The Rennies River watershed has been subject to major flood events caused by river flooding. One of the earlier major flood events recorded was in 1986, when 110 mm of rainfall caused flooding along Leary's Brook and Rennies River (CBCL, 2014). Increasing urbanization in the Rennies River watershed, more frequent and intense precipitation events, and anticipated increase in precipitation frequency and intensity due to climate change, are expected to result in an increase in potential risk of flood damage along Rennies River (NSECCM, 2014). To reduce flood risk, and take action to safeguard residential dwellings and community infrastructure against potential economic loss, the City is proposing to construct flood mitigation infrastructure in strategic locations along Rennies River from Portugal Cove Road to Kings Bridge Road. The proposed Project will also address concerns of stream bank erosion a key location.

In April 2014, on behalf of the City, CBCL completed the Rennies River Catchment Stormwater Management Plan (RRCSMP). The RRCSMP identified that during significant rainfall events, flooding occurs at locations along Rennies River, as well as Ken Brook and



Leary's Brook, at times resulting in major public and private property damage (CBCL, 2014). The RRCSMP identified a prioritized list of flood protection infrastructure improvements including the Long Pond Weir, flood protection berms around the Health Sciences Centre (currently under construction), and flood protection berms downstream of Long Pond. The City has elected to proceed with the implementation of flood protection works in phases. The City is in the Environmental Assessment process of the Long Pond Weir (identified as priority number 1 in the RRCSMP). Flood projection berms downstream of Long Pond were identified as priority 2 in the RRCSMP to protect properties bordering Rennies River, and are intended to be complemented by the Long Pond weir.

Supplemental hydrodynamic analyses were conducted from 2019 through to 2021 to assess additional design solutions for flood protection along Rennies River prior to the construction of the Long Pond Weir. The analyses identified several flood protection options, including the proposed Project which is capable of protecting residential properties on Winter Avenue.

2.3 Alternatives

The 2014 RRCSMP identified flood protection measures based on field surveys, and hydrologic and hydraulic models. Flood flows corresponding to the 1:20 and 1:100 annual exceedance probability (AEP) precipitation events, including the effects of climate change, were estimated through the use of a hydrologic model. Model inputs included watershed areas, slopes, percentage of impervious land, surface roughness, infiltration parameters, and rainfall hyetographs (precipitation time series). The physical characteristics of each sub-catchment were estimated using topographical survey data, aerial imagery, and LiDAR data.

Conceptual designs and preliminary cost estimates for optimum flood and erosion control were also identified as part of the RRCSMP. The City intends to implement the measures as identified in the RRCSMP. However, the sequencing of the measures is dependent on the construction of other flood mitigation measures, such as the Long Pond Weir, as well as available funding and overall priorities. When considering protection of residential properties and non-residential lands, such as parks, along Rennies River, priority was given to residential properties due to safety concerns.

From Elizabeth Avenue to Kings Bridge Road, the RRCSMP identified the following potential flood protection measures:

- Earth berms and concrete walls only along the river section
- Channel realignment through Feildian Grounds, along with construction of berms and walls, and a new bridge at Portugal Cove Road
- Raising the Riverdale Tennis club parking lot, along with the construction of berms and walls



From 2019 to 2021, the City requested CBCL conducted further hydraulic analysis of Rennies River, which considered various flood mitigation scenarios. The assessments included various flood mitigation scenarios between Wicklow Street and Quidi Vidi Lake and resulted in the production of 1:100 AEP climate change floodplain maps (Appendix A). The hydraulic modelling was carried out using XP Solution's Storm Water Management Model (XPSWMM) software. The assessments considered flood protection measures currently being constructed at the Health Sciences Centre, with and without the Long Pond Weir, and various flood protection improvements downstream of Long Pond. The improvements downstream of Long Pond included the following (see Appendix A for further details):

- No flood mitigation along Rennies River.
- **Eight Berms:** Berms 1-2 (in this Registration), two berms downstream of Portugal Cove Road, two berms upstream of Portugal Cove Road, a berm upstream of Carpasian Road, and a berm at the west side of Prince Phillip Drive.
- **Four Berms:** Two berms upstream of Portugal Cove Road, a berm upstream of Carpasian Road, and a berm at the west side of Prince Phillip Drive.
- **Six Berms**: Berms 1-2 (in this Registration), two berms upstream of Portugal Cove Road, a berm upstream of Carpasian Road, and a berm at the west side of Prince Phillip Drive.
- Two Berms: Berms 1-2 (proposed Project in this Registration).

In total, nine scenarios were examined (Appendix A). The flood extents for each scenario for the 1:100 AEP climate change flood were prepared. A summary of the results are provided in Table 2.1.

The proposed Project was ultimately selected as it provided the largest overall reduction in floodplain area and reduced flooding to properties along Winter Avenue to the north, as well as the electrical substation adjacent to Kings Bridge Road bridge. These benefits can be achieved with or without the construction of the Long Pond Weir. In selecting this option, several of the flood protection berms proposed in the RRCSMP downstream of Elizabeth Avenue are not included within this Project. Following the approval and construction of the Long Pond Weir (at a later date), additional flood protection berms at the later time would provide the following advantages:

- Reduction in required berm heights and areas (i.e. footprint) for future additional berms.
- Reduce the potential of fish habitat alteration or loss.
- Reduce potential of removal of mature trees along the riverbanks.
- Reduce encroachment of berms on tennis courts.
- Eliminated the need to acquire portions of properties (rear yards) along Empire Avenue.



Table 2.1Scenarios for Floodplain Comparison to Existing 1:100 AEP CC

Proposed Downstream Improvements	Scenario within CBCL, 2020 or 2021	Health Science Center Berms Included	Long Pond Weir Included	Results
None	1	\checkmark		Floodplain extent is the largest of the scenarios.
	5	\checkmark	~	Weir alone does not reduce flow enough to prevent downstream flooding. Flooding will still occur upstream of Portugal Cove Road toward Pringle Place, and onto Feildian Grounds and Riverdale Tennis Club property.
 Eight Berms: Berms 1-2 (in this Registration) Two berms downstream of Portugal Cove Road 	2	✓		Water level upstream of Portugal Cove Rd will exceed the height of the proposed improvements. Portions of the improvements downstream of Portugal Cove Road would also be overtopped.
 Two berms upstream of Portugal Cove Road One berm upstream of Carpasian Road One berm at the west side of Prince Phillip Drive 	6	\checkmark	✓	Floodplain remains within riparian zone. Residential and non-residential lands protected.
 Four Berms: Two berms upstream of Portugal Cove Road One berm upstream of Carpasian Road One berm at the west side of Prince Phillip 	3	✓		Feildian Grounds and Riverdale Tennis Club flooded. Floodplain extends north toward Winter Avenue, over Kings Bridge Road and onto the King George V Soccer field.
Drive	7	\checkmark	✓	Feildian Grounds and Riverdale Tennis Club flooding, as well as flooding toward Winter Avenue.
Six Berms:Berms 1-2 (in this Registration)Two berms upstream of Portugal Cove Road	4	✓		Feildian Grounds and Riverdale Tennis Club flood. Residential properties protected along Vaughan Place, Pringle Place, Winter Avenue, and Judge Place.
 One berm upstream of Carpasian Road One berm at the west side of Prince Phillip Drive 	8	\checkmark	\checkmark	Feildian Grounds and Riverdale Tennis Club flood. Residential properties protected along Vaughan Place, Pringle Place, Winter Avenue, and Judge Place.
Two Berms:Berms 1-2 (in this Registration)	9	\checkmark		Feildian Grounds and Riverdale Tennis Club flood. Residential properties protected along Winter Avenue, and Judge Place.

Chapter 3 Description of the Undertaking

The Undertaking represents the selected flood mitigation option along Rennies River as identified as Scenario 9 in Chapter 2. The Project consists of two earth berms upstream of Kings Bridge Road, and erosion control measures placed between Portugal Cove Road and Kings Bridge Road (Section 3.2.1). The berm locations were selected based on the results of hydraulic modelling.

3.1 Geographic Location

The Project is located along Rennies River in St. John's, NL (Figure 3.1). The Project area (Figure 3.2) extends along the north and south banks of Rennies River from the east side of Portugal Cove Road to the west side of Kings Bridge Road, approximately 500 m. The area is classified as medium density residential, with vegetation areas primarily within the riparian zone of the river (CBCL, 2014).

Between Portugal Cove Road and Kings Bridge Road, the Rennies River Trail runs adjacent to the north bank of the river and is maintained by the Grand Concourse Authority, a local non-profit charitable based organization. Positioned on the north side of Rennies River Trail and the south side of the river are several residential homes with vegetated riparian areas separating their property lines from the river. Two parks are located adjacent to Project area: Feildian Grounds and the Riverdale Tennis Club on the east side of Portugal Cove Road (Figure 3.2).

The geographical coordinates of the two berms are provided in Table 3.1. The design of the berms reflects the natural curvature of the river banks, on which the berms are to be placed (Figure 3.2). Berm 1 will be located on the west side of Kings Bridge Road and extend approximately 300 m upstream at the rear of properties on Winter Avenue, along the north bank of Rennies River. Berm 2 will be located in the south river bank, beginning at Kings Bridge Road and extending approximately 60 m upstream.







Table 3.1 Berm Coordinates

Berm ID	Berm Type	Coordinates NAD 1983 MTM 1 (End 1)	Coordinates NAD 1983 MTM 1(End 2)
1	Earth	326908.15 m E 5270774.57 m N	327094.69 m E 5270774.57 m N
2	Earth	327082.12 m E 5270771.93 m N	327104.61 m E 5270821.54 m N

The Project includes bank stabilization and erosion protection measures. Approximately 350 m upstream of Berm 2, river bank stabilization by means of armour stone is proposed to be installed. The armour stone will be approximately 45 m in length; the height of the armour stone structure will be determined during further design.

3.2 Physical Features of the Undertaking

The following section outlines the physical features of the undertaking including a description of the Project, and physical and biological setting of the Project area.

3.2.1 Description of the Project

The two flood mitigation berms are designed to accommodate a 1:100 AEP flood flow including the effects of climate change (Figure 3.3 and Table 3.2). The berms are designed to prevent erosion of the berms and the release of material that may harm fish and fish habitat. These designs will include an engineered slope, landscaping, and rock stabilization techniques. An Environmental Protection Plan (EPP), including erosion and sediment control, will be implemented during construction (Appendix A).

The type of berm was selected to preserve the natural waterline, accommodate available space, and optimize effectiveness and aesthetics. Earthen berms are most preferred to blend into existing conditions, while not compromising structural integrity. The dimensions of each individual berm will vary laterally and vertically due to differences in the natural topography of the riparian zone; a summary of the lengths and sizes are provided in Table 3.2.

The area required for each berm will be determined following further design. Berm 1 will be designed such that it is contained within the existing trail alignment, as much as possible.





Table 3.2 Conceptual Berm Specification

Berm ID	Structure / Berm Type	Proposed Materials	Approximate Length (m)	Approximate Height of Structure (m)			
1	Earth	Granular Fill	~260 m	0.1 m – 2.2 m			
2	Earth	Granular Fill	~58 m	0.2 m – 0.5 m			

Earth berms will generally be constructed of a typical sand and gravel mixture containing approximately 10 to 15% fines content, when the berm is greater than 15 m away from the watercourse. Where work adjacent to a watercourse is required (within 15 m) earth berms will be constructed with clean rockfill. The size of the material will be determined in future stages of design. The berms will be constructed with an approximately 2:1 side slope. However, depending on the final design, slopes may vary and could be installed with additional stabilization techniques. Following construction of the berm, the side slopes of the earth berms will be covered using topsoil and a mix of hydroseed and/or sod. The Rennies River Trail overlaps with the location of Berm 1. The design of the raised trail will accommodate safety/accessibility requirements of trail users.

During the 2014 RRCSMP study, erosion areas were identified along the length of the river. The Project will include the stabilization of the river bank in one of the locations identified in the RRCSMP. The erosion control improvements will complement the flood mitigation that is offered by the construction of berms. The river bank will be stabilized using armour stone for an approximate length of 45 m. Addition material may be required behind the armour stone to further stabilize the bank. The final configuration will be determined in future design.

3.2.2 Physical and Biological Setting

The following section identifies the physical and biological setting within the Project area.

3.2.2.1 Setting and Vegetation

The existing environment is set within the Southeastern Barrens Subregion of the Maritime Barrens Ecoregion (NLFFA, 2020a). The area is within the City and has largely been developed, therefore does not reflect the original ecoregion characteristics.

The Project area is within the Rennies River watershed and construction will take place within the riparian zone and the existing trail corridor. A site reconnaissance was completed in October 2020 and identified native and non-native vegetation species in the Project area (Appendix B and C). Past the river banks, just outside of the Project area, upstream vegetation primarily consists of mature trees such as birch, alder, maple and spruce (CBCL, 2014). During the site reconnaissance, mature trees were observed within close proximity of the proposed berms. Areas around road crossings are sparsely



populated with vegetation aside from non-native grasses, and occasional small shrubs and immature trees (CBCL, 2014). Mature trees will be avoided whenever possible during construction.

The area is highly disturbed and the proportion of native species is low (NAACAP, 2015). Native species identified within the Project area included red maple (*Acer rubrum*), spotted Joe Pye weed (*Euthrichium maculatum*), meadowsweet (*Spiraea alba*), sweet gale (*Myrica gale*), and fireweed (*Chamaenerion angustifolium*). Sedges and grasses were abundant, though most were not identifiable. Non-native species identified include black knapweed (*Centaurea nigra*), bittersweet nightshade (*Solanum dulcamara*), Canada thistle (*Cirsium arvense*), hedge bindweed (*Calystegia sepium*), ragwort (*Jacobea vulgaris*), snowberry (*Symphoricarpos albus*), wild chervil (*Anthriscus sylvestris*), and what appears to be Sycamore maple (*Acer pseudoplanatus*). The invasive Japanese knotweed (*Reynoutria japonica*), was abundant on the site, particularly along the riverbanks.

3.2.2.2 Forestry

The Project area is within Forest Management District 1 of the Eastern Region of Newfoundland (NLFFA, 2020b). There are no known timber harvest rights on the property.

3.2.2.3 Soils and Surficial Geology

The surficial geology of the region is composed of a thin, discontinuous sheet of poorly sorted sediment containing a mixture of grain-sizes from clay to boulders (Government of Newfoundland and Labrador Industry, Energy and Technology, 1994). Assessments upstream of the Project area identified that surficial soils are composed of fill underlain with a layer of compacted till, which ranges from well-graded sand with gravel to a silty sand with gravel, with occasional cobbles and boulders (Stantec, 2016). Soils downstream along the river at Carnell Drive are similar to those upstream (NLECCM, 2020a). The site reconnaissance conducted in October 2020 confirmed that the soil and surficial geology in the Project area are consistent with observations made upstream and downstream.

3.2.2.4 Climate

The Maritime Barrens ecoregion has the lowest summer temperatures of the Newfoundland ecoregions (Government of Newfoundland and Labrador, 2020b) and many days are accompanied by fog and strong winds. The winters are generally mild with intermittent snow cover. The coldest month on average is February (daily average of - 4.9°C), with the highest average summer temperature observed in August (16.1°C, Government of Canada, 2020). Average annual precipitation is 1,534.2 mm, with most precipitation occurring as rain. The highest precipitation is recorded in December with an average of 164.8 mm and the lowest precipitation is recorded in July with an average of 91.6 mm (Government of Canada, 2020). Average monthly rain was recorded to be in excess of 120 mm from September to November, with the highest monthly average of rain occurring in October with 153.7 mm (Government of Canada, 2020). Within Newfoundland, hurricanes can occur from June 1st to November 30th, however tropical storms may occur in other months as well (Wood, 2019).



3.2.2.5 Hydraulics of Rennies River

The Rennies River watershed is one of the largest drainage basins in St. John's. It joins many tributaries including Ken Brook, Yellow Marsh Stream, Leary's Brook, Cartys Stream, Nagels Brook, and other unnamed streams (NAACAP, 2015). Rennies River is the most downstream river in the watershed, and joins Long Pond, a 4,000 m² waterbody, at it's upstream end, to Quidi Vidi Lake downstream, and ultimately discharges to the Atlantic Ocean.

Hydraulic modelling of Rennies River was performed using the stormwater modelling software, XPSWMM. The hydraulic model was used to estimate water levels in the river channel, through structures (i.e., culverts and bridges) along the river reach, and in the overbanks. The 1:100 AEP climate change floodplain for the existing condition of the river (i.e., without mitigative measures in place) was prepared during the RRCSMP and updated during the 2020/2021 assessment to include berms at the HSC, by CBCL. The floodplain demonstrates anticipated flooding impacts to adjacent lands.

Inputs consisted of river channel invert elevations, channel and floodplain roughness coefficients, LiDAR information, hydraulic structure dimensions and inflow hydrographs. The model structure is a 1D network representing the hydraulic structures (and the channel for the 2020/2021 assessment) nested within a 2D domain (grid) representing the floodplain. Hurricane Igor (September 2010) was used as the calibration event for the hydraulic model.

The model predicted that the Project area is susceptible to localized flooding during 1:100 AEP CC events (as illustrated in Figure 3.4). From Carpasian Road to north of Pringle Place, the floodplain is mainly contained to the river channel and riparian areas of the river and trail, with the exception of a few properties along Vaughan Place. At the upstream end of Portugal Cove Road bridge flooding is observed over the residential properties at Pringle Place and over several roads including Pringle Place, Portugal Cove Road, and Rennies Mill Road. Downstream of Portugal Cove Road, extensive flooding is anticipated over Feildian Grounds and the Riverdale Tennis Club properties, residential properties along the south side of Winter Place, and Winter Avenue towards Kings Bridge Road. Additionally, the flood boundary extends into the backyards of the residential properties along Empire Avenue and the electrical substation located at Kings Bridge Road. The floodplain also extends to portions of Winter Avenue, Judge Place, Kings Bridge Road, and onto the King George V soccer field and park.





Drawn: SF	Date: 2021-01-22			
Checked:	Project #: 203063.00			
Approved:	Scale @ 11"x17":1:3,000			
Coordinate System: NAD 1983 L Units: Meter	JTM Zone 22N			

3.2.2.6 Fish and Fish Habitat

The Rennies River watershed provides habitat for salmonids. Species confirmed as present within the Rennies River watershed include brown trout (*Salmo trutta*; D. Keefe. NLECCM, *pers comm*. September 20, 2017, NAACAP, 2015), brook trout (*Salvelinus fontinalis*), and Atlantic salmon (*Salmo salar*; NAACAP, 2015). The Rennies River is not designated as a Scheduled Salmon or Brown Trout River (Fisheries and Oceans Canada (DFO), 2020a,b); however, the system was included in a Salmon Enhancement Program which consisted of the incubation of salmon eggs dispersed within the river (Government of Newfoundland and Labrador, 2020b). Other species that may be present in Rennies River watershed include American eel (*Anguilla rostrata*), and three-spined stickleback (*Gasterosteus aculeatus*).

3.2.2.7 Wildlife

The Project area is located within an urban setting (St. John's, NL). Therefore, the likelihood of the presence of common mammal wildlife typically present within the Ecoregion, where suitable conditions occur, is low. Species that may be present in the ecoregion include black bear (*Ursus americanus*), red fox (*Vulpes vulpes*), caribou (*Rangifer tarandus*), moose (*Alces alces*), lynx (*Lynx canadensis*), and other small fur bearing mammals (NLFFA, 2020c; Heritage Newfoundland and Labrador, 2002). Likely species within the Project area include small fur bearing mammals; however, mammal wildlife species were not observed during the site reconnaissance.

The Project site primarily consists of a riparian area, which could be used by many bird species for breeding, feeding, and resting for at least part of the year. Over 373 bird species (including 204 native and 166 irregular visitors) have been found in NL (NLFFA, 2020d). The regional nesting period for the Project area is mid-April to mid-August (ECCC, 2020); however, it is possible for some species to breed outside of this period. The Project is located in Bird Conservation Region 8 (BCR 8): the Boreal Softwood Shield. Priority bird species associated with BCR 8 are primarily located within wetlands, coniferous forests, inland waterbodies and riparian habitats (Environment Canada, 2013). During Newfoundland Breeding Bird Surveys, which were conducted in proximity to the Project area, 55 breeding species were recorded (Newfoundland Breeding Bird Atlas, Appendix D). Using citizen reported occurrences, approximately 96 species have been observed within the Project area (eBird 2020, Appendix D).

3.2.2.8 Species at Risk and Species of Concern

Nineteen species at risk (18 fauna and 1 flora) were identified as potentially occurring within the Project area from the Atlantic Canada Conservation Data Centre (AC CDC) database and the AC CDC's Expert Opinion Maps (Table 3.3). Of note was the single observation of a polar bear (*Ursus maritimus*) recorded in 1993, which has not been reported since that initial observation.



The AC CDC indicated that 1,055 rare fauna observations and 27 rare flora observations have been recorded within ± 5 km of the Project area (Appendix C). An assessment of the AC CDC Expert Opinion Maps of provincially and federally listed species suggest that boreal felt lichen (*Erioderma pedicellatum*) may be present, while banded killifish (*Fundulus diaphanous*), and Newfoundland marten (*Martes americana atrata*) are possible, but unlikely. The Project is also identified within the Barrow's Goldeneye (*Bucephala islandica*) range (A. Durocher, ACCDC, *pers comm*. September 30, 2020).

Species	NL Endangered Species Act Status	Canadian Species at Risk Act (SARA)	Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
Bird			
Bank Swallow	No Status	Schedule 1 -	Threatened
Riparia riparia		Threatened	
Barn Swallow	No Status	Schedule 1 -	Threatened
Hirundo rustica		Threatened	
Barrow's Goldeneye	Vulnerable	Schedule 1 –	Special Concern
Bucephala islandica		Special Concern	
Bobolink	Vulnerable	Schedule 1 -	Threatened
Dolichonyx oryzivorus		Threatened	
Chimney Swift	Threatened	Schedule 1 -	Threatened
Chaetura pelagica		Threatened	
Common Nighthawk	Threatened	Schedule 1 -	Special Concern
Chordeiles minor		Threatened	
Evening Grosbeak	No Status	Schedule 1 –	Special Concern
Coccothraustes vespertinus		Special Concern	
Newfoundland Gray-cheeked	Threatened	No Status	No Status
Thrush			
Catharus minimus			
Harlequin Duck	Vulnerable	Schedule 1 -	Special Concern
Histrionicus histrionicus		Special Concern	
Ivory Gull	Endangered	Schedule 1 -	Endangered
Pagophila eburnea		Endangered	
Peregrine Falcon	Vulnerable	Schedule 1 -	Not at Risk
Falco peregrinus subsp. anatum		Special Concern	
Red Crossbill	Endangered	Schedule 1 -	Threatened
Loxia curvirostra		Threatened	
Rusty Blackbird	Vulnerable	Schedule 1 -	Special Concern
Euphagus carolinus		Special Concern	
Short-eared Owl	Vulnerable	Schedule 1 -	Special Concern
Asio flammeus		Special Concern	

Table 3.3Results of AC CDC Search



Species	NL Endangered Species Act Status	Canadian Species at Risk Act (SARA)	Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	
Insects				
Monarch	No Status	Schedule 1 -	Special Concern	
Danaus plexippus		Special Concern		
Mammal				
Polar Bear	Vulnerable	Schedule 1 -	Special Concern	
Ursus maritimus		Special Concern		
Newfoundland Marten	Threatened	Schedule 1 -	Threatened	
Martes americana atrata		Threatened		
Fish				
Banded Killifish	Vulnerable	Schedule 1 –	Special Concern	
Fundulus diaphanous		Special Concern		
Plant				
Boreal Felt Lichen	Vulnerable	Schedule 1 –	Special Concern	
Erioderma pedicellatum		Special Concern		

3.2.2.9 Protected Areas

There are no existing provincial protected areas, such as provincial parks, wilderness reserves, wildlife reserves, wildlife parks, ecological reserves, provisional ecological reserves, public reserves, special management, or Canadian Heritage Rivers within the Project area. There are also no federal parks/reserves such as national parks, national historic sites, migratory bird sanctuaries or marine protected areas on the property.

3.3 Construction

The Project includes construction of earth berms and the stabilization of the river bank. Berm construction includes two major components, site preparation and earth works. Site preparation will include clearing of vegetation and grubbing of organic materials to prepare a base for construction. Following site preparation, the berms can be constructed via earth works. The stabilization of the river bank will include the removal of vegetation as required, prior to the placement of materials for stabilization. Anticipated activities associated with construction include the following:

Berm Construction

<u>Site preparation</u>

- Vegetation clearing
- Grubbing
- Environmental protection, and sediment and erosion control measures, as required

<u>Earth Works</u>



- Excavation for foundation of the berm, as required
- Placement of new materials (rock fill, granular material, and handrails)
- Grading and shaping of berm
- Stabilization of berm slopes
- Placement of topsoil
- Revegetation of the constructed berm
- Environmental protection, and sediment and erosion control measures

Bank Stabilization and Erosion Protection

<u>Site preparation</u>

- Vegetation clearing
- Installation of temporary environmental protection, and sediment and erosion control measures, as required

<u>Bank Stabilization</u>

• Placement of new materials (armour stone, and an additional granular material, as required to stabilize the bank

Construction will occur only between the hours of 07:00 and 18:00 from Monday to Friday, and from 08:00 to 17:00 on Saturdays, Sundays, and statutory holidays (if required). This aligns with the requirements of the St. John's Noise By-law, which states that construction equipment needs to cease between 11:00pm and 7:00am (City of St. John's. 1998). Approval will be required from the City to work outside of regular hours/days for construction of the Project. Request for approval must be issued to the City at least 72 hours in advance if work is scheduled outside of the above noted times, and must follow the City by-laws.

Potential impacts and sources of pollutants as a result of the Project and associated activities are provided in Section 3.3.1. Potential causes of resource conflicts are provided in Section 3.3.2. Mitigation measures to address potential impacts, pollutants and resources conflicts are described in the following sections and a summary of proposed mitigation measures is provided in Appendix E.

3.3.1 Environmental Impacts and Potential Sources of Pollutants

The Project will be constructed with mitigation measures to minimize risk, and potential environmental impacts, as well as potential sources of pollutants. Potential impacts and sources of pollutants as a result of construction are identified in Table 3.4.



Table 3.4Potential Concerns, Environmental Impact and/or Source of Pollutantsthat may Arise as a Result of Construction

Possible Concern	Potential Environmental Impact	Potential Source of Pollutants
Additional flooding as a result of the berms	✓	
Removal of vegetation and some mature tree branches	✓	
Disruption of wildlife, including birds and fish	✓	
Silt and sediment runoff	✓	\checkmark
Generation of construction debris	✓	\checkmark
Risk of release of fuel, lubricant, and hydraulic fluid from construction vehicles	✓	\checkmark
Dust generation	✓	\checkmark
Airborne emissions from construction equipment	✓	\checkmark
Noise pollution from construction activities	✓	\checkmark
Temporary disruption of traffic or trail use	✓	

3.3.2 Potential Causes of Resource Conflict During Construction

Mitigation measures and best management procedures will be established and monitored to minimize potential resource conflicts. The following sections outline potential causes of resource conflict.

Land or Soil Disturbance: During site preparation and construction activities, such as excavation activities or removal of existing soil materials, there is a potential to affect soils, surrounding lands, and accidental release of fuels and other contaminants from equipment.

Construction equipment will not be permitted to operate outside the construction zone to prevent damaging adjacent areas. Standard safety and environmental practices will be enforced to reduce and prevent potential conflicts caused by construction equipment and tasks. Adjacent properties will be avoided as much as possible, though Rennies River trail will require alteration in the form of earthworks as a result of the Project. Due to limited space between the riverbanks and the trail, the trail will be raised in some places to accommodate the berms underneath.

Where possible, surface soil will be reused. Material that cannot be reused on site will be disposed of offsite following applicable regulations and guidelines. In the event an accidental spill occurs to land, spills will be cleaned up and reported to NLECCM. An Emergency Spill Response Plan and measures for proper handling, storage and disposal of hazardous and other waste materials are outlined in Section 3.5. Following these requirements, minimal conflicts are expected.



Surface Water and Surface Water Management: The berms are designed to accommodate a 1:100 AEP CC flow event (Figure 3.5). Following the implementation of the berms the floodplain for a 1:100 AEP CC flow decreases by approximately 14,910 m² versus the floodplain with no mitigation measures. A summary of the changes is provided in Table 3.5.

Table 3.5	Summary of the Hydrologic and Hydraulic Conditions for Flood
	Protection Berms and the pre and post Construction 1:100 AEP CC

Summary of Changes between Exist Conditions and Post- Construction	Areas showing Additional Floods				
Maximum Change in Water Level along the berms (m)	0.4 m	 Downstream of Portugal Cove Road North Side of Rennies River (Upstream of Berm 1) some backyard properties at 			
Average width of additional flooding (m)	5	Winter Place (up to 5 m), and vegetated area adjacent to Rennies River. • South Side of Rennies River (Upstream of			
Additional Area Flooded (m ²)	880	Berm 2) vegetated area and to some backyards along Empire Avenue (average of 5 m, up to 10 m)			

Downstream of Portugal Cover Road, the Feildian Grounds and the Riverdale Tennis Club are still expected to experience flooding during the design flow, similar to that predicted for the existing conditions. The floodplain does extend approximately 5 m further post berm construction vs existing conditions along the properties at Winter Place. On the south side of the river, the floodplain extends on average approximately 5 m, and up to 10 m in is some places, and is confined to the vegetated areas and backyards along Empire Avenue. With the construction of Berm 1, the flood extents protect properties on Winter Avenue, portions of Winter Avenue, Judge Place, Kings Bridge Road, and the Wyatt Park on the east side of Kings Bridge Road. Berm 2 provides localized benefit by reducing the extend of flooding at the electrical substation.

Project activities will also occur within the riparian area and adjacent to the watercourse. The proposed berms will be constructed as much as possible within the footprint of the existing trails. The excavation of river banks will be limited to selected areas, and only when required for structure stability. Any alterations of the watercourse will be reinstated. For areas where erosion protection is required there may be some excavation of the river bank. However, the erosion protection design will minimize the amount of required excavation.







An Erosion and Sediment Control Plan will be implemented prior to construction and will describe measures to:

- Prevent loss of soil during construction by stormwater runoff or wind erosion, including protecting topsoil by stockpiling for reuse
- Prevent sedimentation of storm sewers or receiving streams
- Prevent pollution of the air with dust and particulate matter

Standard practices, including the use of temporary erosion and pollution control devices such as silt fences will be used to mitigate the possible sources of pollutants and protect Rennies River from potential effects. Following these requirements, minimal conflicts are expected.

There is also the potential that construction of the berms will result in localized changes to surface water drainage, particularly in areas behind the proposed structures. Areas where drainage is altered will be assessed during detailed design. The design will consider alternatives to minimize stormwater build up behind the berms.

Groundwater: During excavation activities or removal of existing soil materials, there is a potential for interactions with groundwater. Dewatering plans and associated measures will be implemented to control the inflow of groundwater. Discharge of water from the site will be conducted in accordance with applicable environmental guidelines.

Whenever possible, construction, particularly including work in wet areas, should be completed during dry or low-flow periods.

Improper disposal and treatment of potentially contaminated soils during construction could also lead to contaminated groundwater. An Emergency Spill Response Plan and measures for proper handling, storage and disposal of hazardous and other waste materials are outlined in Section 3.5. Following these requirements, minimal conflicts are expected.

Fish and Fish Habitat: Due to the proximity of the Project to Rennies River, the following potential effects may occur as a result of construction:

- Bank erosion and sediment loading
- Changes to channel morphology and water flow
- Alteration to riparian habitat through vegetation removal
- Release of deleterious substances associated with accidental spills/leaks, improper disposal of waste materials, or the use of chemical-based dust suppressants

The Project will be designed, and construction activities executed, to minimize impacts to Rennies River, thereby minimizing the effects on fish or fish habitat areas. Prior to construction in the river, NLECCM and Fisheries and Oceans Canada (DFO) will be consulted, and applicable regulatory permits and authorizations will be obtained. Existing watercourses will not be disturbed other than the areas indicated, and only clean rock fill



materials will be used directly adjacent to the watercourse. Earthen berms will be seeded and covered with sod and/or hydroseed and/or native vegetation once topsoil cover is added to enhance stabilization.

As outlined in Section 3.5, further mitigation measures to address the above-mentioned effects will be prepared, including the development of an Erosion and Sediment Control Plan and Emergency Spill Response Plan, both of which will be incorporated into an EPP. Following these requirements, minimal conflicts are expected.

Wildlife: Potential effects to wildlife are expected during the construction period. Effects include:

- Habitat loss or alteration
- Deposition of harmful substances into areas utilized by wildlife
- Noise associated with machinery
- Human presence as a deterrent
- Improper disposal of refuse
- Construction lighting

Loss or alteration of habitat may disturb wildlife that use the riparian area for cover, foraging, breeding, and nesting. To minimize effects to wildlife species, such as breeding birds and their nests, whenever possible, vegetation clearing will occur outside the breeding bird period (mid-April to mid-August). If vegetation clearing outside the breeding bird nesting period is unavoidable, breeding bird /nest surveys will be completed prior to removal of vegetation or disturbance of potential habitat to identify evidence of nesting activities. Nests and neighbouring vegetation will be left undisturbed until nesting is complete. If nests containing eggs, or young, of migratory birds are discovered during construction, disruptive activities in the nesting area should cease until nesting is completed. A buffer zone should be established at an appropriate set-back distance surrounding the nest. Appropriate set back distances should be based on setbacks identified in the literature or in consultation with a provincial or federal wildlife biologist.

Deposition of harmful substances into waterbodies or areas utilized by wildlife could potentially occur due to accidental spills or leaks. An EPP with an emergency response plan will be developed to mitigate the likelihood of accidental spills.

Operation of machinery, equipment, human presence, and noise may result in temporary avoidance behaviours by animals in the vicinity of the berm construction areas. Clearing activities are proposed to occur prior to sensitive timing windows such as the nesting period. Construction activities will be limited as to reduce the overall time of noise and disturbance.

Domestic refuse from construction crews may act as an attractant for wildlife. Best management practices (BMPs) will be implemented for the handling of domestic refuse



generated during construction. Implementation of BMPs will reduce potential for wildlife to opportunistically forage on these materials.

Construction lighting also has the potential to attract wildlife, specifically migratory birds, to the area, increasing the likelihood of wildlife interactions with machinery and subsequent injury. Any lighting for construction will follow BMPs to reduce the potential effects to wildlife.

With implementation of mitigation measures, such as vegetation clearing, noise and waste management, the potential effects to wildlife and species at risk are expected to be minimal.

Vegetation and Forestry: The Project area is located within a riparian zone in which several native and non-native plant species exist. Clearing and grubbing, as part of site preparation, will result in the direct loss or alteration of vegetation and mature trees or mature tree branches. The use of heavy machinery during construction may inadvertently introduce additional invasive or exotic species to the existing environment.

As stated, berms will be covered with topsoil, hydroseed and/or sod as well as revegetated with native vegetation wherever possible. Non-native species that are non-invasive may be planted in specific instances to enhance reinforcement or structural durability that would otherwise not be provided by native species. Additionally, if native species cannot be sourced, non-native species and non-invasive may also be planted as a replacement. A mixture of hydroseed may be planted in areas that are the closest to the river, and sod may be used where there is reasonable distance between the berm and the watercourse. Following these requirements, minimal conflicts are expected.

Air Emissions and Quality: The use of heavy equipment may result in disturbance to wildlife and adjacent properties. Disturbance could include noise and dust emissions. Air emissions and air quality measures will be implemented into the EPP to prevent pollution of the air with dust and particulate matter. Equipment and construction activities on site will occur during approved working hours and equipment used on site will be in good working order to reduce effects of noise. Following these requirements, minimal conflicts are expected.

Human Activities: The intent of the Project is to provide positive benefits to the community. While the Project is located within a residential community, construction will mostly take place on open space municipal land. Existing trees will buffer property lines from the installment of the berms, where applicable. The berms will be designed in accordance with applicable engineering standards and will be constructed by a qualified contractor.

Impacts to human activities will involve temporary blockage of the Rennies Rivers Trail, as in many places the berms will border or be built into the trail. Temporary safety fences will



be installed to isolate the construction area and to inhibit the entry of unauthorized persons in the Project areas.

Additionally, construction may result in temporary restriction of traffic along King Bridge Road during mobilization and demobilization of equipment, and construction. Traffic controls will be implemented following the City of St. John's requirements; however, effects are expected to be infrequent and short in duration. Following these requirements, minimal conflicts are expected.

3.4 Operations

The berms will require periodic maintenance activities following construction, including routine upkeep. Activities may include:

- Annual inspection of berm conditions (planting and structural)
- Berm repairs including regrading and planting
- Geotechnical inspection every 5 years

The berms are to remain in-situ indefinitely or until they require decommissioning or rehabilitation. When the need to decommission or rehabilitate one or both berms arises, the berms will either be revised or incorporated into additional flood water control structures along the river, removed and replanted with vegetation, or left in place and integrated into plans for more extensive water management of Rennies River watershed.

3.4.1 Environmental Impacts during Operation

The berms will be constructed to minimize risk and potential environmental impacts, as well as to minimize possible effects during the life of the structure.

Potential environmental impacts that have been identified include:

- Flooding
- Silt and sedimentation runoff from erosion/increased slopes

A care and maintenance program will be implemented to assess berm conditions annually, at a minimum. Following the yearly assessment, the berms will be rehabilitated, as required, to maintain the berms aesthetics and function. Items will be repaired and cleaned as required to maintain the function of the infrastructure.

3.4.2 Potential Causes of Resource Conflict During Operation

Any resource conflicts that may arise as part of this Project are assessed as part of the construction phase given the intended purpose of the berms is strictly for flood protection. Repairs and inspections will be conducted on an as-needed basis and potential causes of resource conflict will be similar to the those described in Section 3.3.2 for construction during this time.



3.5 Occupations

Design and construction will be the responsibility of the contractor with input from the City, the City's Project Manager, and the City's Consultant. The contractor will ultimately decide on the numbers and types of employees working on the project following final design. Anticipated project estimates have been provided below for evaluation.

Employment equity will be the responsibility of the successful contractor during construction. The City of St. John's has employment equity policies that will be followed in any employment opportunities.

3.5.1 Employees During Construction Phase

It is projected that the following occupations will be required for employment during the construction phase of the project. Table 3.6 displays the approximate anticipated number of positions during construction and their associated National Occupational Classification (NOC) codes.

3.5.2 Employees During Operations Phase

The only staff that will be employed during the Operations Phase of the project are those who are required to conduct as-needed maintenance activities. The berms will otherwise not be staffed post-construction.

3.5.3 Employment Equity

The City is committed to the employment of a qualified workforce that reflects the community's diversity. The City has established employment equity policies within their Corporate and Operational Policy Manual. The policies identifies their commitments to achieve fair and equal access to municipal employment opportunities for citizens; encourages the participation in City employment by all sectors; and foster an environment where employees and candidates for employment are treated with fairness, respect and dignity, without discrimination on the basis of gender, race, colour, religion, ethnic origin, ancestry, sexual orientation, age, disability, marital status or the need for accommodations. Employment decisions will be based on job related knowledge, qualifications, skills, abilities, and fairness. The City encourages companies hired to complete the proposed works to have similar policies and will be an equal opportunity employer.

Additionally, the City has implemented the Workplace Human Rights Policy & Procedure Bylaw as a mechanism for the investigation of alleged violations of individual rights, ensuring that alleged violations of the Policy are investigated.



Position	National Occupational Classification	Type of Employment Full / Part- time	Duration of Employment (months)	Number Positions Anticipated	Hiring Method Contracted Out, Direct	Estimated Quarterly Occupational Requirements			
	Group Title Code				Hire,	2021			
					Existing Staff	Q1	Q2	Q3	Q4
Construction Manager	0711	Full Time	4	1	Contracted Out		1	1	
Heavy Equipment Operators	7521	Full Time	4	2	Contracted Out		2	2	
Construction and Trades Contractors and Supervisors	7205	Full Time	4	1	Contracted Out		1	1	
Construction Trades Labourers	7611	Full Time	4	4	Contracted Out		4	4	
Land Surveyors	2154	Part Time	6	1	Contracted Out	1	1	1	
Construction Inspectors	2264	Full Time	4	1	Contracted Out		1	1	
Geological Engineer	2113	Part Time	6	1	Contracted Out	1	1	1	
Civil Engineer	2131	Part Time	6	1	Contracted Out	1	1	1	

Table 3.6Anticipated Positions / Occupations Required during Construction Phase
3.6 Public Consultation

The City of St. John's provided opportunities for public engagement and involvement throughout the process, including a Project specific webpage and a virtual public engagement session. The City of St. John's has prepared a "What We Heard" document outlining a summary of the engagement activities. This document is included in Appendix F.

The City of St. John's prepared a Project-specific webpage on the 'Engage St. John's' website, which provided a Project description, available information for the Project, and question submission form. The Project description on the Engage St. John's' website included the identification of five potential berms located from Elizabeth Avenue to Kings Bridge Road. The public was encouraged to ask questions throughout the engagement process. Question submitted were posted, and responses were provided from the City of St. John's. The questions and responses are provided in Appendix F.

The City of St. John's held a virtual public engagement session on November 17, 2020 to provide information on the proposed Project to the people whose environment may be affected, and to respond to questions and seek feedback from the local community. Virtual public engagement session announcements were posted on the 'Engage St. John's' website to ensure maximum exposure to participants. Approximately 40 people attended the virtual public engagement session. The session provided project details on five potential structures and described the process for the registration of the Undertaking in accordance with the provincial *Environment Protection Act* and *Environmental Assessment Regulations*. Presented materials included:

- Purpose of the engagement session
- Background
- The Project
 - Location / Project Design
 - Project Activities
 - Project Schedule
- Flooding and Surface Water Management
- Permits and Authorizations
 - o Environmental Assessment Process
 - o Other Permit Requirements

Participants were able to express concerns and issues with the Project via the engagement pages and at the public session. Key concerns and issues with this Project included the following which are integrated into this EARD:

- Environmental assessment process for this project, and timelines
- Health and beauty of the river
- Use and design of berms
- Project costs
- Sequencing of this Project with other projects
- Effects of climate change



- Effects of flooding and to hydrology
- Effects to the water table/surface water, ground water
- Impact on surrounding properties, such as Empire Avenue, Feildian Grounds and Riverdale area
- How the public will be engaged and how will feedback will be incorporated

As a result of the engagement activities and public feedback, the City Council on December 14, 2020 decided to proceed with a reduced selection of two flood protection berms: one earth berm located adjacent to Winter Avenue, one earth berm located adjacent to the power substation berm, and erosion protection along Rennies River downstream from Portugal Cove Road. The other structures discussed in the Virtual Engagement Session may be designed and developed as part of future flood mitigation efforts; however, were not included as part of the Undertaking for the EARD.

A summary of key questions and concern themes are outlined in Table 3.7, a full list of questions is provided in Appendix F. Questions asked about other undertakings are not included within this assessment.

Theme	Торіс	Response Summary
Environmental Assessment Process	Environmental Assessment Timeline	The Minister has 45 days to review the registration document and 10 days to post the decision after the 45 days. The Public will be provided a 35-day review period. Public are encouraged to participate in the process and a link will be provided to the NLECCM Project website on the engage page.
Project	How were the heights of the berm determined? Will the berms be designed to be impermeable?	The berm heights were determine based on the 1:100 AEP CC with allowing for approximately 30 cm of freeboard. The Project design in underway, this will be consider as required, and as not to effect surface water drainage.
	Does the Project consider other infrastructure such as bridges?	Yes, the size and capacity of bridges has been considered in the development of the Project.
Flooding Concerns	Has the Project considered Hydraulic flows? Does the Project include run-	The modelling has been completed for various conditions (Appendix A). Yes, the watershed has been included in
	offs from other areas in the	this assessment.

Table 3.7	Summary of Questions and Concerns from Public Information Meetings
and Location	Addressed in the EA Registration



Theme	Торіс	Response Summary
	watershed, such as upstream of Kelsey Drive?	
	How will the other projects effect the Project, such as the Health Science Centre Berms and Long Pond Weir?	The modelling has been completed for various conditions (Appendix A). The proposed project can be completed prior to the construction of the Long Pond Weir.
	Does the Project result in additional flooding?	Following the implementation of the berms during a 1:100 AEP CC event, the floodplain decreases approximately 14,910 m ² compared to the floodplain without mitigation measures.
		The Project will result in the extension of the flood plain by approximately 880 m ² along the backyard of properties at Winter Place (up to 5 m width), vegetated area adjacent to north side of the Rennies River, and the vegetated area along the south side of the river and to some backyards along Empire Avenue (average 5 m. up to 10 m)
Other Environmental Concerns	How will this Project affect the riparian areas and the river?	As much as possible, the berms will be constructed within the existing trail alignment. The types of berms were selected to preserve the natural waterline, accommodate available space and optimize effectiveness and aesthetics. Earthen berms are most preferred to blend into existing conditions, while not compromising structural integrity, when space allows.
	Will the Project change groundwater level?	The Project is proposed as a mitigation measure for surface water from acute flooding events.
Approvals	Pippy Park Approvals	The Project is not located within the Pippy Park managed areas, and will not anticipated to require a Pippy Park Approval.

3.7 Project Related Documents

The following section includes a summary of the documents used to generate this EARD.



3.7.1 Reference Documents

CBCL. 2014. Rennies River Catchment Stormwater Management Plan (RRCSWMP): Final Report. File No. 123097.00. Report prepared for City of St. John's by CBCL, St. John's, NL. Dated April 15, 2014. Available:

http://www.stjohns.ca/sites/default/files/files/publication/Rennies%20River%20Catchment %20Stormwater%20Management%20Plan_0.pdf. Accessed September 25, 2020.

CBCL. 2020. Rennies River Flood Mitigation – Phase 2A – Additional Analysis. Draft Final Report. File No. 193030.00. Report prepared for City of St. John's by CBCL, St. John's NL. Dated March 2, 2020.

Environment and Climate Change Canada (ECCC). 2020. General Nesting Periods of Migratory Birds in Canada. Available: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html. Accessed: November 26, 2020.

Environment Canada. 2013. Bird Conservation Strategy for Bird Conservation Region 8 and Marine Biogeographic Units 10 and 12 in Newfoundland and Labrador: Boreal Softwood Shield, Newfoundland-Labrador Shelves, and Gulf of St. Lawrence. Canadian Wildlife Service, Environment Canada. Sackville, New Brunswick. vi + 158 pp. + Appendices. Available online: <u>http://publications.gc.ca/collections/collection_2014/ec/CW66-320-6-2014eng.pdf</u>. Accessed: November 26, 2020.

eBird. 2020. eBird: An online database of bird distribution and abundance. eBird, Ithaca, New York. Available: http://www.ebird.org. (Accessed: November 26, 2020).

Fisheries and Oceans Canada (DFO). 2020a. Newfoundland and Labrador Angler's Guide 2020-2021:

Annex 7 - Newfoundland and Labrador scheduled Salmon Rivers. Available: <u>http://www.nfl.dfo-mpo.gc.ca/NL/AG/ScheduledSalmonRivers</u>. Accessed: November 23, 2020.

Fisheries and Oceans Canada (DFO). 2020b. Newfoundland and Labrador Angler's Guide 2020-2021: Brown Trout. Available: <u>http://www.nfl.dfo-mpo.gc.ca/NL/AG/BrownTrout</u> Accessed: November 23, 2020.

Fisheries and Oceans Canada (DFO). 2019. Timing windows to conduct projects in or around water. Available: <u>https://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/index-eng.html</u>. Accessed November 23, 2020.

Government of Canada. 2020. Canadian Climate Normals 1981 – 2010 Station Data – St. John's A – Climate ID: 8403506. Modified: July 20, 2018. Available:



http://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?stnID=6720&autof wd=1. Accessed: November 23, 2020.

Government of Newfoundland and Labrador, Environment, Climate Change and Municipalities (NLECCM). 2020a. Water Quality Station Profile: Station #: NF02ZM0016, Rennies River at Carnell Drive. Available:

https://www.canal.gov.nl.ca/root/main/station_details_e.asp?envirodat=NF02ZM0016. Accessed September 24, 2020.

Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agriculture (NLFFA).2020b. District Planning Information. Available: https://www.gov.nl.ca/ffa/programs-and-funding/forestry-programs-and-funding/forestry-programs-and-funding/managing/district/ Accessed: September 23, 2020.

Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agriculture (NLFFA). 2020a. Maritime Barrens Ecoregion. Available: <u>https://www.gov.nl.ca/ffa/gis/maps/mbarrens-eco/</u>. Accessed: September 28, 2020.

Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agriculture (NLFFA). 2020c. All Species. Available: http://www.flr.gov.nl.ca/wildlife/all_species/index.html. Accessed November 26, 2020.

Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agriculture (NLFFA). 2020d. Birds. Available: <u>https://www.gov.nl.ca/ffa/wildlife/all-species/birds/</u>. Accessed: November 26, 2020.

Government of Newfoundland and Labrador, Environment, Climate Change and Municipalities NSECCM (2014). Available: <u>https://www.gov.nl.ca/eccm/waterres/flooding/flooding/#forecast</u>. Accessed September 28, 2020.

Government of Newfoundland and Labrador, Industry, Energy and Technology. 1994. Surficial Geology Map. Available: <u>https://www.gov.nl.ca/iet/mines/geoscience/reports-maps/indexes/</u>. Accessed September 29, 2020.

Heritage Newfoundland and Labrador. 2002. Maritime Barrens. Available Online: https://www.heritage.nf.ca/articles/environment/maritime-barrens.php. Accessed: November 26, 2020.

Keefe, Donald. Ecosystem Management Ecologist, Aquatic, Wildlife Division, Newfoundland and Labrador, Department of Municipal Affairs and Environment, Corner Brook, Newfoundland and Labrador. September 20, 2017.



Newfoundland Breeding Bird Atlas. 2020. Newfoundland Breeding Bird Atlas (2020-2024). Available: https://www.birdscanada.org/birdmon/nfatlas/main.jsp. Accessed: November 26, 2020.

Northeast Avalon Atlantic Coastal Action Program (NAACAP). 2015. Rennies River Watershed Riparian Assessment. Available Online: http://www.naacap.ca/site/wpcontent/uploads/2015/07/Rennies-River-Watershed-Riparian-Assessment.pdf. Accessed: November 23, 2020.

Pardieck, K.L., D.J. Ziolkowski Jr., M. Lutmerding and M.-A.R. Hudson. 2018. North American Breeding Bird Survey Dataset 1966 - 2017, version 2017.0. U.S. Geological Survey, Patuxent Wildlife Research Center. https://doi.org/10.5066/F76972V8.

Stantec Consulting Ltd. (Stantec). 2016. Geotechnical Investigation – Flood Protection Berm (Rev.1), Health Sciences Centre, St. John's, NL. Technical Letter Report. Report prepared for Eastern Health by Stantec, St. John's, NL. Dated July 7, 2016.

City of St. John's. 1998. St. John's Noise By-Law. Available: <u>http://www.stjohns.ca/bylaws.nsf/nwByLawNum/1405</u>. Accessed: November 23, 2020.

Wood Environment & Infrastructure Solutions (Wood). 2019. Hurricane Season Outlook 2019. Report prepared for Water Resources Management Division, Department of Municipal Affairs and Environment by Wood, St. John's, NL. Dated 11 June 2019. Available Online: <u>https://www.gov.nl.ca/eccm/files/waterres-flooding-wrmd-hurricane-seasonoutlook-2019.pdf</u>. Accessed: September 25, 2020.

3.7.2 Project Specfic Studies

The City has undertaken Project specific studies since 2013. The following Project related documents have been completed and are provided for further information to this EARD. The locations of the studies are provided below:

Available Online: CBCL. 2014. Rennies River Catchment Stormwater Management Plan (RRCSWMP): Final Report. File No. 123097.00. Report prepared for City of St. John's by CBCL, St. John's, NL. Dated April 15, 2014. Available Online:

http://www.stjohns.ca/sites/default/files/files/publication/Rennies%20River%20Catchment %20Stormwater%20Management%20Plan_0.pdf

Appendix A – Flood Mitigation Studies

CBCL. 2020. Rennies River Flood Mitigation – Phase 2A – Additional Analysis. Draft Final Report. File No. 193030.00. Report prepared for City of St. John's by CBCL, St. John's NL. Dated March 2, 2020.



CBCL. 2021. Rennies River Flood Mitigation - Winter Avenue. Report prepared for City of St. John's by CBCL, St. John's NL. Dated January 19, 2021.

Appendix B – Site Visit Photographs

Appendix F – Public Consultation Documents



Chapter 4 Approval of Undertaking

After completion of the environmental assessment process, the Project is anticipated to require federal and provincial environmental permits, approvals, and authorizations. Table 4.1 provides a list of the anticipated permits, approvals, authorizations or reviews that may be required, the enabling legislation, and the regulatory agency responsible for administration. Respective approvals, permits, authorizations or reviews will be in place prior to the commencement of construction activities, such as Permit to Alter a Body of Water and Request for Review, prior to in water works.

Permit, Approval, Authorization or Review	Applicable Legislation	Issuing Body
Approval for the Undertaking	<i>Environmental Protection Act I Environmental Assessment Regulation</i>	Minister of Environment Climate Change and Municipalities
Permit to Alter a Body of Water Schedule J - Miscellaneous Works in a Freshwater Body i.e. Other works not specific to above schedules	<i>Water Resources Act,</i> SNL 2002 and NSECCM Policy for Development in Wetlands	NSEECM Water Resources Management Division
Request for Review	Fisheries Act	Fisheries and Oceans Canada (DFO)
Development, Building, and Occupancy Permits	<i>City of St. John's Act</i> , RSNL 1990	St. John's City Council

Table 4.1List of Permits, Approvals, Authorization or Reviews for the Project



Chapter 5 Schedule

The preliminary design activities such as topographic surveys are scheduled to take place in the winter of 2021 and detailed design will continue through the winter of 2021. Upon receipt of required approvals and authorizations, site preparation activities, such as vegetation clearing may occur in the spring of 2021. Construction of berms will follow in spring/summer of 2021. The construction is expected to occur over a six-month period including site preparation and construction. The construction of the berms is likely to take place over a three-month period including mobilization to demobilization.

The schedule reflects vegetation clearing occurring outside the breeding bird period (mid-April to mid-August, ECCC, 2020). If vegetation clearing outside the breeding bird nesting period is unavoidable, breeding bird/nest surveys will be completed prior to removal of vegetation or disturbance of potential habitat. Appropriate set back distances should be based on setbacks identified in the literature or in consultation with a provincial or federal wildlife biologist.

Any in-water works will occur during the summer low flow period (June 1 to September 30) to avoid sensitive life stages of aquatic life (from October 1 to May 31). Mitigation measures will be employed as to minimize effects to brown trout, such as avoiding construction from October 1 to November 30 (DFO, 2019).



Chapter 6 Funding

The City received funding for the Rennies River flood Mitigation Project from Infrastructure Canada under the New Building Canada Fund - Provincial-Territorial Infrastructure Component. The estimated capital cost for the design and construction is in the range of \$1.0 to 1.2 million.



APPENDIX A

Flood Mitigation Study

Rennies River Flood Mitigation – Phase 2A Additional Analysis Rennies River Flood Mitigation - Winter Avenue





March 2, 2020

Scott Winsor, P.Eng. Director of Engineering Planning, Engineering and Regulatory Services City of St. John's P.O. Box 908 St. John's, NL A1C 1J3

Dear Mr. Winsor:

RE: Rennies River Flood Mitigation – Phase 2A Additional Analysis DRAFT REPORT

Background

In 2014 CBCL completed the Rennies River Catchment Stormwater Management Plan (RRCSMP) Study for the City of St. John's. The study included hydrologic modelling of the catchment to determine flood flows for existing and future land uses, considering up-to-date rainfall data as well as rainfall representative of climate change conditions. A hydraulic model was then created to examine the extent of the floodplain resulting from the flood flows. The flood selected for design of flood protection improvements was the 1:100 annual exceedance probability (AEP) flow associated with future land development and climate change conditions.

Scope of Work

The scope of work for this current assignment includes hydraulic modelling of Rennies River from Wicklow Street to Quidi Vidi Lake for the following scenarios:

- Without the Long Pond weir in place, determine the effect on flooding if the improvements downstream of Portugal Cove Road bridge, as identified in Figure 2 of the Rennies River Flood Mitigation – Phase 2A Draft Final Report, dated September 17, 2019, are removed.
- 2. Determine the climate change design storm that can be accommodated by the existing river.
- 3. Determine the climate change design storm that can be accommodated without the Long Pond weir in place and with downstream improvements as recommended in Figure 2 of the September 17, 2019 Report.
- 4. Compare the floodplain for the existing river system (i.e. without improvements) to floodplains with the proposed berms at the Health Sciences, with and without Long Pond weir, and with and without the proposed downstream improvements as presented in Figure 2 and Figure 7 of the September 17, 2019 Report.

Analysis

BEST MANAGED COMPANIES This scope of work builds on the analysis presented in the September 17, 2019 Report. It should be noted that, during the course of the hydraulic modeling for the scope of work listed above, a software bug was identified. It was noticed that a road which did not overtop in previous versions of the software did overtop in XPSWMM version 2018.2.1 (and version 2019.1). This software bug was brought to the attention of XPSolutions, the supplier of the XPSWMM software. XPSolutions determined that the problem was related to the bridge links. When the bridge geometry is entered in XPSWMM through the bridge link the

187 Kenmount Road

St. John's, Newfoundland

Canada A1B 3P9

```
Telephone: 709 364 8623
```

Fax: 709 364 8627

E-mail: info@cbcl.ca

www.cbcl.ca

Solving today's problems with tomorrow in mind



Mr. Scott Winsor March 2, 2020 Page 2 of 9

program creates tables of depth, area, wetted perimeter, and surface width. There were errors in these tables which lead to the program incorrectly determining the amount of water through the bridge links. XPSolutions recommended changing the bridge links to multilinks, creating the depth, area, wetted perimeter and surface width tables outside of XPSWMM, and entering this data in the multilinks. These changes were made to the model and the 1:100 AEP Climate Change (CC) flow was simulated. The results were compared to the original RRCSMP study floodplain. In general, the 1:100 AEP CC floodplain produced from the 1D-2D model compared well to the original 2D-2D RRCSMP 1:100 AEP CC floodplain. However, the water level upstream of Clinch Crescent West is higher than modeled in the RRCSMP study and results in Clinch Crescent west being overtopped to the north of the bridge.

For item 1, the improvements proposed downstream of Portugal Cove Road in Figure 2 of the September 17, 2019 Report were removed, and the 1:50 AEP without climate change flow was simulated. The resulting floodplain was compared to Figure 2 of the September 17, 2019 Report. This comparison is presented in Figure 1. Without the downstream improvements the peak water level just upstream of Portugal Cove Road is reduced by approximately 0.3m. Therefore, the height of the proposed segmental concrete block wall and cast-in-place concrete wall just upstream of Portugal Cove Road may be reduced. However, further upstream the difference in peak water level is negligible.

For item 2, the hydrologic model which was created for the RRCSMP study was used to simulate climate change hyetographs for 2, 5, 10, 20, 50 and 100 year return periods. The peak flows from each of the sub-watersheds (identified in Figure 2) were extracted and compared to the peak flows corresponding to the 20, 50 and 100 year return periods without climate change. This data is presented in Table 1. It should be noted that the flows presented are **not** river flows (i.e. are not cumulative and do not include the attenuating effects of Long Pond), but rather runoff from each sub-watershed. It was found that a 1:2 AEP CC event cannot be fully contained by the existing river system, particularly at Portugal Cove Road. This is not surprising when the 1:2 AEP CC flows are compared to other storm events. As can be seen from the table the 1:2 and 1:5 AEP CC flows are similar to the 1:20 AEP flow for existing climate conditions cannot be contained in the river. The floodplain for the 1:2 AEP CC flow is presented in Figure 3.



Mr. Scott Winsor

March 2, 2020 Page 3 of 9

Table 1: Peak Flows by Sub-Watershe

CBCL LIMITED

Consulting Engineers

Sub-				Peak Sub-V	Watershed I	-low (m³/s)			
watersned #	1:2 CC	1:5 CC	1:10 CC	1:20 CC	1:50 CC	1:100 CC	1:20	1:50	1:100
1	3.1	4.3	5.2	6.1	7.3	8.2	4.2	5.1	5.8
2	4.8	6.7	8.1	9.4	11.2	12.6	6.5	7.7	8.7
3	2.4	3.5	4.2	4.9	6.0	6.8	3.4	4.2	5.0
4	5.9	8.2	9.8	11.5	13.7	15.4	7.9	9.4	10.6
5	9.2	13.0	15.7	18.4	22.0	24.9	12.7	15.3	17.3
6	8.9	12.6	15.2	17.8	21.3	24.1	12.6	15.2	17.2
7	8.6	12.0	14.4	16.9	20.2	22.7	11.6	13.9	15.7
8	4.0	5.5	6.6	7.6	9.1	10.1	5.2	6.2	7.0
9	9.0	12.9	15.6	18.4	22.1	25.0	13.9	16.9	19.2
10	11.0	15.5	18.5	21.6	25.7	28.9	15.0	17.9	20.1

The analysis for the Rennies River Flood Mitigation – Phase 2A Draft Final Report, dated September 17, 2019 found that the 1:50 AEP flow without climate change could be accommodated without the Long Pond weir in place and with downstream improvements. For item 3, various return period climate change flows were simulated in the model. The 1:20 AEP CC can be accommodated with berm and concrete wall heights less than those proposed in Figure 2 of the September 17, 2019 report. The 1:50 AEP CC event can be accommodated by increasing berm and wall heights proposed in Figure 2 of the September 17, 2019 Report by approximately 0.2-0.4 m. Figure 4 presents the improvements required to accommodate the 1:50 AEP CC event without Long Pond weir in place. Berm heights may change from those presented in Figure 4 during detailed design when survey of the alignment is collected.

For item 4, the scenarios described in Table 2 were simulated for the 1:100 AEP CC event and compared to the 1:100 AEP CC existing conditions. The following sections describe the results of the simulation runs. Figures 5 to 12 present the floodplain for each scenario compared to the existing 1:100 AEP CC floodplain.





Mr. Scott Winsor March 2, 2020 Page 4 of 9

Table 1: Scenarios for Floodplain Comparison to Existing 1:100 AEP CC

Scenario	Figure No.	Health Science Centre	Long Pond Weir	Downstream Improvements
1	5	HSC Berms	No Long Pond weir	No D/S improvements
2	6	HSC Berms	No Long Pond weir	D/S improvements as per figure 2 of the Sept 17, 2019 report
3	7	HSC Berms	No Long Pond weir	D/S improvements as per figure 2 of the Sept 17, 2019 report - deleting improvements D/S of Portugal Cove Road Bridge
4	8	HSC Berms	No Long Pond weir	D/S improvements as per figure 7 of the Sept 17, 2019 report
5	9	HSC Berms	With Long Pond weir	No D/S improvements
6	10	HSC Berms	With Long Pond weir	D/S improvements as per figure 2 of the Sept 17, 2019 report
7	11	HSC Berms	With Long Pond weir	D/S improvements as per figure 2 of the Sept 17, 2019 report - deleting improvements D/S of Portugal Cove Road Bridge
8	12	HSC Berms	With Long Pond weir	D/S improvements as per figure 7 of the Sept 17, 2019 report

Scenario 1, Figure 5: 1:100 AEP CC Health Sciences Berms

As expected, the floodplain for scenario 1 is similar to the floodplain for the 1:100 AEP CC existing river conditions, with the exception of the and floodplain extent between Clinch Crescent West and Clinch Crescent East where the proposed Health Sciences Centre (HSC) Berms are to be constructed. It should be noted that although there is flooding on Prince Philip Drive in the vicinity of the south HSC berm, this flow is not due to overtopping the south berm, but rather flow which overtops the right bank upstream of Clinch Crescent west.

Scenario 2, Figure 6: 1:100 AEP CC Health Sciences Berms and Downstream Berms The floodplain for scenario 2 cannot be contained by the improvements as proposed in Figure 2 of the September 17, 2019 Report. The water level upstream of Portugal Cove Road will exceed the height of the proposed improvements. Similarly, portions of the proposed downstream improvements will be overtopped.

Scenario 3, Figure 7: 1:100 AEP CC Health Sciences Berms and Berms Downstream of Portugal Cove Road Removed

Removing the berms downstream of Portugal Cove Road will result in the Fieldian Grounds & Riverdale Tennis Club being flooded during the 1:100 AEP CC event. Without berms in the left bank upstream of Kings Bridge Road the floodplain will extend north toward Winter Avenue, over Kings Bridge Road and onto the King George V soccer field.



Scenario 4, Figure 8: 1:100 AEP CC Health Sciences Berms and Alternative Flood Protection Scheme

With the berms downstream of Portugal Cove Road removed but maintaining the berms upstream of King's Bridge Road, the Fieldian Grounds & Riverdale Tennis Club will be



Mr. Scott Winsor March 2, 2020 Page 5 of 9

flooded during the 1:100 AEP CC event. However residential property will be protected during the 1:100 AEP CC event.

Scenario 5, Figure 9: 1:100 AEP CC Health Sciences Berms and Long Pond Weir Including the weir at Long Pond does not reduce the flow enough to prevent flooding downstream. Flooding will still occur upstream of Portugal Cove Road toward Pringle Place, and onto Fieldian Grounds & Riverdale Tennis Club.

Scenario 6, Figure 10: 1:100 AEP CC Health Sciences Berms, Long Pond Weir and Downstream Berms

The 1:100 AEP CC event was simulated with the HSC berms and Long Pond weir in place with the downstream improvements as presented in Figure 2 of the September 17, 2019 report. The resulting floodplain is presented in Figure 10.

Scenario 7, Figure 11: 1:100 AEP CC Health Sciences Berms & Long Pond Weir – Berms Downstream of Portugal Cove Road Removed

With this configuration there will still be some flooding toward Winter Avenue for the 1:100 AEP CC event.

Scenario 8, Figure 12: 1:100 AEP CC Health Sciences Berms, Long Pond Weir and Alternative Flood Protection Scheme

The resulting floodplain for scenario 8 is similar to that for scenario 4. The Fieldian Grounds & Riverdale Tennis Club property will be flooded, however, the residential properties will be protected.

Yours truly,

CBCL Limited

Gennefer Bursey

Prepared by: Jennifer Bursey, P. Eng. Civil Engineer Direct: 1-709-364-8623 Ext.241 E-Mail: jenniferb@cbcl.ca

A.E. Ahepp

Reviewed by: Greg Sheppard, P. Eng. Senior Civil Engineer

Project No: 193030.00



This document was prepared for the party indicated herein. The material and information in the document reflects CBCL Limited's opinion and best judgment based on the information available at the time of preparation. Any use of this document or reliance on its content by third parties is the responsibility of the third party. CBCL Limited accepts no responsibility for any damages suffered as a result of third party use of this document.

Portugal Cove Road 0.0 m Empire Ave 1.6 m 0.8 m 1.2 m Legend 1:50 AEP With Improvementd DS of Portugal Cove Road 1:50 AEP Without Improvements DS of Portugal Cove Road Proposed Cast-in-Place Concrete Wall Proposed Segmental Concrete Block Wall 30 60 120 180 ⊐m

Figure 1: Comparison of 1:50 AEP Floodplains With and Without Improvements Downstream of Portugal Cove Road

Figure 2: Subcatchment Delineation



Figure 3: 1:2 AEP Climate Change Floodplain for Existing River System









HOLAN SCIO PLA	Key Map:	st Park lows Mount Cashel Beasantville Ouidi
DROAD	Stingwell Park St. Town John's	Nyn Eest ort William ishen d'Cahill Point
	S. S.M.	4SPM
	Legend: 100 AE 100 AE Propos	EP CC Existing EP CC HSC Berms sed Earth Berm sed HSC Berms
	ST. Je	∂HN'S
	Project: Rennies River Phase 2A Add	PHN'S
Y ROAD	ST. J@ Project: Rennies River Phase 2A Ado Figure Title:	PHN'S
Y ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He	Shod Mitigation Hood Mitigation Hitional Analysis ure 5: Halth Sciences Berms
Y ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He CE	HN'S
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He CE Page	HN'S Flood Mitigation litional Analysis ure 5: ealth Sciences Berms
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He I:100 AEP CC He Page Page	HN'S Flood Mitigation Itional Analysis ure 5: alth Sciences Berms ICLL t of 3 Date: 02/03/2020
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He I:100 AEP CC He Page Drawn: JB Checked: JB	HN'S Flood Mitigation Sector 2010 Flood Mitigation Sector 2010 Sector 2010 Flood Mitigation Sector 2010 Se
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He I:100 AEP CC He Page Drawn: JB Checked: JB Approved: GS	HN'S Flood Mitigation Stitional Analysis ure 5: alth Sciences Berms Sciences 1 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He I:100 AEP CC He Page Drawn: JB Checked: JB Approved: GS Coordinate System: NAD 1983 M	EVALUATE SET SET SET SET SET SET SET SET SET S

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG5-HSC-Berms.ma



	Key Map:	st Park
	nola	Mount northill
	A FAI	Cashel Ouidi
	3708	Clearidge Vidi
N. C. (I) Strength		Hoylestown
	Gorgesto	ort William
Ala and	Vishingwell Park St. Town	n sh en d Cahill Point
ENERSON	John's	XASI
STREET	S CAN	25 / Jah
BEE -	Legend:	
NIC SI	100 AF	P CC Existing
OWNER		
All Carlos A	Propos	sed Earth Berm
	Propos	sed HSC Berms
THE N		
ALL COLOR OF		
THE . YUR		
NO. CON		
1 . A. M		
B COM PS/S		
TE MACE		
For Rech Pt		
R LA	ST. J@	ƏHN'S
Real Provide P		
	Ducianti	
AUGHAN PLACE	Project:	
	Rennies River	Flood Mitigation
	Phase 2A Add	litional Analysis
	Figure Title:	
		_
	Fig 1:100 AEP CC He	ure 5: alth Sciences Berms
SONG POND ROAD		
	C7 1.1	
	CD	
BO		
And	Page	e 2 of 3
	_	
Real Provide State	Drawn: JB	Date: 02/03/2020
TUN	Checked: JB	Project #: 193030.00
an le		
AVENUE	Approved: GS	Scale @ 11"x17" : 1:4,500
AVENUE	Approved: GS	Scale @ 11"x17" : 1:4,500
AVENUE	Approved: GS Coordinate System: NAD 1983 M Units: Meter	Scale @ 11"x17" : 1:4,500
AVENUE AL	Approved: GS Coordinate System: NAD 1983 M Units: Meter 0 25 50 100	Scale @ 11"x17" : 1:4,500

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG5-HSC-Berms.mxd



AAGE	Key Map: Key Map: Corgesto F Corgesto F John's Legend: 100 AE Propos Propos	And the second s
CLANCEY DRIVE		
	ST. J@	∂HN'S
FORESTROAD	Rennies River Phase 2A Ado	Flood Mitigation litional Analysis
OF OF OF	Figure Title: Fig 1:100 AEP CC He	ure 5: alth Sciences Berms
	СВ	CL
Min E	Page	e 3 of 3
	Drawn: JB	Date: 02/03/2020
	Checked: JB	Project #: 193030.00
The AP	Approved: GS	Scale @ 11"x17" : 1:4,500
armouth Re	Coordinate System: NAD 1983 M Units: Meter	
	0 25 50 100	150 200 m

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG5-HSC-Berms.mxd





	Key Map:	st lows
	MARKA	Mount Fleasantyille
	A. Had	Quidi
And Andrews	STAV.	Crescent Houlestown
NAME AND AND A DESCRIPTION OF		
	Georgesto	ort William
Mary Carlos	Wishingwell Park St. Town	shend Cahill Point
EMER	John's	12/ 5
STREET	CAN SAL	274/18
HEI VI		MS PA
GSTA	Legend:	
Willer	100 AE	P CC Existing
	100 AE Downst	P CC HSC and ream Berms
	Propos	ed HSC Berms
	Propos Concre	sed Cast-in-Place ete Wall
	Propos	sed Segmental
A Star Star	Concre	ete Block Wall
R. S. M.	Propos	ed Earth Berm
1 2 · j * 1/		
a construction		
CR. ACE		
CAR CHIPLACE		
FRANCH PLACE	ST 10	วามาร
CRA LARCHPLACE	ST. Je	∍HN'S
Charles I ArcH PLACE	ST. J@	∍HN'S
CRASH LARCHPLACE	ST. J@	∍HN'S
Change Hause	ST. J@ Project: Rennies River	∂HN'S Flood Mitigation
Change I Arch PLACE	ST. J@ Project: Rennies River Phase 2A Add	Plood Mitigation
VAUGHAN PLAGE	ST. J@ Project: Rennies River Phase 2A Add	SHN'S
Change And	ST. J@ Project: Rennies River Phase 2A Ado Figure Title:	PHN'S
CRABINE LARCH PLACE	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation litional Analysis
Alughan PLACE	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Downs	Flood Mitigation litional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He and Downs	Show A stream Berms
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He and Downs	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Charles and the second	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Charles Long Pond Road	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Downs	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Charles Internet	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Downs CEE	HN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Charles Internet	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs CE E Page	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Charles LANCH HUNCH	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs CEE Page	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms ICCL 2 of 3
Cong pond road	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs CE Page Drawn: JB	SHN'S Flood Mitigation litional Analysis ure 6: alth Sciences Berms stream Berms
Cong pond road	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs Checked: JB Checked: JB	EVALUATION SET OF CONTRACT OF
Charles Linch Hubble Balance LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Downs Checked: JB Approved: GS	CINCUESSION CONTRACTOR OF CONTRACTOR CONTRACTICACITICONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CON
Cong pond road	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs Ce E Page Drawn: JB Checked: JB Approved: GS	SHN'S Flood Mitigation itional Analysis ure 6: alth Sciences Berms stream Berms LELL 2 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
Charles Lincel Hubble Calification Place	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Downs Coefficient Figure Title: Fig 1:100 AEP CC He and Downs Fig Coefficient Coordinate System: NAD 1983 M Units: Meter	EVALUATION SECTION SEC

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG6-HSC_and_DSBerms.mxd







	Key Map:	ist dows
	NOrth	Mount Cashel Heasantville
	Balle	Quidi
Contraction of the second		rescent Hoylestown
	Corgesto	CH In
		ort William
CAR AND	Vishingwell Park St.	Cahill Point
EE' SMERSON	John's	XGRA
STREET	S Sort	45 100
TREE -	Legend:	
MAC S.	100 AE	P CC Existing
oom.	100 AE	P CC HSC Berms -
	No Ber	ms DS of Portugal
	Propos	ed HSC Berms
	Propos	ed Cast-in-Place
	Concre	ete Wall
- P	Propos	sed Segmental
	Concre	ete Block Wall
	Propos	ed Earth Berm
a lina Pr /		
C TA		
A REAL REALPLACE		·
CAR AND A LARCH PLACE	ST. J@	ƏHN'S
CARATER LARCH PLACE	ST. Je	∂HN'S
CRAMER ARCHELACE	ST. J@	∂HN'S
CANAR ALAGE	ST. J@ Project: Rennies River	HN'S
CANARA LARCHIPLACE	ST. J@ Project: Rennies River Phase 2A Add	PHN'S
CRAME AN PLAGE	ST. J@ Project: Rennies River Phase 2A Add	PHN'S
CANARA LARCH PLACE	ST. J@ Project: Rennies River Phase 2A Add Figure Title:	SHN'S
AUGHAN PLACE	Project: Rennies River Phase 2A Add Figure Title:	Flood Mitigation ditional Analysis
Aughan Place	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Cove Roa Cove Roa	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Cove Roa Page	HN'S Flood Mitigation ditional Analysis ure 7: halth Sciences Berms hstream of Portugal ad Removed CLL e 2 of 3
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Cove Roa Page Drawn: JB	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Cove Roa Drawn: JB Checked: JB	EVALUATE SET SET SET SET SET SET SET SET SET S
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Drawn: JB Checked: JB Approved: GS	EVALUATE SET SET SET SET SET SET SET SET SET S
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Ros Cove Ros Page Drawn: JB Checked: JB Approved: GS	Flood Mitigation ditional Analysis ure 7: ealth Sciences Berms instream of Portugal ad Removed Flood Mitigation ure 7: ealth Sciences Berms instream of Portugal ad Removed Flood Mitigation Sciences Berms Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Berms Dow Cove Roa Drawn: JB Checked: JB Approved: GS Coordinate System: NAD 1983 I Units: Meter	Flood Mitigation ditional Analysis Pure 7: walth Sciences Berms instream of Portugal ad Removed Flood L L L L L L L L L L L L L L L L L L L

Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG7-HSC_and_Berms DS of PCR removed.mxd



m 4-Comparisons\FIG7-HSC_and_Berms DS of PCR I





	Key Map: Ea Meac	lows
	NAFER	Mount Cashel Pleasantville
	- B. Hall	Quidi
Contraction of the second	371	Crescent Hoylestown
N. C. C. L. C.	Corgesto	CHAR
	I Town	ort William
CAR AND	vishingwell Park St.	Cahill Point
EE' SMERSON	John's	Xand
STREET	S. S.M.	45/30
TREE	Legend:	
THE S	100 AE	P CC Existing
10 Miles	100 AE	P CC HSC -
	Alterna	tive Flood
Ballon Mar	Protect	
State of the second second	Propos	ed HSC Berms
	Propos Concre	sed Cast-in-Place ete Wall
	Propos	sed Segmental
	Concre	ete Block Wall
	Propos	ed Earth Berm
CANER STATIS		
MAN AND		
ALCON A CAS		
C FA		
Fag och PL		
N R LAN	ST	P'NHG
- A - A - A - A - A - A - A - A - A - A		
AUGHAN PLACE	Project:	
	Rennies River	Flood Mitigation
	Phase 2A Additional Analysis	
	Figure Title:	
CONTRACT REAL	i igure i ide.	
A REAL PROPERTY OF A REAL PROPER	Fig	uro 8:
	Fig 1:100 AEP CC He	ure 8: alth Sciences Berms
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative	ure 8: alth Sciences Berms Flood Protection
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc C E Page	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc C C C C C C C C C C C C C C C C C C	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc C E Page Drawn: JB Checked: JB	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc Diale Drawn: JB Checked: JB Approved: GS	ure 8: alth Sciences Berms Flood Protection heme 2 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc CEE Page Drawn: JB Checked: JB Approved: GS	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc Cordinate System: NAD 1983 M Units: Meter	ure 8: alth Sciences Berms Flood Protection heme
LONG POND ROAD	Fig 1:100 AEP CC He and Alternative Sc Example Sc Fage Page Page Page Checked: JB Approved: GS Coordinate System: NAD 1983 N Units: Meter 0 25 50 100	ure 8: alth Sciences Berms Flood Protection heme 2 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500

ath: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG8-HSC_and_Alternative Protection Scheme.mxd



3030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG8-HSC_and_Alternative Protection Scheme.



	Key Map: Ea Mean	st tows
CO STA	Norka	Mount Cashel Pleasantville
SCIO PI	A Land	Clearidee Vidi
The second secon		Crescent Hoyl estown
DOND	orgesto	William
D ROAD	Vishingwell Park St.	nshend Cahill Point
and the second	John's	14 / Jan
	Carl	2-16
C-q P	Legend:	
Crew W	100 AE	EP CC Existing
S. S. A. C. T. S.	100 AE	EP CC HSC and
		sed HSC Berms
ATT AND	Bropos	and Earth Parm
		sed Earth Berm
A CONTRACTOR OF		
man		
		•
	CT IC	JUNI'C
	ST. Je	PHN'S
	ST. J@	<u>ƏHN'S</u>
	ST. J@	∂HN'S
	Project: Rennies River	Plood Mitigation
	ST. J@ Project: Rennies River Phase 2A Add	Plood Mitigation
Y.ROAD	Project: Rennies River Phase 2A Ado	Plood Mitigation
Y ROAD	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He	Flood Mitigation ditional Analysis
Y ROAD	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Long	Flood Mitigation ditional Analysis
Y.ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long	SHN'S Flood Mitigation litional Analysis ure 9: alth Sciences Berms Pond Weir
Y ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He and Long	Flood Mitigation ditional Analysis
Y ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Long	SHN'S Flood Mitigation litional Analysis ure 9: latth Sciences Berms g Pond Weir
Y ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Long	SHN'S Flood Mitigation ditional Analysis ure 9: alth Sciences Berms of Pond Weir
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He and Long CE Page	HN'S Flood Mitigation ditional Analysis ure 9: ealth Sciences Berms or Pond Weir CLL at of 3
Y ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long CE Page Drawn: JB	HN'S Flood Mitigation ditional Analysis ure 9: alth Sciences Berms or Pond Weir CCL at of 3 Date: 02/03/2020
Y ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long Page Page Drawn: JB Checked: JB	HN'S Flood Mitigation Sitional Analysis ure 9: alth Sciences Berms Pond Weir Solution Iccl at of 3 Date: 02/03/2020 Project #: 193030.00
Y.ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long Drawn: JB Checked: JB Approved: GS	EVALUATE SET SET SET SET SET SET SET SET SET S
Proab	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long Drawn: JB Checked: JB Approved: GS	EVALUATION SECTION SEC
	ST. J Project: Rennies River Phase 2A Add Figure Title: Fig 1:100 AEP CC He and Long Drawn: JB Checked: JB Approved: GS Coordinate System: NAD 1983 M	EVALUATION SERVICES S
	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figure Title: Figure Title: Fig 1:100 AEP CC He and Long Cereital Page Page Drawn: JB Checked: JB Approved: GS Coordinate System: NAD 1983 M Units: Meter 0 25 50 100	Flood Mitigation ditional Analysis ure 9: alth Sciences Berms Pond Weir Flood

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\tem 4-Comparisons\FIG9-HSC-LP.m>



	Key Map: Harver Ea Meac	st lows Mount Cashel He asantville
	- Corrector	Quidi trescent Hoylestown
	Wishingwell Park St.	ort William 1 shend Cahill Point
HET EMERSON STREET	John's	34/18
STREET	Legend:	
white ?	100 AE	P CC Existing
	100 AE Long F	P CC HSC and ond Weir
	Propos	sed HSC Berms
	Propos	sed Earth Berm
ta a LARCH PLAG	ST. J@	∍HN'S
VAUGHAN PLACE	Project: Rennies River Phase 2A Add	Flood Mitigation litional Analysis
LONG POND ROAD	Figure Title: Fig 1:100 AEP CC He and Long	ure 9: alth Sciences Berms 9 Pond Weir
SYCANO	СВ	CL
AR PL	Page 2 of 3	
	Drawn: JB	Date: 02/03/2020
	Checked: JB	Project #: 193030.00
AVEN	Approved: GS	Scale @ 11"x17" : 1:4,500
	Coordinate System: NAD 1983 M Units: Meter	
PURROSE PLACE	0 25 50 100	150 200 m

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\tem 4-Comparisons\FIG9-HSC-LP.mxd



1403	Key Map: Ea	st Park lows Mount Cashel He asan tville
	Gorgesto	Unrescent Grescent William
	vishingwell Fark St. John's	ort rshend Cahill Point
50 55	NY A	TS PM
	Legend: 100 AF	P CC Existing
	100 AE	P CC HSC and
	Long F	Pond Weir
	Propos	sed HSC Berms
	Propos	sed Earth Berm
an is is		
DRIVE		
CLANGER CL		
	ST 10	วามาร
	51.00	
Carlos and	Project:	
BOAD	Rennies River Flood Mitigation	
OREST	Phase 2A Additional Analysis	
	Figure Title:	
e Alexandre	Fig 1:100 AEP CC He	ure 9: alth Sciences Berms
N. N	and Long Pond Weir	
	3.8	
	CE	
	Page 3 of 3	
NY N E	Drawny ID	Dete: 02/02/0000
	Jrawn: JB	Date: 02/03/2020
the second se	Chackad IP	100001 #. 193030.00
	Checked: JB	Scale @ 11"x17" : 1-4 500
AR CROAD	Checked: JB Approved: GS	Scale @ 11"x17" : 1:4,500
AL NOUTH BOAD	Checked: JB Approved: GS Coordinate System: NAD 1983 M Units: Meter	Scale @ 11"x17" : 1:4,500
An armouth ROAD	Checked: JB Approved: GS Coordinate System: NAD 1983 M Units: Meter 0 25 50 100	Scale @ 11"x17" : 1:4,500

Path: L:\Jobs\2019\193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\tem 4-Comparisons\FIG9-HSC-LP.m



S\LAYOUT\Item 4-Co


as a contract of	Key Map:	East Park Meadows	(74) Jo
	Mark.	Mount	Pleasantville
	A.L.	Clenridee	Quidi
		Grescent	Hoylestown
	14	argestown Fort	t Alr
Service States	Vishingwell Park St	Fort William Town sh en d	Columbia
A BMB	Iohr	n's	Canili Point
STREET		V/N/#	
ALL	N. A.	APS !!	9
IC STREET	Legend:		
With	10		sting
	Po	nd Weir & Dov	, Long vnstream
All a star	Be	rms	
	Pro	oposed HSC B	erms
AL AN	Pr	oposed Cast-	in-Place
	Br		ontol
	Co	oncrete Block	Wall
Note in the second	Pro	oposed Earth E	Berm
and the second s			
ALC I I S			
ACE ACE			
TAR BCHIPL			
R Uhr	ST. 、	JQH	NS
B			
Value	Project:		
GHAN PLACE	Rennies Ri	iver Flood N	litigation
	Phase 2A	Additional	Analysis
	Figure Title:	Figure 10.	
	1:100 AEP CC	Health Scier	nces Berms,
LONG POND ROAD	Long Pond	Weir and Dov Berms	wnstream
	191		
Store and the			
AM	C	BC	-
		Page 2 of 3	
	Drawn: JB	Date: 02/03	/2020
NUE	Checked: JB	Project #: 1	93030.00
WE	Approved: GS	Scale @ 11	"x17":1:4,500
	Coordinate System: NAD	1983 MTM 1	\frown
	Units: Meter		
			000
ROSEPLAS	0 25 50	100 150	200 m

L:Jobs/2019/193030.00 CSJ Rennies River Modelling/20 CAD/08 GIS/LAYOUT/Item 4-Comparisons/FIG10-HSC_LPand_DSBerms.



sons\FIG10-HSC_LPand IS\LAYOUT\Item 4-Compa



FIG11-HSC_LPand_Berms DS of PCR



	Key Map: Ea Meao	st lows
	narka	Mount Cashd Pleasantyille
	A fait	Quidi
Provide and a state	510	Crescent Undertain
A Destant		Hoyiestown
	Gorgesto	ort William
and a second second	Wishingwell Park St. Town	shend Cahill Point
EMER.	John's	47/15
STREET	C XV	14/18-1
	NY A	The Part
STREE	Legend:	
ALL CONTRACTOR	100 AE	P CC Existing
On	100 AE	P CC HSC & Long
	Pond V	/eir - No Berms DS
	Propos	ed HSC Berms
	Propos	sed Cast-in-Place
The Alt	Propos	sed Segmental
	Concre	ele diock wall
NYSA TA SY	Propos	ed Earth Berm
~ / C / C /		
TRE PLACE		
THE REHPLACE		
THE REAL ARCHPLACE	ST. J@	∂HN'S
TAR AND ARCH PLACE	ST. J@	∍HN'S
PARTIN LARCH PLACE	ST. J@	∂HN'S
VAUGHAN PLACE	ST. J@	∍HN'S
VAIV GHAN PLAGE	ST. J@ Project: Rennies River	SHN'S
Alvehan Place	ST. J@ Project: Rennies River Phase 2A Add	SHN'S
VAUGHAN PLAGE	ST. J@ Project: Rennies River Phase 2A Add	SHN'S
VAIV GHAN PLACE	ST. J@ Project: Rennies River Phase 2A Ado Figure Title:	SHN'S
VAUGHAN PLACE	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He	Flood Mitigation litional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation litional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation litional Analysis
VAUGHAN PLACE	ST. Je Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov	Flood Mitigation litional Analysis
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov	Flood Mitigation litional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov	SHN'S Flood Mitigation litional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov CE E Page	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov E C E Page	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed CCL - 2 of 3
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov Figure Title: Drawn: JB	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed CCL 2 of 3 Date: 02/03/2020
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figur	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed CCCC 2 of 3 Date: 02/03/2020 Project #: 193030.00
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov Figure Title: Drawn: JB Checked: JB Approved: GS	EVALUATE SET SET SET SET SET SET SET SET SET S
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figur	SHN'S Flood Mitigation litional Analysis ure 11: alth Sciences Berms - Berms Downstream re Road Removed CCL 2 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
AUGHAN PLACE	ST. J Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov Figure Title: Drawn: JB Checked: JB Approved: GS	EVALUATION SERVICES
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: 1:100 AEP CC He & Long Pond Weir of Portugal Cov Page Drawn: JB Checked: JB Approved: GS Coordinate System: NAD 1983 M Units: Meter 0 25 50 100	EVALUATION SERVICES

9/193030.00 CSJ Rennies River Modelling/20 CAD/08 GIS/LAYOUT/Item 4-Comparisons/FIG11-HSC_LPand_Berms DS of PCR removed.mxd



s/FIG11-HSC_LPand_Berms DS of PCR r





	Key Map:	st lows
	norta	Mount Heasantville
	A PAI	Cashel Quidi
	5102	Clearing Vidi
A CARLEN DE COMPANY		Hoylestown
	Gorgesto	ort William
and a second second	Wishingwell Park St. Town	n sh en d Cahill Point
EMBD.	John's	47/15
STREET	C XV	14/18-1
	NY M	TS PA
STRE	Legend:	
- Malale	100 AE	P CC Existing
002	100 AE	P CC HSC & Long
	Flood F	Protection DS
	Propos	ed HSC Berms
	Propos	sed Cast-in-Place
100 - 00	Denote	
The second	Propos	sed Segmental
	Propos	ed Earth Berm
a then the se		
A CARA		
ALCON IN		
The second se		
A PLACE		
AR REAL ARCHPACE	ST 10	
THE REAL PROPERTY OF THE REAL PROPERTY OF THE	ST. J@	∂HN'S
AR BARREN PLACE	ST. J@	∂HN'S
AND A CONTRACT	ST. J@	∍HN'S
AR BAN PLACE	ST. J@	PHN'S
LAWGHAN PLACE	Project: Rennies River Phase 2A Add	PHN'S
VALUGHAN PLACE	ST. J@ Project: Rennies River Phase 2A Add	SHN'S
Alvighan Place	ST. J@ Project: Rennies River Phase 2A Add Figure Title:	SHN'S
VALUGHAN PLACE	ST. J@ Project: Rennies River Phase 2A Add Figure Title: Figure Title:	Flood Mitigation litional Analysis
VAIVGHAN PLACE	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He	Flood Mitigation litional Analysis
LONG POND ROAD	Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection	Flood Mitigation litional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: Figure Title: I:100 AEP CC He Long Pond Weir a Protection	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection	SHN'S Flood Mitigation ditional Analysis
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection Protection	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	SHN'S Flood Mitigation ditional Analysis
LONG POND ROAD	ST. JO Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection Protection Protection Protection Protection Protection	Flood Mitigation ditional Analysis
LONG POND ROAD	ST. J Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figur	SHN'S Flood Mitigation ditional Analysis ure 12: alth Sciences Berms, and Alternative Flood on Scheme CCL a 2 of 3 Date: 02/03/2020
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	SHN'S Flood Mitigation ditional Analysis ure 12: alth Sciences Berms, and Alternative Flood on Scheme CCL a 2 of 3 Date: 02/03/2020 Project #: 193030.00
LONG POND ROAD	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection Protection Protection Page Drawn: JB Checked: JB Approved: GS	EVALUATE SET SET SET SET SET SET SET SET SET S
LONG POND ROAD	ST. Je Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection Protection Page Drawn: JB Checked: JB Approved: GS	EVALUATE SUBJECT SUBJE
AUGHAN PLACE	ST. J@ Project: Rennies River Phase 2A Add Figure Title: 1:100 AEP CC He Long Pond Weir a Protection Protection Protection Page Drawn: JB Checked: JB Approved: GS	Flood Mitigation ditional Analysis ure 12: alth Sciences Berms, and Alternative Flood on Scheme CCLC a 2 of 3 Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500
LONG POND ROAD	ST. J. Project: Rennies River Phase 2A Add Figure Title: Figure Title: Figu	Flood Mitigation Analysis Flood Mitigation Analysis ure 12: alth Sciences Berms, and Alternative Flood Scheme Flood Mitigation Ure 12: alth Sciences Berms, and Alternative Flood Date: 02/03/2020 Project #: 193030.00 Scale @ 11"x17" : 1:4,500 ATM1

9/193030.00 CSJ Rennies River Modelling\20 CAD\08 GIS\LAYOUT\Item 4-Comparisons\FIG12-HSC_LPand_Alternative Protection Scheme.mxd



IG12-HSC_LPand_Alterr



Date	01/19/2021
Memo to	Scott Winsor
Project name	Rennies River Flood Mitigation Environmental Assessment Registration Document
Subject	Rennies River Flood Mitigation - Winter Avenue
From	Jennifer Bursey
Copies to	Melissa Rutherford and Greg Sheppard

On December 10, 2020 the City of St. John's (City) requested that CBCL Limited (CBCL) examine the extent of flooding resulting from a 1:100 annual exceedance probability (AEP) climate change (CC) flood if berms are constructed between Kings Bridge Road and Portugal Cove Road. This scope of work builds on the analysis presented in the March 2, 2020 Report; therefore, the flood protection scenario presented in this memo is referred to as Scenario 9. Scenario 9 examines the following flood protection measures:

▶ Without Long Pond weir, with Health Sciences flood protection berms, and with flood protection berms along Rennies River between Kings Bridge Road and Portugal Cove Road.

The analysis was carried out using the XSPWMM model created for the March 2, 2020 analysis. The flood protection berms upstream of Kings Bridge Road will consist of berms in the left (i.e. North) and right (i.e. South) river banks. The north berm as entered in the model, extends approximately 260 m upstream of Kings Bridge Road, and varies in height from approximately 0.1 m to 2.2 m. The south berm is shorter than the north berm, extending upstream from Kings Bridge Road roughly 58 m varying in height from 0.2 m to 0.5 m. The south berm will protect the electrical substation from flooding during a 1:100 AEP CC flood. The north berm will prevent flooding onto Winter Avenue and Kings Bridge Road, as well as onto the King George the V soccer field during flow corresponding to a 1:100 AEP CC event.

Flood protection berms were proposed for these locations during the RRCSWMP in 2014, as priority 2. The objective of the improvements proposed in the RRCSWMP were to protect all properties along Rennies River by containing flood levels in the channel. The Long Pond Weir was presented as priority 1, as constructing the weir first would reduce the flow downstream, thereby reducing the height of berms required downstream of Long Pond.



The City is moving through the Environmental Preview Report process for the Long Pond Weir. In the interim, the flood protection berms presented for this project will provide protection to the residential properties on Winter Avenue.

The expected floodplain for Scenario 9 is presented in Figure 1. As discussed in the September 17, 2019, report the model results indicated that Prince Philip Drive, north of the bridge at Rennies River is overtopped during the 1:100 AEP CC flow. To address flow over Prince Philip Drive, an earth berm could be constructed in the location indicated on Figure 1. The structure would be approximately 115 m long, and range in height up to approximately 0.6 m.



TOUNT SCIO PLACERETONNE	KEY MAP	Climate Change es (Existing s) Climate Change es (Post Berm s) s
	ST. J@	∂HN'S
EV BOAD	Rennies River Winter	Flood Mitigation: Avenue
	Fig 1:100 AEP CC Hea Berms Between K Portugal	ure 1: Ith Sciences Berms & Cings Bridge Road & Cove Road
	СВ	CL
	Page	e 1 of 3
	Drawn: SF	Date: 2021-01-20
RS	Approved: GS	Scale @ 11"x17" : 1:4,600
8	Coordinate System: NAD 1983 U Units: Meter	JTM Zone 22N
	0 25 50 100	150 200 MINICAL MEMO\203063 FIGURE 1.mrd



CNEILLY	KEY MAP	Mount Cashel Heat
STREE	A.LA	Que Vi
	2	Crescont B Hoyleste
LANE	1 Jorga	estown Fort
SHALL THE	n gwell Park St.	Fort own sh en d
A.	John's	741/39
SULERSON STREET	LEGEND	1 2- NJ 1.0, N 34
CONTRACTOR OF THE	1:100 AEP	Climate Change
	Boundarie Condition	es (Existing s)
	1:100 AEP	Climate Change
	Boundarie	es (Post Berm
	Condition	s)
A STE	Proposed	Earth Berm
ABETH		
ELILA		
CALL AND		
OBCH PLA	ST. J@	ƏHN'S
		<u> </u>
	Donnico Divor	Elead Mitigation
	Rennies River Winter	Flood Mitigation: Avenue
	Rennies River Winter	Flood Mitigation: Avenue
	Rennies River Winter Fig 1:100 AEP CC Hea	Flood Mitigation: r Avenue ure 1: lith Sciences Berms &
	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal	Flood Mitigation: r Avenue ure 1: alth Sciences Berms & Kings Bridge Road & Cove Road
	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal	Flood Mitigation: r Avenue ure 1: alth Sciences Berms & (ings Bridge Road & Cove Road
CARTASIAN ROA	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal	Flood Mitigation: r Avenue ure 1: lith Sciences Berms & (ings Bridge Road & Cove Road
ARPASIANI ROAD	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal	Flood Mitigation: r Avenue ure 1: lith Sciences Berms & Cings Bridge Road & Cove Road
ARPASANI ROAD	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal	Flood Mitigation: r Avenue ure 1: lth Sciences Berms & Cings Bridge Road & Cove Road
ARAMUE ARAMUE	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal C B Page Drawn: SF	Flood Mitigation: Avenue ure 1: Ith Sciences Berms & Cings Bridge Road & Cove Road
NE BUD AVENUE	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal C B Page Drawn: SF Checked: JB Approved: GS	Flood Mitigation: Avenue ure 1: Ith Sciences Berms & Cove Road Cove Road
NE BUD AVENUE	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal C B Page Drawn: SF Checked: JB Approved: GS	Flood Mitigation: Avenue
AVENUE AVENUE	Rennies River Winter Fig 1:100 AEP CC Hea Berms Between K Portugal C E Berms Between K Portugal C E C E C E Drawn: SF Checked: JB Approved: GS	Flood Mitigation: Avenue

20\203063.00 ENVIRONMENTAL ASSESSMENT - RENNIES RIVER\20 CAD\08 GIS\MXD\TECHNICAL MEMO\203063_FIGURE_1.mxd



20\203063.00 ENVIRONMENTAL ASSESSMENT - RENNIES RIVER\20 CAD\08 GIS\MXD\TECHNICAL MEMO\203063_FIGURE_1.

APPENDIX B

Site Photographs



Appendix B: Photo Log



Photo 1: Berm 1 – Two mallards (*Anas platyrhynchos*) in Rennies River.



Photo 3: Berm 1 – Rennies River Trail facing west.



Photo 5: Berm 2 – Black knapweed (*Centaurea nigra*) and electrical substation.



Photo 2: Berm 1 – Various shrubs and mature trees, facing east towards Kings Bridge Road.



Photo 4: Berm 2 - Rennies River looking west and fence line of electrical substation adjacent to Kings Bridge road.



Photo 6: Berm 2 - Across Rennies River towards proposed location of Berm 4.

Appendix B: Photo Log



Photo 7: Armour stone wall erosion control improvements on south side of Rennies River across from tennis courts.

APPENDIX C

Atlantic Canada Conservation Data Centre (AC CDC) Results



Rutherford, Melissa

From:	Durocher, Adam <adamdurocher@gov.nl.ca></adamdurocher@gov.nl.ca>
Sent:	August 30, 2017 3:13 PM
То:	Rutherford, Melissa
Cc:	Bryson, Ian; Sheppard, Greg
Subject:	RE: New Data Request: 2017-08-22 15:18:20
Attachments:	Map.jpg; RareFauna.xls; RareFlora.xls; RQ0623.pdf; Caveats.doc; DATA DICTIONARY.doc; herbaria.xls; RANKING.rtf

Hi Melissa,

Attached are your data request results for the HSC Berm in St. John's, Newfoundland & Labrador.

Summary: Within 5km of your point of interest, there were 759 rare animal records and 36 rare plant records found. Of the 759 rare animal records, there were 29 Ivory Gull records, 70 Red Crossbill records (both are listed as *Endangered* under both COSEWIC and our province's Endangered Species Act (ESA)), 21 Bank Swallow, 10 Barn Swallow records (*Threatened* under COSEWIC), 10 Gray-cheeked Thrush records (*Threatened* under the ESA), 17 Bobolink records (*Vulnerable* under our ESA, *Threatened* under COSEWIC), 1 Polar Bear record, 13 Harlequin Duck, 15 Rusty Blackbird, 14 Short-eared Owl records (all listed as *Special Concern* under COSEWIC, *Vulnerable* under our ESA), 2 Monarch records (*Special Concern* under our ESA), 4 Chimney Swift and 7 Common Nighthawk records (both listed as *Threatened* under both COSEWIC and our ESA). The remaining rare animal records are for species which are not on the provincial ESA or federal COSEWIC lists, and outside of Newfoundland & Labrador they are not considered globally rare.

As for the 36 rare plant records, none of these plants are COSEWIC or provincially listed, but Hump-backed Elves (*Buxbaumia minakatae*), Fernald's Chuckleypear (*Amelanchier fernaldii*) and Woodland Cudweed (*Omalotheca sylvatica*) are considered globally rare.

Secondly, a new addition to our standard data requests is the use of Expert Opinion Maps. These maps are the result of our work with species-specific experts to gather suggestions about locations where species at risk - either provincially, SARA or COSEWIC listed - may be found. While we don't have observations in our database for these species within your study area, our Expert Opinion Maps suggest that Boreal Felt Lichen is *possible*, while Newfoundland Marten and Banded Killifish are *possible*, but unlikely. Your study area is also said to be within the Barrow's Goldeneye *range*.

For more information, including a map of the area showing the locations of the rare fauna, rare flora and the area of interest, please refer to the following attached documents:

Map.jpg - shows the locations of the rare fauna, rare flora, and the 5 km buffer around the point of interest.

RareFauna.xlsx – a list of rare animal records, including their SRANK, NRANK, GRANK and habitats.

RareFlora.xlsx – a list of rare plant records, including their SRANK, NRANK, GRANK and habitats.

Data Dictionary.doc - explains the various columns in RareFauna.xlsx and RareFlora.xlsx.

Ranking.rtf - explains the S, N and GRANKS.

Herbaria.xls - A list of herbariums in case you would like to follow up on the specimens included in this request. Caveats.doc - The fine print - please read. This is also included at the end of this email. RQ0623.pdf - Invoice for the data request.

Please do not hesitate to contact me if you have any questions.

Adam Durocher Data Manager Atlantic Canada Conservation Data Centre Corner Brook, NL

709-637-2494

DATA SOURCES:

All data housed at Atlantic Canada Conservation Data Centre (ACCDC). Refer to the 'CITATION' field for data sources.

CAVEATS:

ACCDC rare taxa occurrence records are offered as a guide recognizing that the ability to find plants and animals will depend upon the season. The ACCDC makes a strong effort to verify the accuracy of all the data it obtains, generates and manages, but it will not be held responsible for inaccuracies in data that it provides.

PLEASE NOTE:

* ACCDC data is restricted for use by the specified data user only; any third party requiring data must make its own request to the ACCDC.

* Specified data users may not publish any information provided by the ACCDC or its partners without prior permission.

* To ensure the currency of the data, the ACCDC requires Data Users to destroy all copies of data 18 months after the date of receipt.

- * ACCDC data reports are restricted to that data in our Data System at the time of the request.
- * Data accuracy is qualified as to location (Accuracy) and time (Date)
- * ACCDC data reports are not to be constructed as exhaustive inventories of taxa in an area.

* The non-occupancy of a taxon cannot be inferred by its absence in an ACCDC data report.

* Museum databases, which are the basis for more accessible public databases, such as those of the ACCDC, are works in progress. Essentially, they are finding aids and dynamic data records, constructed primarily to serve scientists engaged in the continuing, active process of plant systematics and taxonomy. Ongoing additions of new collections, and frequent upgrades to the identifications of all plant specimens housed in museum herbaria, may not always be reflected, in real time, by databases such as those of the ACCDC. Specifically, the conservation status of individual species recorded in the ACCDC database may not be absolutely current. It is therefore the responsibility of the data user to contact the relevant museums directly, in order to check for the most current identifications of specimens of individual species in question. The absolute conservation status of any given species is dynamic, and subject to change over short periods of time.

From: James Churchill [mailto:james.churchill@accdc.ca]
Sent: Tuesday, August 22, 2017 12:56 PM
To: Durocher, Adam
Subject: Fwd: New Data Request: 2017-08-22 15:18:20

------ Forwarded message ------From: Apache <<u>apache@webserv2.mta.ca</u>> Date: Tue, Aug 22, 2017 at 12:18 PM Subject: New Data Request: 2017-08-22 15:18:20 To: jlchurchill@mta.ca

New Data Request:

name: Melissa Rutherford

company: CBCL Limited phone: <u>9027178487</u> email: <u>mrutherford@cbcl.ca</u> email2: <u>gregs@cbcl.ca</u> jobnum: 173056.01 area: St. John's details: HSC Berm lat: 47.570393 lon: -52.741472 comment: Please send results to the following emailsmrutherford@cbcl.caianb@cbcl.cagregs@cbcl.ca asap: standard

.....

UPDATES (www.accdc.com/en/updates.html)

December 6, 2016. <u>S-rank updates</u> December 23, 2015. <u>Database release 151223 and S-rank updates</u> November 12, 2015. <u>Updates to 100 km species lists (Data Report Section 5.0)</u> July, 2015. <u>Updated Data Request Cost Structure</u> June 10, 2015. <u>NEW - Submit Data Requests online</u> June 10, 2015. <u>Our new website is live</u> May, 2014. <u>Location Sensitive Species (Data Report Section 4.3)</u>

.....

James Churchill Data Manager Atlantic Canada Conservation Data Centre (AC CDC) james.churchill@accdc.ca P: (902) 679-6146

.....

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."



GNAME	GCOMNAME	FAMILY	Observer To	talNumber Month	Day	Year	SRANK_2015 SI	RANK_2010	NRANK GI	RANK	GeneralStatus	s COSEWIC_ST F	PROVINCIAL	SARA	DESCR_HABIT/SITE_NAME	Accuracy	SYNAME	CITATION	IDNUM
Pagophila eburnea	Ivory Gull	Laridae	Hugh Whitney	1 1		2007	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered		100		Dr. Hugh Whitney, NL Dep	or mstr1020871
Loxia curvirostra	Red Crossbill	Fringillidae		1 5	27	2000	S1S2	S2S3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered	en Pond Botanical Garden St. J	oh 100		NF Birds	mstr1007387
	Red Crossbill	Fringillidae		1 3	28	1000	\$1\$2	\$253	N5B N5N N5	G5	At Rick	Threatened	Endangered	Endangered	Pinny Park: St. John's NI	100		NE Birds	mstr1007388
	Croy Checked Thruch	Turdidaa	Howard Class	1 10	20	1999		5255 5252B		65	AL INISK	undidate (Mid Driar	Threatened	Linualiyereu		100	1		motr100/300
	Gray-Cheeked Thrush			1 IU) 1	2002	32D,3UW	3233D		G5	Secure		Findemenand	En den nene d	Oxen Polia	1000)	NF.DIIUS	mstr1000311
		Fringillidae			10	2007	5152	5253		Go	AL RISK		Endangered	Endangered		100			mstr1009311
			e Toda Boland	1 7	31	2006	SNA	SNA	N4B,N3M	G5	May be at ris	k Special Concern	Inreatened	Inreatened		100		Canadian Wildlife Service	mstr1009367
Loxia curvirostra	Red Crossbill	Fringillidae		1 5	31	2000	S1S2	\$2\$3	N5B,N5N,N5	G5	At Risk	Inreatened	Endangered	Endangered	ical Garden; Mount Scio Road; S	t., 100		NF RBA	mstr1007389
Loxia curvirostra	Red Crossbill	Fringillidae		1 4	28	2002	S1S2	\$2\$3	N5B,N5N,N5	G5	At Risk	Ihreatened	Endangered	Endangered	MUN Campus; St. John's; NL	100		Email correspondence	mstr100/390
Loxia curvirostra	Red Crossbill	Fringillidae		1 4	25	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	MUN Campus; St. John's; NL	100		NF RBA	mstr1007391
Loxia curvirostra	Red Crossbill	Fringillidae		1 4	28	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	MUN Campus; St. John's	1000)	NF.Birds	mstr1007440
Loxia curvirostra	Red Crossbill	Fringillidae		1 5	14	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	MUN Campus; St. John's	1000)	NF.Birds	mstr1007441
Loxia curvirostra	Red Crossbill	Fringillidae		1 4	17	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	MUN Campus; St. John's	1000)	NF.Birds	mstr1007442
Loxia curvirostra	Red Crossbill	Fringillidae		1 5	6	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	MUN Campus; St. John's	1000)	NF.Birds	mstr1007443
Loxia curvirostra	Red Crossbill	Fringillidae	Peter Thomas	1 11	24	2006	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	urban forest Pippy Park; St. John's	10		Canadian Wildlife Service	mstr1007371
Loxia curvirostra	Red Crossbill	Fringillidae	Todd Boland	1 11	20	2006	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	urban park Mundy Pond; St. John's	100		NF.Birds	mstr1007428
Loxia curvirostra	Red Crossbill	Fringillidae	Bruce Mactavish	12 4	11	2007	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	urban forest	1000)	Canadian Wildlife Service	mstr1009289
Loxia curvirostra	Red Crossbill	Fringillidae	Michael Parmente	5 4	13	2007	S1S2	S2S3	N5B.N5N.N5	G5	At Risk	Threatened	Endangered	Endangered	Larch Forest	1000)	Canadian Wildlife Service	mstr1009314
Euphagus carolinus	Rusty Blackbird	Icteridae	John Wells	1 5	17	2000	S2S3B SUM	S3B	N4B NI IN N4	G4	Secure	Special Concern	Vulnerable	Special Concert	Long Pond: St. John's	1000)	NE Birds	mstr1007606
	Red Crossbill	Fringillidae	Paul Linegar	1 11	10	2000	S1S2	\$253	N5B N5N N5	G5	At Rick	Threatened	Endangered	Endangered	urban forest Long Pond; St. John's	1000)	Email correspondence	mstr1007455
	Red Crossbill	Fringillidae		1 6	20	1071	S1S2	S263	NER NEN NE	05 C5	At Rick	Threatened	Endangered	Endangered	urban forest St John's	1000	0	Nost Record Card	mstr1007493
	Red Crossbill	Fringillidae	Todd Bolond	10 1	20	1971	S152	5255		05	AL NISK At Diak	Threatened	Endangered	Endangered		1000	0	Canadian Wildlife Service	motr1000288
		Fringillidae		10 4	0	2007	5152	5253		Go	AL RISK		Endangered	Endangered	European Larch	1000)	Canadian Wildlife Service	mstr1009288
Eupnagus carolinus	Rusty Blackbird	Icteridae	Brian Daizeli	1 3	18	2000	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure	Special Concern	vuinerable	Special Concert	n St. Jonn's; Fox Avenue	100	<u></u>	NatureNB	mstr1007567
Pagophila eburnea	Ivory Gull	Laridae		1 12	2 27	1999	S1N,SUM	S2N	N1B,N1N,N1	G4	Atrisk	Endangered	Endangered	Endangered	St. John's CBC;	1000)	NF.Birds	mstr1006586
Pagophila eburnea	Ivory Gull	Laridae		1 12	2 28	1999	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	St. John's CBC;	1000)	NF.Birds	mstr1006587
Pagophila eburnea	Ivory Gull	Laridae		1 1	0	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	hn's harbour and lower Waterfor	d' 1000)	NF.Birds	mstr1006588
Pagophila eburnea	Ivory Gull	Laridae		1 2	1	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	St. John's;	1000)	NF.Birds	mstr1006589
Loxia curvirostra	Red Crossbill	Fringillidae		1 3	21	2000	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	Strawberry Marsh Road; St. Joh	n's 100		NF RBA	mstr1007392
Loxia curvirostra	Red Crossbill	Fringillidae		1 5	5	1967	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	urban forest Kents Pond; St. John's	1000)	Nest Record Card	mstr1007457
Asio flammeus	Short-eared Owl	Strigidae		1 12	2 27	2002	S3B,SUM	S3B	N4B,N3N,N4	G5	Secure	Special Concern	Vulnerable	Special Concern	n unknown	1000	0	Canadian Wildlife Service.	(mstr1009255
Asio flammeus	Short-eared Owl	Strigidae	Todd Boland	1 2	25	2004	S3B.SUM	S3B	N4B,N3N,N4	G5	Secure	Special Concern	Vulnerable	Special Concern	n urban	100		Canadian Wildlife Service	mstr1009227
I oxia curvirostra	Red Crossbill	Fringillidae	Dan	1 1	2	2008	S1S2	S2S3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered	backvard feeder	1000)	Canadian Wildlife Service	mstr1009441
Ealco peregrinus subsp. a		Falconidae	Bruce Mactavish	1 10) 3	2000	S3M S2N	\$200	N3B	GATA	Sensitive	Special Concern	Vulnerable	Concern (anatum		1000)	Canadian Wildlife Service	mstr1009460
Histrionicus histrionicus		Anatidae	Didee Mactavish	1 10) <u> </u>	1070	S3B S2N SUM	S3B S2N		G4	Secure	Special Concern	Vulnerable	Special Concert	n St John's	1000	0	The Osprey, Christmas Bir	rc mstr1004643
Histrionicus histrionicus		Anatidae		1 12	20	1979	S2D, S2N, SUM	53D,52N		C4	Secure	Special Concern	Vulnerable	Special Concert		1000	0	The Osprey, Christmas Bi	c motr1005020
Histrionicus histrionicus		Analidae		1 12	20	1970	SSB, SZN,SUM	535,52N		G4	Secure		Vulnerable	Special Concert		1000	0	The Osprey, Christmas Bi	c mstr 1005050
Histrionicus histrionicus	Harlequin Duck	Anatidae		1 12	2 26	1980	S3B, S2N,SUM	S3B,S2N	N4B,N3N,N4	G4	Secure	Special Concern	Vuinerable	Special Concert	n St John's	1000	0	The Osprey, Christmas Bli	c mstr1005031
Histrionicus histrionicus	Harlequin Duck	Anatidae		1 12	2 26	1988	S3B, S2N,SUM	S3B,S2N	N4B,N3N,N4	G4	Secure	Special Concern	Vulnerable	Special Conceri	n St John's	1000	0	Am Birds, Christmas Bird (C mstr1005032
Histrionicus histrionicus	Harlequin Duck	Anatidae		1 12	2 26	1968	S3B, S2N,SUM	S3B,S2N	N4B,N3N,N4	G4	Secure	Special Concern	Vulnerable	Special Concern	n St John's	1000	0	Am Birds, Christmas Bird (C mstr1006372
Chroicocephalus ridibund	Black-headed Gull	Laridae		44 0	0	1967	S1B, S3N,SUM	S1B,S3N	N3B,N3N4N,	G5	Sensitive					10		Christmas Bird Count	mstr1016213
Charadrius vociferus	Killdeer	Charadriidae		1 0	0	1967	S3B,SUM	S2B	N5B,N4N5N,	G5	Sensitive	ndidate (Low Prior				10		Christmas Bird Count	mstr1016227
Anas acuta	Northern Pintail	Anatidae		1 0	0	1967	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016229
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	e	1 0	0	1967	S1B,SUM	S1B	N5B,N4N5N,	G5	Undetermine	d				10		Christmas Bird Count	mstr1016230
Loxia curvirostra	Red Crossbill	Fringillidae		59 0	0	1967	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered		10		Christmas Bird Count	mstr1016233
Plectrophenax nivalis	Snow Bunting	Emberizidae		7 0	0	1967	S5M,S2N	S5N	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016235
Troglodytes troglodytes	Winter Wren	Troglodytidae	9	1 0	0	1967	S3B,SUM	S3S4B	N5B	G5	Secure					10		Christmas Bird Count	mstr1016238
Certhia americana	Brown Creeper	Certhiidae		5 0	0	1968	S3	S3B	N5B.N5N.N5	G5	Secure					10		Christmas Bird Count	mstr1016247
Chroicocephalus ridibund	Black-headed Gull	Laridae		48 0	0	1968	S1B_S3N SUM	S1B S3N	N3B N3N4N	G5	Sensitive					10		Christmas Bird Count	mstr1016248
Zenaida macroura		Columbidae		3 0	0	1968	S3	S2B	N5B N5N N5	G5	Secure					10		Christmas Bird Count	mstr1016259
Plectrophenax nivalis	Show Bunting	Emberizidae		2 0	0	1900	S5M S2N	S5N	N5B N5N N5	C5	Secure					10		Christmas Bird Count	mstr1016263
	Boltod Kingfisher	Alecdinidee		2 0	0	1900				GJ CF	Secure	ata (Craup 2 Law				10		Christmas Bird Count	motr1016267
Megaceryle alcyon	Beiled Kinglisher	Alcedinidae		1 U	0	1909	S4B, S3N,SUM		NOB, NANJAN	Go	Secure	ate (Group 3, Low				10		Christmas Bird Count	mstr1010207
	Black-neaded Gull	Laridae		52 0	0	1969	STB, S3N,SUM	51B,53N	N3B,N3N4N,	G5	Sensitive					10		Christmas Bird Count	mstr1016272
Acanthis flammea		Fringillidae		480 0	0	1969	52S3B, S4N,SUI	S5	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016275
Coccothraustes vespertin	Evening Grosbeak	Fringillidae		400 0	0	1969	S4	S4B,S5N	N4B,N4N,NU	G5	Secure	Special Concern				10		Christmas Bird Count	mstr1016280
Histrionicus histrionicus	Harlequin Duck	Anatidae		4 0	0	1969	S3B, S2N,SUM	S3B,S2N	N4B,N3N,N4	G4	Secure	Special Concern	Vulnerable	Special Concerr	1	10		Christmas Bird Count	mstr1016285
Loxia curvirostra	Red Crossbill	Fringillidae		110 0	0	1969	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered		10		Christmas Bird Count	mstr1016294
Plectrophenax nivalis	Snow Bunting	Emberizidae		10 0	0	1969	S5M,S2N	S5N	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016296
Megaceryle alcyon	Belted Kingfisher	Alcedinidae		1 0	0	1970	S4B, S3N,SUM	S5B	N5B,N4N5N,	G5	Secure	ate (Group 3, Low				10		Christmas Bird Count	mstr1016300
Certhia americana	Brown Creeper	Certhiidae		4 0	0	1970	S3	S3B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016306
Chroicocephalus ridibund	Black-headed Gull	Laridae		100 0	0	1970	S1B, S3N,SUM	S1B,S3N	N3B,N3N4N,	G5	Sensitive					10		Christmas Bird Count	mstr1016307
Acanthis flammea	Common Redpoll	Fringillidae		23 0	0	1970	32S3B, S4N,SUM	S5	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016310
Coccothraustes vespertin	Evening Grosbeak	Fringillidae		220 0	0	1970	S4	S4B.S5N	N4B,N4N.NU	G5	Secure	Special Concern				10		Christmas Bird Count	mstr1016314
Accipiter aentilis	Northern Goshawk	Accipitridae		1 0	0	1970	S3	S3B	N4B,N4N5N	G5	Secure					10		Christmas Bird Count	mstr1016323
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	9	1 0	0	1970	S1B.SUM	S1B	N5B.N4N5N	G5	Undetermine	d				10		Christmas Bird Count	mstr1016325
Plectrophenax nivalis	Snow Bunting	Emberizidae		150 0	0	1970	S5M.S2N	S5N	N5B.N5N N5	G5	Secure					10		Christmas Bird Count	mstr1016332
Troglodytes troglodytes	Winter Wren	Troglodytidae	9	8 0	0	1970	S3B SUM	\$3\$4B	N5B	G5	Secure					10		Christmas Bird Count	mstr1016335
Megacervle alcvon	Belted Kingfisher	Alcedinidae		1 0	0	1071	S4B_S3N_SUM	S5B	N5B N4N5N	G5	Secure	ate (Group 3 Low				10		Christmas Bird Count	mstr1016338
Chroicocenhalus ridibund	Black-headed Cull	Laridae		27 0	0	1071	S1R S3N SUM	S1R S2N	N3R N3N/M	G5	Sonsitivo					10		Christmas Bird Count	mstr1016344
	Common Gracklo	Icteridae		1 0	0	1071	S5R S22NI SUM	210,00N	N5R NI IN NE	C5	Soouro					10		Christmae Rird Count	mstr10163/6
Coopethreustes verset	Evoning Crocheck	Fringillides		7 0	0	19/1	550,5511, 5010			00	Secure	Special Concerns				10		Christmas Diru Coulli	motr1016251
Colidria maritime	Evening Grospeak	Socionasida		7 U	0	19/1		04D,00N	N2N//D N2N//	65	Secure	Special Concern				10		Christmas Diru Count	mstr1016262
		Ering		0 0	0	19/1	SON SUM	SON	NED NEN NE	65	Secure	Threatened	Enderstand	Enderstand		10			motr1016262
	Neu Closspill			23 0	0	19/1	5152	3233		65	AL KISK	meatened	Enuangered	Endangered		10			mstr1010303
Piectropnenax nivalis	Show Bunting	∟mperizidae		0 0	0	1971	55M,S2N	55N	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	IIIST 1016365
Chroicocephalus ridibund	Black-headed Gull	Laridae		27 0	0	1972	S1B, S3N,SUM	S1B,S3N	N3B,N3N4N,	G5	Sensitive					10		Christmas Bird Count	mstr1016375
Quiscalus quiscula	Common Grackle	Icteridae		1 0	0	1972	55B,S3?N, SUN	S5B	N5B,NUN,N5	G5	Secure					10		Christmas Bird Count	mstr1016376
Acanthis flammea	Common Redpoll	Fringillidae		2 0	0	1972	52S3B, S4N,SUM	S5	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016377
Coccothraustes vespertin	Evening Grosbeak	Fringillidae		220 0	0	1972	S4	S4B,S5N	N4B,N4N,NU	G5	Secure	Special Concern				10		Christmas Bird Count	mstr1016383
Anas acuta	Northern Pintail	Anatidae		1 0	0	1972	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016394
Sphyrapicus varius	Yellow-bellied Sapsucke	Picidae		1 0	0	1972	S2B,SUM	S2B	N5B,N5M	G5	May be at ris	k				10		Christmas Bird Count	mstr1016404
Spizella arborea	American Tree Sparrow	Emberizidae		0 0	0	1973	S3B,SUM	S2B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016407
Certhia americana	Brown Creeper	Certhiidae		3 0	0	1973	S3	S3B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016413
Chroicocephalus ridibund	Black-headed Gull	Laridae		9 0	0	1973	S1B, S3N, SUM	S1B.S3N	N3B,N3N4N	G5	Sensitive					10		Christmas Bird Count	mstr1016414
Acanthis flammea	Common Redpoll	Fringillidae		4 0	0	1973	2S3B S4N SUM	S5	N5B.N5N N5	G5	Secure					10		Christmas Bird Count	mstr1016417
Coccothraustes vesnertin	Evening Grosbeak	Fringillidae		81 0	0	1973	S4	S4B S5N	N4B N4N NU	G5	Secure	Special Concern				10		Christmas Bird Count	mstr1016422
Accipiter gentilis	Northern Goshawk	Accipitridae		3 0	0	1073	S3	S3B	N4B N4N5N	G5	Secure					10		Christmas Bird Count	mstr1016435
Podilymbus podicens	Pied-hilled Grebe	Podicipedidee	a	0 0	0	1072	S1R SUM	S1B	N5R N/N5N	G5	Undeterminer	d				10		Christmas Bird Count	mstr1016437
Calidria maritima	Purple Sendning	Scolonasida		5	0	19/3		CON	NOD, NANDIN,	00	Source	u				10		Christmas Dird Court	mstr1016440
		Aloidoo		J 0	0	19/3		00N	NED MAN NE	05	Secure					10		Christmas Diru Coulli Christmas Bird Court	motr1016444
Alloa torua		Emborieit			0	19/3	SSD,SSIVI	SSE	NED NEN NE	65	Secure					10			motr1016446
Piecuophenax nivalis	Show Bunting			0	U	19/3	SOIVI,SZIN	NICC	NCD NICKLAIS	G5	Secure					10		Christmas Bird Count	IIISU 1010440
Bubo scandiacus	Snowy Owl	Strigidae		0 0	0	1973	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016447
Certhia americana	ыrown Creeper	Certhildae		U 0	0	1974	53	S3B	N5B,N5N,N5	G5	Secure					10		Christmas Bird Count	mstr1016455

GNAME	GCOMNAME	EAMILY Observer	TotalNumber Month	Dav	Vear	SRANK 2015 SRA	NK 2010		C GeneralStatus COSEWIC ST PROVINCIAL SARA DESCR HABIT/SITE NAME	Accuracy SYNAME	CITATION	
ONAME	BUILDING	TAMILT Observer		Day	1601			NAR GRAN		Accuracy STRAME		
Chroicocephaius ridibundi	Black-neaded Gull	Laridae	26 0	0	1974	S1B, S3N,SUM S	1B,53N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016456
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	111 0	0	1974	S4 S	64B,S5N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016465
Charadrius vociferus	Killdeer	Charadriidae	1 0	0	1974	S3B SUM	S2B	N5B N4N5N	G5 Sensitive ndidate (Low Prior	10	Christmas Bird Count	mstr1016472
		Anatida			4074		020			10	Christmas Bird Count	moti 1010472
Somateria spectabilis	King Elder	Analidae	0 0	0	1974	52N,50M	53IN	NUB,NUN,NU	G5 Undetermined ate (Group 3; Low	10	Christmas Bird Count	mstr 10 1047 3
Zenaida macroura	Mourning Dove	Columbidae	25 0	0	1974	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016475
Alca torda	Razorbill	Alcidae	1 0	0	1974	S3B.S3M	S3B	N5B.N4N.N5	G5 Secure	10	Christmas Bird Count	mstr1016479
Loxia curvirostra	Red Crosshill	Fringillidae	25 0	0	107/	S1S2	6263	N5B N5N N5	C5 At Pick Threatened Endangered Endangered	10	Christmas Bird Count	metr1016/80
			25 0	0	1074	0102	0200			10		11301010400
I rogiodytes trogiodytes	winter wren	I rogiodytidae	1 0	0	1974	S3B,SUM	5354B	N5B	G5 Secure	10	Christmas Bird Count	mstr1016485
Chroicocephalus ridibundu	Black-headed Gull	Laridae	11 0	0	1975	S1B, S3N,SUM S	61B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016494
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	104 0	0	1975	S4 S	64B.S5N	N4B.N4N.NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016502
Plectrophenax nivalis	Spow Bunting	Emberizidae	6 0	0	1075	S5M S2N	S5N	N5B N5N N5		10	Christmas Bird Count	mstr1016517
			0 0	0	1975	3314,3214	SJN			10		
Porzana carolina	Sora	Rallidae	1 0	0	1975	S2B,SUM	S1B	N5B,N5M	G5 Undetermined	10	Christmas Bird Count	mstr1016518
Spizella arborea	American Tree Sparrow	Emberizidae	1 0	0	1976	S3B,SUM	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016522
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	1 0	0	1976	S4B_S3N SUM	S5B	N5B N4N5N	G5 Secure ate (Group 3. Low	10	Christmas Bird Count	mstr1016523
Corthia amoricana	Brown Crooper	Corthiideo	1 0	0	1076	612, 6611,6611	C2D			10	Christmas Bird Count	motr1016529
	Blown Cleeper		1 0	0	1970	33	330			10		11501010320
Chroicocephalus ridibundi	Black-headed Gull	Laridae	4 0	0	1976	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016529
Acanthis flammea	Common Redpoll	Fringillidae	3 0	0	1976	32S3B, S4N,SUI	S5	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016532
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	317 0	0	1976	S4 5	64B S5N	N4B N4N NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016537
Accipitor contilio	Northorn Cochowk	Accipitridac	1 0	0	1076	62	C2D			10	Christman Bird Count	motr1016546
Accipiter gentilis			1 0	0	1970	33	330	IN4D,IN4INJIN,		10		11501010340
Loxia curvirostra	Red Crossbill	Fringillidae	2 0	0	1976	\$1\$2	\$2\$3	N5B,N5N,N5	G5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1016551
Chroicocephalus ridibundu	Black-headed Gull	Laridae	3 0	0	1977	S1B, S3N,SUM S	S1B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016567
Quiscalus guiscula	Common Grackle	Icteridae	2 0	0	1977	S5B.S3?N. SUN	S5B	N5B.NUN.N5	G5 Secure	10	Christmas Bird Count	mstr1016569
Coccothraustos vosportin	Evoning Grosbook	Fringillidao	00 0	0	1077	<u> </u>			CE Secure Special Concern	10	Christmas Bird Count	metr1016575
			30 0	0	1977					10	Christmas Dird Count	mstr 1010373
Histrionicus histrionicus	Harlequin Duck	Anatidae	1 0	0	1977	53B, 52N,50M 5	3B,52N	N4B,N3N,N4	G4 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1016580
Zenaida macroura	Mourning Dove	Columbidae	0 0	0	1977	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016584
Loxia curvirostra	Red Crossbill	Fringillidae	20 0	0	1977	S1S2	S2S3	N5B,N5N.N5	G5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1016591
Megaceryle alovon	Belted Kingfisher	Alcedinidae	1 0	0	1078	S4B S3N SUM	S5B	N5B N4N5N	G5 Secure ate (Group 3 Low	10	Christmas Rird Count	mstr1016601
Corthia americana		Corthildoo		0	4070		C0D	NED NEN NE		10	Christmas Dird Count	motr1016607
Ceruna americana	Drown Creeper	Certinidae	1 0	U	1978	53	53B	INDE,INDIN,IND	GO Secure	10	Christmas Bird Count	111SU 10 10007
Chroicocephalus ridibundu	Black-headed Gull	Laridae	34 0	0	1978	S1B, S3N,SUM	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016608
Quiscalus quiscula	Common Grackle	Icteridae	4 0	0	1978	S5B,S3?N. SUM	S5B	N5B,NUN.N5	G5 Secure	10	Christmas Bird Count	mstr1016610
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	145 0	0	1078	S4 0	54B \$5N	N4R N4N NU	G5 Secure Special Concern	10	Christmas Rird Count	mstr1016616
	Northern Chailes	Lapiidae		0	1970					10		motr1016607
	Normern Shrike	Laniidae	1 0	U	1978	S3N,SUM	SJIN	INDE,INDIN,IND	GO Secure	10	Christmas Bird Count	111SU 10 10027
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	10	0	1978	S1B,SUM	S1B	N5B,N4N5N,	G5 Undetermined	10	Christmas Bird Count	mstr1016629
Loxia curvirostra	Red Crossbill	Fringillidae	41 0	0	1978	S1S2	S2S3	N5B,N5N,N5	G5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1016632
Troalodytes troalodytes	Winter Wren	Troglodvtidae	1 0	0	1978	S3B.SUM	S3S4B	N5B	G5 Secure	10	Christmas Bird Count	mstr1016639
Chroicocephalus ridibundu	Black-headed Gull	Laridae	5 0	0	1979	S1B_S3N SUM	S1B S3N	N3B N3N4N	G5 Sensitive	10	Christmas Bird Count	mstr1016648
Coccethraustos vosportin	Evoning Grosboak	Eringillidao	334 0	0	1070	S4 S4	248 S5N		CC Secure Special Concern	10	Christmas Bird Count	metr1016656
	Evening Grosbeak		334 0	0	1979	34 0	000			10	Christmas Dird Count	mstr1010030
Accipiter gentilis	Northern Goshawk	Accipitridae	I U	U	1979	53	53B	IN4B,IN4INDIN,		10	Christmas Bird Count	mstr 10 10008
Plectrophenax nivalis	Snow Bunting	Emberizidae	21 0	0	1979	S5M,S2N	S5N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016676
Falco sparverius	American Kestrel	Falconidae	0 0	0	1980	S2B,SUM	S2B	N5B,N1N,N5	G5 Undetermined ate (Group 3, Low	10	Christmas Bird Count	mstr1016682
Certhia americana	Brown Creeper	Certhiidae	2 0	0	1980	S3	S3B	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1016688
Chroicocenhalus ridibundu	Black-beaded Gull	Laridae	13 0	0	1080	S1B S3N SUM	18 S3N	N3B N3N/N		10	Christmas Bird Count	mstr1016690
Consethreustee veenertin			664 0	0	1000		AD CEN			10	Christmas Dird Count	motr1016700
Coccothraustes vespertin	Evening Grosbeak	Fringilidae	664 0	0	1980	54 8	4B,55N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016700
Histrionicus histrionicus	Harlequin Duck	Anatidae	1 0	0	1980	S3B, S2N,SUM S	53B,S2N	N4B,N3N,N4	G4 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1016704
Zenaida macroura	Mourning Dove	Columbidae	0 0	0	1980	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016709
Porzana carolina	Sora	Rallidae	1 0	0	1980	S2B.SUM	S1B	N5B.N5M	G5 Undetermined	10	Christmas Bird Count	mstr1016718
Corthia amoricana	Brown Crooper	Corthiidao	2 0	0	1000	\$2	C3P			10	Christmas Bird Count	metr1016730
	Blown Creeper		2 0	0	1901		330			10		11150 1010730
Chroicocephalus ridibundi	Black-headed Gull	Laridae	62 0	0	1981	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016732
Quiscalus quiscula	Common Grackle	Icteridae	0 0	0	1981	S5B,S3?N, SUN	S5B	N5B,NUN,N5	G5 Secure	10	Christmas Bird Count	mstr1016734
Acanthis flammea	Common Redpoll	Fringillidae	2 0	0	1981	32S3B, S4N,SUI	S5	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016737
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	471 0	0	1981	<u>S4</u>	348 S5N	NAB NAN NU	65 Secure Special Concern	10	Christmas Bird Count	mstr1016744
Histrianique histrianique	Horloquin Duck	Apotidoo	1 0	0	1001				CA Sequer Special Concern Vulnerable Special Concern	10	Christmas Bird Count	motr1016740
		Analiuae	1 0	0	1901	338, 3214,30141	000,021	IN4D,IN3IN,IN4	Ge Secure Special Concern Vulnerable Special Concern	10		11150 1010749
Somateria spectabilis	King Eider	Anatidae	1 0	0	1981	S2N,SUM	S3N	NUB,NUN,NU	G5 Undetermined ate (Group 3, Low	10	Christmas Bird Count	mstr1016753
Zenaida macroura	Mourning Dove	Columbidae	3 0	0	1981	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016754
Agelaius phoeniceus	Red-winged Blackbird	Icteridae	16 0	0	1981	S1B.SUM	S1S2B	N5B.N5N.N5	G5 Sensitive	10	Christmas Bird Count	mstr1016761
Euphagus carolinus	Rusty Blackbird	Icteridae	1 0	0	1981	S2S3B SUM	S3B	NAB NI IN NA	G4 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1016764
Carthia amaricana		Carthiidee	1 0	0	1001	02000,000	000			10	Christmas Dird Count	motr1010704
			1 0	0	1982	015 000	330			10		11501010704
Chroicocephalus ridibundi	Black-headed Gull	Laridae	46 0	0	1982	S1B, S3N,SUM	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016786
Acanthis flammea	Common Redpoll	Fringillidae	3 0	0	1982	32S3B, S4N,SUI	S5	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016790
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	369 0	0	1982	S4 .5	4B.S5N	N4B.N4N.NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016796
Charadrius vociferus	Killdeer	Charadriidae	7 0	0	1082	S3R SUM	S2B	N5B N/N5N	G5 Sensitive ndidate (Low Prior	10	Christmas Rird Count	mstr1016805
	Northern Chrilt-	Lopiidoc		0	1002		CON	NED NEN NE		10	Christmas Dird Count	motr1016900
			1 0	U	1902					10		mou 1010003
Loxia curvirostra	Red Crossbill	Fringillidae	6 0	0	1982	\$152	5253	N5B,N5N,N5	GO AT KISK I hreatened Endangered Endangered	10	Christmas Bird Count	mstr1016814
Chroicocephalus ridibundu	Black-headed Gull	Laridae	25 0	0	1983	S1B, S3N,SUM	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016828
Quiscalus quiscula	Common Grackle	Icteridae	5 0	0	1983	S5B,S3?N, SUN	S5B	N5B,NUN,N5	G5 Secure	10	Christmas Bird Count	mstr1016830
Coccothraustes vesnertin	Evening Grosbeak	Fringillidae	2 0	0	1983	S4	4B.S5N	N4B N4N NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016837
Accipiter gentilie	Northern Coshowk	Accinitridae	5 0	0	1092	63	S3P	NAR NANSN	G5 Secure	10	Christmas Bird Count	mstr1016846
		Dedicine dide	J 0	0	1903		000			10		motr1016040
Fourigribus podiceps	Fieu-billed Grebe	rouicipedidae	1 0	U	1983	SIB,SUM	SIB	INOD,IN4INOIN,		10	Christmas Bird Count	111SU 10 10040
Calidris maritima	Purple Sandpiper	Scolopacidae	32 0	0	1983	S3N,SUM	S3N	N3N4B,N3N4	G5 Secure	10	Christmas Bird Count	mstr1016852
Chroicocephalus ridibundu	Black-headed Gull	Laridae	50 0	0	1984	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1016867
Acanthis flammea	Common Redpoll	Fringillidae	20 0	0	1984	32S3B, S4N,SUM	S5	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1016871
Coccothraustee vesportin	Evening Groebeak	Fringillidae	315 0	0	1094	۹٨ ٩	48 85N	NAR NAN NU	G5 Secure Special Concern	10	Christmas Rird Count	mstr1016878
Zensida macroure	Mourning Dovo	Columbidae		0	1004	C7 C	\$200N			10	Christmas Bird Court	metr1016999
				0	1984	00	020			10		msu 1010000
Accipiter gentilis	Northern Goshawk	Accipitridae	2 0	0	1984	S3	S3B	N4B,N4N5N,	G5 Secure	10	Christmas Bird Count	mstr1016890
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	10	0	1984	S1B,SUM	S1B	N5B,N4N5N,	G5 Undetermined	10	Christmas Bird Count	mstr1016894
Calidris maritima	Purple Sandpiper	Scolopacidae	6 0	0	1984	S3N.SUM	S3N	N3N4B,N3N4	G5 Secure	10	Christmas Bird Count	mstr1016899
Loxia curvirostra	Red Crossbill	Fringillidae	51 0	0	1984	S1S2	S2S3	N5B N5N N5	G5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1016900
	Red winged Pleakhind	Interidad	2 ^	0	1004		\$1\$2D		C5 Sancitiva	10	Christman Dird Count	metr1016002
			3 0	U	1984	SID,SUM	01020			10		1150 10 10902
Buteo lagopus	Rougn-legged Hawk	Accipitridae	2 0	0	1984	5253	53B	N5B,N5N,N5	Go Secure	10	Christmas Bird Count	mstr1016905
Plectrophenax nivalis	Snow Bunting	Emberizidae	15 0	0	1984	S5M,S2N	S5N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1016908
Megaceryle alcvon	Belted Kingfisher	Alcedinidae	2 0	0	1985	S4B, S3N, SUM	S5B	N5B,N4N5N,	G5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1016915
Bucephala albeola	Bufflehead	Anatidae	1 0	0	1985	S2N SUM	S1S2N	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1016923
Chroicocephalus ridibundu	Black-headed Cull	Laridae	. 0	0	1085	S1R_S3N SUM	18 S3N	N3R N3N/N	G5 Sensitive	10	Christmas Bird Count	mstr1016025
	Common Crocklo			0	1005		SED	NEP NI IN NE		10	Christmas Dird Count	mstr1016029
			0 0	U	1985	550,55 (IN, 5UIV				10		
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	505 0	0	1985	S4 S	64B,S5N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1016938
Tringa melanoleuca	Greater Yellowlegs	Scolopacidae	0 0	0	1985	S3B, S4M S	64B,S5M	N5B,N4N,N5	G5 Secure	10	Christmas Bird Count	mstr1016944
Charadrius vociferus	Killdeer	Charadriidae	1 0	0	1985	S3B,SUM	S2B	N5B,N4N5N,	G5 Sensitive ndidate (Low Prior	10	Christmas Bird Count	mstr1016949
Larus fuscus	Lesser Black-backed Gi	Laridae	1 0	0	1985	S3N.SUM	S3N	NUN.N4N5M	G5 Secure	10	Christmas Bird Count	mstr1016950
Anas platyrhynchos	Mallard	Anatidae	0 0	0	1085	S3R SUM	S3B	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1016951
		Columbidae	0 0	0	1900	000,00101	000			10		motr1046050
zenalua macroura	wourning Dove	Columbiase	ı 0	U	1985	53	32B	CVI,VICVI, DCVI		10	Uninsumas Bird Count	111511 10 10933

GNAME	GCOMNAME	FAMILY	Observer TotalNumber Month	Dav	Year	SRANK 2015 SRAN	K 2010	NRANK GRAN	GeneralStatus COSEWIC ST PROVINCIAL SARA DESCR HABIT/SITE NAME Accur	acy SYNAME	CITATION	IDNUM
	Northern Coshawk	Accinitridae	6 0		1085	63	S3B			10	Christmas Bird Count	mstr1016055
Area aguta	Northern Disteil	Accipitidae	0 0		1905		000			10	Christmas Bird Count	mstr1016056
Anas acuta	Northern Pintali	Anatidae	1 U	J U	1985	S3B,SUM	53B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1016956
Seiurus aurocapilla	Ovenbird	Parulidae	0 0	0 0	1985	S3B,SUM	S5B	N5B,N5M	S Secure	10	Christmas Bird Count	mstr1016958
Calidris maritima	Purple Sandpiper	Scolopacidae	3 0	0 C	1985	S3N,SUM	S3N	N3N4B,N3N4	5 Secure	10	Christmas Bird Count	mstr1016963
Loxia curvirostra	Red Crossbill	Fringillidae	13 0	n 0	1985	S1S2 S	\$2\$3	N5B N5N N5	5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1016964
Rutoo lagonus	Rough logged Howk	Accipitridao	1 0		1005	<u> </u>	C3B		E Souro	10	Christmas Bird Count	mstr1016066
			1 0	0	1905	3233	33B			10		115010000
Plectrophenax nivalis	Snow Bunting	Emberizidae	12 0	0	1985	S5M,S2N	S5N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1016969
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	4 0	0 0	1986	S4B, S3N,SUM	S5B	N5B,N4N5N,	5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1016979
Certhia americana	Brown Creeper	Certhiidae	4 0	0 C	1986	S3	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1016988
Chroicocephalus ridibundu	Black-headed Gull	Laridae	42 0	D 0	1986	S1B_S3N_SUMS1	B S3N	N3B N3N4N	5 Sensitive	10	Christmas Bird Count	mstr1016990
A septhia flammaa					1000		0.5			10	Christmas Bird Count	motr1016002
Acanthis hammea	Common Reapon	Fringillidae	38 0	J U	1980	283B, 54N,50P	30		Secure	10	Christmas Bird Count	mstr 1016993
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	436 0	0 0	1986	S4S4	B,S5N	N4B,N4N,NU	5 Secure Special Concern	10	Christmas Bird Count	mstr1017000
Larus fuscus	Lesser Black-backed G	it Laridae	1 0	0 C	1986	S3N,SUM	S3N	NUN,N4N5M	5 Secure	10	Christmas Bird Count	mstr1017010
Accipiter gentilis	Northern Goshawk	Accipitridae	3 0	0 C	1986	S3	S3B	N4B.N4N5N.	5 Secure	10	Christmas Bird Count	mstr1017014
Calidris maritima	Purple Sandniner	Scolonacidae	0 0	n 0	1086	S3N SLIM	S3N	N3N/B N3N/	5 Secure	10	Christmas Bird Count	mstr1017021
	Red Creashill	Fringillidae	10 0		1006		2000		E At Disk Threatened Endengered	10	Christmas Bird Count	motr1017021
		Fringillidae	10 0	0	1900	5152 3	5233			10	Christmas Bird Count	IIIsti 1017022
Agelaius phoeniceus	Red-winged Blackbird	Icteridae	4 0	0 0	1986	S1B,SUM S	1S2B	N5B,N5N,N5	5 Sensitive	10	Christmas Bird Count	mstr1017024
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 0	0 0	1986	S2S3	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017027
Euphagus carolinus	Rusty Blackbird	Icteridae	1 0	0 0	1986	S2S3B.SUM	S3B	N4B.NUN.N4	4 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1017028
Plectrophenax nivalis	Spow Bunting	Emborizidao	2 0		1086	S5M S2N	951 95N	N5B N5N N5	5 Secure	10	Christmas Bird Count	mstr1017030
			2 0		1000					10	Ohristmas Dird Count	mst 1017050
Faico sparverius	American Kestrei	Faiconidae	1 0	J 0	1987	S2B,SUM	S2B	N5B,N1N,N5	5 Undetermined ate (Group 3, Low	10	Christmas Bird Count	mstr1017040
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	2 0	0 0	1987	S4B, S3N,SUM	S5B	N5B,N4N5N,	5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1017043
Certhia americana	Brown Creeper	Certhiidae	0 0	0 0	1987	S3	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017049
Chroicocephalus ridibundu	Black-headed Gull	Laridae	32 0	0	1987	S1B_S3N SUM S1	B S3N	N3B N3N4N	5 Sensitive	10	Christmas Bird Count	mstr1017050
	Common Grackle	Icteridae	1		1007	S5R S22NL SLIM	\$5R	N5R NUN NE		10	Christmas Bird Count	metr1017052
					1907		DOCH			10		
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	721 0	J 0	1987	S4 S4	B,S5N	N4B,N4N,NU	5 Secure Special Concern	10	Christmas Bird Count	mstr101/061
Falco rusticolus	Gyrfalcon	Falconidae	1 0	0 0	1987	S2S3N,SUM S	2S3N	N4N5B,N5N,	5 Secure	10	Christmas Bird Count	mstr1017067
Somateria spectabilis	King Eider	Anatidae	5 0	0 0	1987	S2N.SUM	S3N	NUB,NUN.NU	5 Undetermined ate (Group 3, Low	10	Christmas Bird Count	mstr1017072
	Lesser Black-backed G	u Laridae	1 0) <u> </u>	1087	S3N SUM	S3N	NUN NAN5M	5 Secure	10	Christmas Bird Count	mstr1017073
	Mollord	Apotidos			1007		C2D	NED NEN NE		10	Christman Dird Court	motr1017074
Anas platyrnynchos		Anatidae	3 0	<u> </u>	1987	53B,5UM	৩৩৪	USB,NSN,NS		10	Christmas Bird Count	msu 1017074
Zenaida macroura	Mourning Dove	Columbidae	1 0	0 0	1987	S3	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017077
Accipiter gentilis	Northern Goshawk	Accipitridae	5 0	0 0	1987	S3	S3B	N4B,N4N5N,	5 Secure	10	Christmas Bird Count	mstr1017079
Calidris maritima	Purple Sandpiper	Scolonacidae	1 0) 0	1087	S3N SUM	S3N	N3N4B N3N4	5 Secure	10	Christmas Bird Count	mstr1017084
	Red Crossbill	Fringillidaa			1007	Q1Q0 (5262	NSR NEN NE	5 At Rick Threatened Endangered Endangered	10	Christmas Bird Count	metr1017085
		Interidue			1907		1000			10		mou 1017000
Ageialus phoeniceus	Rea-winged Blackbird	Icteridae	1 0	0	1987	STB,SUM S	152B	NSB,NSN,NS	Sensitive	10	Christmas Bird Count	111ST 1017086
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 0	00	1987	S2S3	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017089
Plectrophenax nivalis	Snow Bunting	Emberizidae	43 0	0 0	1987	S5M,S2N	S5N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017092
Bubo scandiacus	Snowy Owl	Strigidae	7 0	0	1987	S3N SUM	SNA	N5B N5N N5	5 Secure	10	Christmas Bird Count	mstr1017093
Spizelle erheree	Amorican Trac Sporrow	v Emborizidoo	0 0		1007		60D			10	Christmas Bird Count	motr1017104
Spizella arborea	American Tree Sparrow		0 0	0	1988	S3B,SUM	52B			10	Christmas Bird Count	mstr1017104
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	1 0	0 0	1988	S4B, S3N,SUM	S5B	N5B,N4N5N,	5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1017107
Chroicocephalus ridibundu	Black-headed Gull	Laridae	93 0	0 C	1988	S1B, S3N,SUM S1	B,S3N	N3B,N3N4N,	5 Sensitive	10	Christmas Bird Count	mstr1017115
Acanthis flammea	Common Redpoll	Fringillidae	0 0	0 0	1988	2S3B. S4N.SU	S5	N5B.N5N.N5	5 Secure	10	Christmas Bird Count	mstr1017118
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	2279 0		1088	SA SA	R S5N		5 Secure Special Concern	10	Christmas Bird Count	mstr1017127
	Evening Grosbeak	Fringiniuae	2219 0	0	1900		D,33N			10	Christmas Bird Count	11ISU 1017 127
Larus fuscus	Lesser Black-backed G	il Laridae	1 0	J 0	1988	S3N,SUM	S3N	NUN,N4N5M	5 Secure	10	Christmas Bird Count	mstr101/136
Anas platyrhynchos	Mallard	Anatidae	3 0	0 0	1988	S3B,SUM	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017138
Zenaida macroura	Mourning Dove	Columbidae	4 0	0 0	1988	S3	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017140
Acciniter gentilis	Northern Goshawk	Accinitridae	10 0	n 0	1988	53	S3B	N4B N4N5N	5 Secure	10	Christmas Bird Count	mstr1017142
	Northern Dinteil	Apotidoo	0		1000		COD			10	Christmas Bird Count	motr1017142
	Northern Pintali	Anatidae	0 0	0	1988	S3B,SUM	53B	N5B,N5N,N5	is Secure	10	Christmas Bird Count	mstr1017143
Lanius excubitor	Northern Shrike	Laniidae	3 0	0 0	1988	S3N,SUM	S3N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017144
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	0 0	0 0	1988	S1B,SUM	S1B	N5B,N4N5N,	5 Undetermined	10	Christmas Bird Count	mstr1017145
Buteo lagopus	Rough-legged Hawk	Accipitridae	3 0	0 0	1988	S2S3	S3B	N5B.N5N.N5	5 Secure	10	Christmas Bird Count	mstr1017152
Bubo scandiacus	Spowar Owl	Strigidae	12 0		1088	S3N SUM	SNA	N5B N5N N5		10	Christmas Bird Count	mstr1017156
Calidria funcicallia	White rumped Candnin	o Coolonacidae	0 0		1000					10	Christmas Bird Count	motr1017160
	white-rumped Sandpip	e Scolopacidae	0 0	J U	1988	53171	NICC	INSB,INSIVI		10	Christmas Bird Count	mstr 1017 161
Troglodytes troglodytes	Winter Wren	Troglodytidae	1 0	0 0	1988	S3B,SUM S	3S4B	N5B	5 Secure	10	Christmas Bird Count	mstr1017165
Anthus rubescens	American Pipit	Motacillidae	1 0	0 0	1989	S3B, S4M S3	B,S5M	N5B,N4N,N5	5 Secure	10	Christmas Bird Count	mstr1017173
Anas americana	American Wigeon	Anatidae	1 0	0	1989	S3B SUM	S3B	N5B N5N N5	5 Undetermined	10	Christmas Bird Count	mstr1017175
Mogaconylo aleyon	Roltod Kingfishor	Alcodinidao	1 0		1080		SEB		5 Segure ato (Croup 2 Low	10	Christmas Bird Count	metr1017176
		Apoticia	4 0		1909		000			10	Christman Dird Could	motr1017170
ivieianitta nigra	DIACK SCOTER	Anatidae	1 0	J ()	1989	SZB, SZN, SUM S2B,	53NI,S1N	N4B,N4N	bo Secure	10	Christmas Bird Count	mstr101/1/8
Chroicocephalus ridibundu	Black-headed Gull	Laridae	71 0	0 0	1989	S1B, S3N,SUM S1	B,S3N	N3B,N3N4N,	5 Sensitive	10	Christmas Bird Count	mstr1017185
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	110 0	0 0	1989	S4 S4	B,S5N	N4B,N4N,NU	5 Secure Special Concern	10	Christmas Bird Count	mstr1017197
Histrionicus histrionicus	Harlequin Duck	Anatidae	1 0) 0	1989	S3B S2N SUM	B.S2N	N4B N3N N4	4 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1017202
	Lesser Blook booked O		1 0		1000		\$3NI			10	Christmas Dird Count	metr1017207
	Lesser Diack-Dacked G				1909					10		motr1017207
Anas platyrnynchos	waiiaro	Anatidae	5 0	J 0	1989	S3B,SUM	33B	NOB,NON,NO	bo Secure	10	Christmas Bird Count	IIISU 1017208
∠enaida macroura	Mourning Dove	Columbidae	12 0	0	1989	S3	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017212
Fulmarus glacialis	Northern Fulmar	Procellariidae	1 0	0 0	1989	S1B,S1M S1	B,S5M	N5B,N5N,N5	5 Sensitive	10	Christmas Bird Count	mstr1017214
Accipiter gentilis	Northern Goshawk	Accipitridae	5 0	0 0	1989	S3	S3B	N4B.N4N5N	5 Secure	10	Christmas Bird Count	mstr1017215
Anas acuta	Northern Pintail	Anatidae	1 0) <u> </u>	1080	S3R SLIM	S3B	N5B N5N N5	5 Secure	10	Christmas Bird Count	mstr1017218
Dodilymbus no-liters	Diad billed Oreks	Dodicina dista			1909		C1D	NED NAMEN	25 Undetermined	10	Christman Dird Count	matr1017200
roullymbus podiceps		Poulcipedidae	1 0	J U	1989	SIB,SUM	31B	INOD, IN4INOIN,		10	Christmas Bird Count	
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 0	0 0	1989	S2S3	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017227
Bubo scandiacus	Snowy Owl	Strigidae	1 0	0 0	1989	S3N,SUM	SNA	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017230
Anthus rubescens	American Pipit	Motacillidae	1 0	0 0	1990	S3B, S4M S3	B,S5M	N5B,N4N.N5	5 Secure	10	Christmas Bird Count	mstr1017242
Medaceryle alovon	Belted Kingfisher	Alcedinidae	2 0) 0	1000	S4B S3N SUM	S5B	N5B N4N5N	S Secure ate (Group 3 Low	10	Christmas Bird Count	mstr1017246
Corthia area mission		Conthild	2 0		1990		000	NED MEN NE		10	Christman Dird Court	motr1017050
Ceruna americana	Brown Creeper	Certhildae	1 0	0	1990	53	SSB	NDB,NDN,ND	Secure	10	Christmas Bird Count	11ISU 1017252
Chroicocephalus ridibundu	Black-headed Gull	Laridae	79 0	0	1990	S1B, S3N,SUM S1	B,S3N	N3B,N3N4N,	5 Sensitive	10	Christmas Bird Count	mstr1017254
Quiscalus quiscula	Common Grackle	Icteridae	0 0	0 0	1990	S5B,S3?N, SUN	S5B	N5B,NUN,N5	5 Secure	10	Christmas Bird Count	mstr1017256
Acanthis flammea	Common Redpoll	Fringillidae	2 0) (1990	2S3B S4N SUM	S5	N5B N5N N5	5 Secure	10	Christmas Bird Count	mstr1017259
Coccetbrauctos vosportin	Evening Greebeek	Fringillidaa	701 0		1000	CA CA	B SEN		5 Secure Special Concern	10	Christmas Bird Count	metr1017266
Comptania and the		Ametician			1990	04 54				10		motr1017200
Somateria spectabilis	rking ⊨laer	Anatidae	20	J ()	1990	SZN,SUM	JUN	NUB,NUN,NU	Do Undetermined ate (Group 3, LOW	10	Christmas Bird Count	mstr101/2//
Larus fuscus	Lesser Black-backed G	i Laridae	2 0	0 0	1990	S3N,SUM	S3N	NUN,N4N5M	5 Secure	10	Christmas Bird Count	mstr1017278
Anas platyrhynchos	Mallard	Anatidae	21 0	0 0	1990	S3B.SUM	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017280
Zenaida macroura	Mourning Dove	Columbidae	3 0) 0	1000	S3	S2B	N5B N5N N5	5 Secure	10	Christmas Bird Count	mstr1017284
	Northorn Cochevel	Accinitrides	0 0		1000	62	C2D	NAD NANEN		10	Christmas Bird Count	metr1017296
	Northern Goshawk	Accipitidae	4 0		1990	33	000	NICO NICO NICO		10		
Circus cyaneus	Northern Harrier	Accipitridae	1 0	0	1990	S3B,SUM S	53?B	N5B,N4N	5 Secure	10	Christmas Bird Count	mstr101/28/
Anas acuta	Northern Pintail	Anatidae	2 0	0	1990	S3B,SUM	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017289
Calidris maritima	Purple Sandpiper	Scolopacidae	15 0	0 0	1990	S3N.SUM	S3N	N3N4B,N3N4	5 Secure	10	Christmas Bird Count	mstr1017295
	Red Crosshill	Frindillidae	Q 0) 0	1000	S1S2 4	5253	N5B N5N N5	5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1017296
	Pod winged Bleekkind	lotoridae			4000		1920	NED NEN NE	S Sonsitivo	10	Christmas Dird Count	metr1017200
	Neu-wingen Blackbird		1 0		1990		102D			10		1115U 1017299
Asio tiammeus	Snort-eared Owl	Strigidae	2 0	J 0	1990	S3B,SUM	53B	N4B,N3N,N4	Secure Special Concern Vulnerable Special Concern	10	Unristmas Bird Count	mstr101/305
Plectrophenax nivalis	Snow Bunting	Emberizidae	5 0	0 0	1990	S5M,S2N	S5N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1017306
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	0 0	0 0	1991	S4B, S3N,SUM	S5B	N5B,N4N5N,	5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1017318

GNAME	GCOMNAME	FAMILY Observer T	otalNumber Month	Dav	Year	SRANK 2015 SRA	NK 2010	NRANK GF	RANK	GeneralStatus COSEWIC ST PROVINCIAL SARA	DESCR HABIT/SITE NAME Accu	racy SYNAME	CITATION	IDNUM
Chroicocephalus ridibundu	Black-headed Gull	Laridae	70 (0 0	1991	S1B, S3N, SUM S	1B.S3N	N3B.N3N4N	G5	Sensitive		10	Christmas Bird Count	mstr1017325
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	432 (0 0	1991	S4 S	4B S5N	N4B N4N NU	G5	Secure Special Concern		10	Christmas Bird Count	mstr1017339
Ealco rusticolus	Gyrfalcon	Falconidae	1 (0 0	1001	5253N SLIM	5253N	N/N5B N5N	G5	Secure		10	Christmas Bird Count	mstr1017345
Somatoria spostabilis	King Eidor	Apatidao	1 (1001		\$200N		C5			10	Christmas Bird Count	mstr1017350
		Analidae			1991		SON		G5	Course		10	Christmas Bird Count	metr1017350
	Lesser Black-backed G		3 (0 0	1991		5311		Go	Secure		10	Christmas Bird Count	IIISU 1017351
		Analidae	39 (0 0	1991	53B,50M	53B		Go	Secure		10	Christmas Bird Count	mstr 1017352
Zenalda macroura	Mourning Dove	Columbidae	1 (0 0	1991	\$3	S2B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017356
Accipiter gentilis	Northern Goshawk	Accipitridae	7 (0 0	1991	S3	S3B	N4B,N4N5N,	G5	Secure		10	Christmas Bird Count	mstr1017359
Anas acuta	Northern Pintail	Anatidae	21 (0 0	1991	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017360
Lanius excubitor	Northern Shrike	Laniidae	1 (0 0	1991	S3N,SUM	S3N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017361
Seiurus aurocapilla	Ovenbird	Parulidae	1 (0 0	1991	S3B,SUM	S5B	N5B,N5M	G5	Secure		10	Christmas Bird Count	mstr1017362
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	1 (0 0	1991	S1B,SUM	S1B	N5B,N4N5N,	G5	Undetermined		10	Christmas Bird Count	mstr1017363
Calidris maritima	Purple Sandpiper	Scolopacidae	2 (0 0	1991	S3N,SUM	S3N	N3N4B,N3N4	G5	Secure		10	Christmas Bird Count	mstr1017367
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 (0 0	1991	S2S3	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017372
Avthva fuliqula	Tufted Duck	Anatidae	2 (0 0	1991	S1N.SUM	SNA	N1N.NUM	G5	/agrant/ Accidenta		10	Christmas Bird Count	mstr1017378
Anthus rubescens	American Pipit	Motacillidae	1 (0 0	1992	S3B_S4MS	3B S5M	N5B N4N N5	G5	Secure		10	Christmas Bird Count	mstr1017386
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	0 (<u> </u>	1992	S4B_S3N SUM	S5B	N5B N4N5N	G5	Secure ate (Group 3 Low		10	Christmas Bird Count	mstr1017391
Spizella passerina	Chipping Sparrow	Emberizidae	0 (1002	\$2\$3B \$UM	\$2B	N5B N5M	G5	Secure		10	Christmas Bird Count	mstr1017306
Spizella passellila	Black baseded Cull				1992				GJ	Consitius		10	Christmas Bird Count	metr1017390
	Diack-neaded Guil			0 0	1992		010,001	NED NEN NE	GS	Sensitive		10	Christmas Bird Count	metr1017397
					1992	5255D, 54N,50F			GS	Secure Creatial Concern		10	Christmas Bird Count	11ISU 1017401
	Evening Grosbeak	Fringillidae	1 (0 0	1992	54 5	4B,55N	N4B,N4N,NU	G5	Secure Special Concern		10	Christmas Bird Count	mstr1017408
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic	3 (0 0	1992	S3B,S3M,S3N	S3B	N3N4B,N3N4	G5	Sensitive		10	Christmas Bird Count	mstr1017414
Falco rusticolus	Gyrfalcon	Falconidae	1 (0 0	1992	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure		10	Christmas Bird Count	mstr1017415
Larus fuscus	Lesser Black-backed Gu	Laridae	2 (0 0	1992	S3N,SUM	S3N	NUN,N4N5M	G5	Secure		10	Christmas Bird Count	mstr1017420
Anas platyrhynchos	Mallard	Anatidae	25 (0 0	1992	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017421
Zenaida macroura	Mourning Dove	Columbidae	0 (0 0	1992	S3	S2B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017423
Accipiter gentilis	Northern Goshawk	Accipitridae	15 (0 0	1992	S3	S3B	N4B,N4N5N,	G5	Secure		10	Christmas Bird Count	mstr1017425
Anas acuta	Northern Pintail	Anatidae	19 (0 0	1992	S3B,SUM	S3B	N5B,N5N.N5	G5	Secure		10	Christmas Bird Count	mstr1017427
Calidris maritima	Purple Sandpiper	Scolopacidae	77 (0 0	1992	S3N SUM	S3N	N3N4B_N3N4	G5	Secure		10	Christmas Bird Count	mstr1017432
Plectrophenax nivalis	Snow Bunting	Emberizidae	4 (0 0	1992	S5M S2N	S5N	N5B N5N N5	G5	Secure		10	Christmas Bird Count	mstr1017438
Rubo scandiacue	Snowy Owl	Strigidae	3		1002	S3N SLIM	SNA	N5B N5N N5	G5	Secure		10	Christmas Bird Count	mstr1017439
Carthia amaricana	Brown Crooper	Certhiidaa			1992	C2	C1N/A C2D	NED NEN NE	00	Secure		10	Christmas Dird Count	mstr1017450
Ceruna americana	Blook brack I C II				1993		33D 10 001		G5	Secure		10	Christmas Bird Count	mot-1017409
	Diack-neaded Gull		23 (1993	STB, S3N,SUM S	10,53N	N3B,N3N4N,	G5	Sensitive Coourse - On a sick On a sum		10	Christmas Bird Count	mstr 1017400
Coccotnraustes vespertin	Evening Grosbeak	ringiliae	44 (0	1993	54 S	45,55N	N4B,N4N,NU	G5	Secure Special Concern		10	Christmas Bird Count	mstr101/4/2
Somateria spectabilis	King Elder	Anatidae	1 (0	1993	S2N,SUM	S3N	NUB,NUN,NU	G5	Undetermined ate (Group 3, Low		10	Christmas Bird Count	mstr101/484
Larus fuscus	Lesser Black-backed G	Laridae	0 0	0	1993	S3N,SUM	S3N	NUN,N4N5M	G5	Secure		10	Christmas Bird Count	mstr1017485
Aythya affinis	Lesser Scaup	Anatidae	2 (0 0	1993	S3N,SUM	S2N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017486
Anas platyrhynchos	Mallard	Anatidae	64 (0 0	1993	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017488
Zenaida macroura	Mourning Dove	Columbidae	17 (0 0	1993	S3	S2B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017489
Accipiter gentilis	Northern Goshawk	Accipitridae	10 (0 0	1993	S3	S3B	N4B,N4N5N,	G5	Secure		10	Christmas Bird Count	mstr1017491
Circus cvaneus	Northern Harrier	Accipitridae	1 (0 0	1993	S3B.SUM	S3?B	N5B.N4N	G5	Secure		10	Christmas Bird Count	mstr1017492
Anas acuta	Northern Pintail	Anatidae	39 (0 0	1993	S3B SUM	S3B	N5B N5N N5	G5	Secure		10	Christmas Bird Count	mstr1017493
Calidris maritima	Purple Sandniner	Scolonacidae	22 (0 0	1003	S3N SUM	S3N	N3N4R N3N4	G5	Secure		10	Christmas Bird Count	mstr1017499
	Pod wingod Blackbird	Ictoridao	0 (1002	S1R SLIM	00N		C5	Sonsitivo		10	Christmas Bird Count	mstr1017501
Ageialus prioeniceus	Reu-willgeu Blackbilu	Accipitridae			1993	51D,30101	0102D		G5	Secure		10	Christmas Bird Count	metr1017501
Buleo lagopus				0 0	1993	5253 05M 00N	SSD OFN		GS	Secure		10	Christmas Bird Count	IIISU 1017504
Plectrophenax nivalis	Show Bunting	Emberizidae	1 (0 0	1993	S5M,S2N	S5N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017508
Bubo scandiacus	Snowy Owl	Strigidae	0 (0 0	1993	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017509
Anthus rubescens	American Pipit	Motacillidae	1 (0 0	1994	S3B, S4M S	3B,S5M	N5B,N4N,N5	G5	Secure		10	Christmas Bird Count	mstr1017522
Anas americana	American Wigeon	Anatidae	2 (0 0	1994	S3B,SUM	S3B	N5B,N5N,N5	G5	Undetermined		10	Christmas Bird Count	mstr1017524
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	1 (0 0	1994	S4B, S3N,SUM	S5B	N5B,N4N5N,	G5	Secure ate (Group 3, Low		10	Christmas Bird Count	mstr1017527
Certhia americana	Brown Creeper	Certhiidae	1 (0 0	1994	S3	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017535
Dendroica tigrina	Cape May Warbler	Parulidae	1 (0 0	1994	S2B,SUM	S2B	N5B,N5M	G5	Secure		10	Christmas Bird Count	mstr1017537
Chroicocephalus ridibundu	Black-headed Gull	Laridae	9 (0 0	1994	S1B, S3N,SUM S	1B.S3N	N3B.N3N4N.	G5	Sensitive		10	Christmas Bird Count	mstr1017539
Acanthis flammea	Common Redpoll	Fringillidae	8 (0 0	1994	2S3B_S4N_SU	S5	N5B N5N N5	G5	Secure		10	Christmas Bird Count	mstr1017542
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	481 (n n	1994	S4 S	48 S5N	N4B N4N NU	G5	Secure Special Concern		10	Christmas Bird Count	mstr1017548
	Lossor Black backed G	Laridao	1 (1004		\$2NI		C5	Secure		10	Christmas Bird Count	mstr1017556
Authur offinio	Lesser Diack-Dacked G	Apotidoo			1994		SON		GJ CF	Secure		10	Christmas Bird Count	metr1017550
	Mallard	Analidae	2 (1994				GS	Secure		10	Christmas Bird Count	metr1017557
Anas platymynchos	Mourning Davis				1994	300,3UM	00D	NED NEN NE	GS	Secure		10	Christmas Bird Count	motr1017550
	Nouthing Dove		0 (1994	53	02B		G5			10		msu 1017559
Accipiter gentilis	Northern Goshawk	Accipitridae	8 (0	1994	53	53B	N4B,N4N5N,	G5	Secure		10	Christmas Bird Count	mstr1U1/561
Anas acuta	Northern Pintail	Anatidae	59 (0 0	1994	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017562
Lanius excubitor	Northern Shrike	Laniidae	1 (0	1994	S3N,SUM	S3N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017563
Calidris maritima	Purple Sandpiper	Scolopacidae	33 (0	1994	S3N,SUM	S3N	N3N4B,N3N4	G5	Secure		10	Christmas Bird Count	mstr1017571
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 (0 0	1994	S2S3	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017575
Plectrophenax nivalis	Snow Bunting	Emberizidae	1 (0 0	1994	S5M,S2N	S5N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017579
Anas americana	American Wigeon	Anatidae	1 (0 0	1995	S3B,SUM	S3B	N5B,N5N,N5	G5	Undetermined		10	Christmas Bird Count	mstr1017593
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	1 (0 0	1995	S4B, S3N,SUM	S5B	N5B,N4N5N,	G5	Secure ate (Group 3, Low		10	Christmas Bird Count	mstr1017594
Chroicocephalus ridibundu	Black-headed Gull	Laridae	14 (0 0	1995	S1B, S3N,SUM S	1B,S3N	N3B,N3N4N.	G5	Sensitive		10	Christmas Bird Count	mstr1017602
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	1 (0 0	1995	S4 S	4B.S5N	N4B,N4N,NU	G5	Secure Special Concern		10	Christmas Bird Count	mstr1017613
Pagophila eburnea	Ivory Gull	Laridae	2 (0 0	1995	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk Endangered Endangered Endangere	ed	10	Christmas Bird Count	mstr1017621
Larus fuscus	Lesser Black-backed G	Laridae	3 (0 0	1995	S3N SUM	S3N	NUN N4N5M	G5	Secure		10	Christmas Bird Count	mstr1017622
Anas nlatvrhynchos	Mallard	Anatidae	141		1005	S3B SUM	S3B	N5R N5N N5	G5	Secure		10	Christmas Bird Count	mstr1017623
Acciniter contilio	Northern Coshowly	Accinitridae) اتت م		1005	C2	S3B		00	Secure		10	Christmas Bird Count	mstr1017625
	Northorn Harrier	Accipitridae			1990		630D	NED NAM	00	Secure		10	Christman Dird Count	mstr1017626
		Apatidae			1995		SOLD	NED NEN NE	65	Sourc		10	Christmes Dird Count	motr1017607
Anas acuta			143 (1995	SSB,SUM	000		G5			10		
Lanius excubitor	Northern Shrike	Laniidae	3 (0	1995	S3N,SUM	S3N	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr101/628
Calidris maritima	Purple Sandpiper	Scolopacidae	24 (0 0	1995	S3N,SUM	S3N	N3N4B,N3N4	G5	Secure		10	Christmas Bird Count	mstr1017634
Buteo lagopus	Rough-legged Hawk	Accipitridae	0 (0 0	1995	S2S3	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017638
Aythya fuligula	Tufted Duck	Anatidae	3 (0 0	1995	S1N,SUM	SNA	N1N,NUM	G5	/agrant/ Accidenta		10	Christmas Bird Count	mstr1017645
Spizella arborea	American Tree Sparrow	Emberizidae	1 (0 0	1996	S3B,SUM	S2B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017656
Anas americana	American Wideon	Anatidae	1 (0 0	1996	S3B.SUM	S3B	N5B,N5N.N5	G5	Undetermined		10	Christmas Bird Count	mstr1017657
Megacervle alcvon	Belted Kingfisher	Alcedinidae	0 (0 0	1996	S4B, S3N, SUM	S5B	N5B.N4N5N	G5	Secure ate (Group 3, Low		10	Christmas Bird Count	mstr1017659
Spizella passerina	Chipping Sparrow	Emberizidae	1 (0 0	1996	S2S3B SUM	S2B	N5B N5M	G5	Secure		10	Christmas Bird Count	mstr1017667
Chroicocenhalus ridibundu	Black-headed Gull	Laridae	63	0 0	1996	S1B_S3N SUM_S	1B S3N	N3B N3N4N	G5	Sensitive		10	Christmas Bird Count	mstr1017668
Acanthis flammon	Common Rednoll	Fringillidae	26		1006	22228 24N 211	S5	NSB NEN NE	C5	Secure		10	Christmas Bird Count	mstr1017673
	Evening Creebeek	Fringillidae	20 (61 (1990	ο ο ο ο ο ο ο ο ο ο ο ο ο ο			00	Secure Special Concern		10	Christmas Dird Count	mstr1017691
Loruo fuocuo					1990	04 D	NICO, UH		65			10	Christmas Diru Count	motr1017600
	Lesser Black-backed Gl				1996	S3N,SUM	SUN	NUN,N4N5M	G5	Secure		10	Christmas Bird Count	mstr 1017692
Ayınya amınıs	Lesser Scaup	Anatidae	1 (0	1996	S3N,SUM	52N	NSB,NSN,N5	G5	Secure		10	Christmas Bird Count	mstr101/693
Anas platyrhynchos	Mallard	Anatidae	174 (0	1996	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017695
Zenaida macroura	Mourning Dove	Columbidae	38 (U 0	1996	S3	S2B	N5B,N5N,N5	G5	Secure		10	Christmas Bird Count	mstr1017697

GNAME	GCOMNAME	FAMILY Observer	CotalNumber Month	Dav	Year	SRANK 2015 SRA	NK 2010	NRANK GRA	K GeneralStatus COSEWIC ST PROVINCIAL SARA DESCR HABIT/SITE NAME	Accuracy SYNAME	CITATION	IDNUM
Accipiter gentilis	Northern Goshawk	Accipitridae	15 (0 0	1006	63	S3B			10	Christmas Bird Count	mstr1017600
	Northern Distail		100		1990		000			10	Christmas Dird Count	msu 1017099
Anas acuta	Northern Pintali	Analidae	120 (0 0	1990	53B,50M	53B	INSB,INSIN,INS	Go Secule	10	Christmas Bird Count	mstr1017700
Lanius excubitor	Northern Shrike	Laniidae	4 (0 0	1996	S3N,SUM	S3N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017701
Calidris maritima	Purple Sandpiper	Scolopacidae	14 (0 0	1996	S3N,SUM	S3N	N3N4B,N3N4	G5 Secure	10	Christmas Bird Count	mstr1017706
Anas americana	American Wideon	Anatidae	0 (0 0	1997	S3B SUM	S3B	N5B N5N N5	G5 Undetermined	10	Christmas Bird Count	mstr1017722
Corthia amoricana	Brown Crooper	Corthiideo	1 (1007	000,000M	60D	NED NEN NE		10	Christmas Bird Count	motr1017720
	Brown Creeper		1 (0 0	1997	33	330			10		1115011111111
Chroicocephalus ridibundi	Black-headed Gull	Laridae	90 (0 0	1997	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1017733
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	15 (0 0	1997	S4 S	64B,S5N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1017743
Larus fuscus	Lesser Black-backed G	ι Laridae	4 (0 0	1997	S3N.SUM	S3N	NUN.N4N5M	G5 Secure	10	Christmas Bird Count	mstr1017752
		Anatidae	1 (0 0	1007	S3N SUM	S2N	N5B N5N N5		10	Christmas Bird Count	mstr1017753
Ayurya amins	Lessel Scaup				1997		000			10	Christmas Dird Count	1115ti 1017755
Anas platyrhynchos	Mallard	Anatidae	230 (0 0	1997	S3B,SUM	S3B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017754
Zenaida macroura	Mourning Dove	Columbidae	0 (0 0	1997	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017757
Accipiter gentilis	Northern Goshawk	Accipitridae	13 (0 0	1997	S3	S3B	N4B.N4N5N.	G5 Secure	10	Christmas Bird Count	mstr1017759
Anas acuta	Northern Pintail	Anatidae	202 (0 0	1007	S3B SUM	S3B	N5B N5N N5		10	Christmas Bird Count	mstr1017760
			1		1007		CON			10	Christmas Bird Count	motr1017761
	Northern Shrike		1	0 0	1997	3314,30141	5311			10	Christmas Bird Count	
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	1 (0 0	1997	S3M, S2N	S2M	N3B	G4T4 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1017762
Alca torda	Razorbill	Alcidae	1 (0 0	1997	S3B,S3M	S3B	N5B,N4N,N5	G5 Secure	10	Christmas Bird Count	mstr1017766
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 (0 0	1997	\$2\$3	S3B	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1017771
Diastrophonov nivelio	Show Bunting	Emborizidaa	1 (1007	SEM SON	CEN	NED NEN NE		10	Christmas Bird Count	motr1017776
Plectrophenax nivalis		Emperizidae	1	0 0	1997	551VI,521N	SOIN ON IA			10		
Bubo scandiacus	Snowy Owl	Strigidae	4 0	0 0	1997	S3N,SUM	SNA	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017778
Aythya fuligula	Tufted Duck	Anatidae	1 (0 0	1997	S1N,SUM	SNA	N1N,NUM	G5 /agrant/ Accidenta	10	Christmas Bird Count	mstr1017781
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	5 (0 0	1998	S4B_S3N SUM	S5B	N5B N4N5N	G5 Secure ate (Group 3 Low	10	Christmas Bird Count	mstr1017792
Corthia amoricana	Brown Crooper	Corthiidaa	2		1000	612, 0011,00111	C2D			10	Christmas Bird Count	motr1017900
	Blown Creeper		2 (0 0	1990	33	330			10		
Unroicocephalus ridibundi	Black-headed Gull	Laridae	64 (U 0	1998	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N,	GD SENSITIVE	10	Christmas Bird Count	mstr1017803
Acanthis flammea	Common Redpoll	Fringillidae	0 (0 0	1998	32S3B, S4N,SUN	S5	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017807
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	213 (0 0	1998	S4 S	64B,S5N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1017816
Ardea herodias	Great Blue Heron	Ardeidae	0 (0 0	1008	S2B SUM	S2B	N5B N3N N5	G5 Secure	10	Christmas Bird Count	mstr1017820
Charadrine vaciferer	Killdoor	Charadriidaa	1 1		1000		SOP		C5 Sonsitivo ndidato /Low Prior	10	Christmas Dird Count	metr1017026
			I (U U	1998	33D,3UIVI	J2D	INJD, IN4INJN,		10		
Larus fuscus	Lesser Black-backed G	l Laridae	1 (0	1998	S3N,SUM	S3N	NUN,N4N5M	G5 Secure	10	Christmas Bird Count	mstr1017827
Aythya affinis	Lesser Scaup	Anatidae	0 (0 0	1998	S3N,SUM	S2N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017828
Anas platvrhynchos	Mallard	Anatidae	299 (0 0	1998	S3B SUM	S3B	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1017830
Zenaida mocrouro	Mourning Dovo	Columbidae	15 (1000	62	SOP			10	Christmas Bird Count	metr1017831
	North and Control in				1998	33	02D			10		
Accipiter gentilis	Northern Goshawk	Accipitridae	9 (0 0	1998	\$3	53B	N4B,N4N5N,	GD Secure	10	Christmas Bird Count	mstr1017833
Anas acuta	Northern Pintail	Anatidae	283	0 0	1998	S3B,SUM	S3B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017834
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	1 (0 0	1998	S3M, S2N	S2M	N3B	G4T4 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1017837
Podilymbus podicops	Pied-hilled Grobo	Podicinedidae	1 (1000	S1R SLIM	S1R	N5R NANEN	G5 Undetermined	10	Christmas Bird Count	mstr1017838
			I (1998			NED MAN NE		10		mou 1017000
Alca torda	Razorbill	Alcidae	1 (0 0	1998	S3B,S3M	S3B	N5B,N4N,N5	G5 Secure	10	Christmas Bird Count	mstr1017842
Aythya fuligula	Tufted Duck	Anatidae	2 (0 0	1998	S1N,SUM	SNA	N1N,NUM	G5 /agrant/ Accidenta	10	Christmas Bird Count	mstr1017852
Anas americana	American Wigeon	Anatidae	2 (0 0	1999	S3B.SUM	S3B	N5B.N5N.N5	G5 Undetermined	10	Christmas Bird Count	mstr1017864
Megaceryle alcyon	Belted Kingfisher		3 (1000	SAB SON SUM	\$5B	N5B N4N5N	C5 Secure ate (Group 3 Low	10	Christmas Bird Count	mstr1017867
	Beileu Kinglisher	Arcedinidae	3 (1999				OS Secure are (Group 5, Low	10	Christmas Bird Count	111Sti 1017607
Melanitta nigra	Black Scoter	Anatidae	1 (0 0	1999	S2B,S2N,SUM S2E	3,S3M,S1N	N4B,N4N	G5 Secure	10	Christmas Bird Count	mstr1017869
Chroicocephalus ridibund	Black-headed Gull	Laridae	77 (0 0	1999	S1B, S3N,SUM S	\$1B,S3N	N3B,N3N4N,	G5 Sensitive	10	Christmas Bird Count	mstr1017872
Certhia americana	Brown Creeper	Certhiidae	2 (0 0	1999	S3	S3B	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1017876
Bucenhala albeola	Bufflebead	Anatidae	1 (0 0	1000	S2N SLIM	\$1\$2N	N5B N5N N5		10	Christmas Bird Count	mstr1017877
	Dullielleau		1		1999		050			10	Christmas Bird Count	111SU 1017077
Quiscalus quiscula	Common Grackle	Icteridae	0 (0 0	1999	55B,53?N, 5UN	22R	IN5B,INUIN,IN5	G5 Secure	10	Christmas Bird Count	mstr1017880
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	13 (0 0	1999	S4 S	64B,S5N	N4B,N4N,NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1017891
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic	9 (0 0	1999	S3B,S3M,S3N	S3B	N3N4B,N3N4	G5 Sensitive	10	Christmas Bird Count	mstr1017896
Larus fuscus	Lesser Black-backed G	u Laridae	2 (0	1999	S3N SUM	S3N	NUN N4N5M	G5 Secure	10	Christmas Bird Count	mstr1017902
	Mellard	Anotidae	240		1000		620			10	Christmas Bird Count	motr1017004
Anas platymynchos	Mallard	Analidae	240 (0 0	1999	53B,50M	53B		G5 Secure	10	Christmas Bird Count	mstr1017904
Zenaida macroura	Mourning Dove	Columbidae	14 0	0 0	1999	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017906
Accipiter gentilis	Northern Goshawk	Accipitridae	5 (0 0	1999	S3	S3B	N4B,N4N5N,	G5 Secure	10	Christmas Bird Count	mstr1017908
Circus cyaneus	Northern Harrier	Accipitridae	1 (0 0	1999	S3B SUM	S3?B	N5B N4N	G5 Secure	10	Christmas Bird Count	mstr1017909
	Northorn Dintail	Anatidao	240 (1000	S2R SLIM	S2B	NER NEN NE		10	Christmas Bird Count	metr1017010
			249	0 0	1999	330,3010	330			10		1115011017910
Lanius excubitor	Northern Shrike	Laniidae	1 (0 0	1999	S3N,SUM	S3N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr101/911
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	1 (0 0	1999	S3M, S2N	S2M	N3B	G4T4 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1017913
Buteo lagopus	Rough-legged Hawk	Accipitridae	1 (0 0	1999	S2S3	S3B	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1017919
Avthya fuliqula	Tuffed Duck	Anatidae	1 (0 0	1000	S1N SUM	SNA	N1N NUM	G5 /agrant/ Accident:	10	Christmas Bird Count	mstr1017926
		Anatidao			1999		COP		C5 Undetermined	10	Christmas Dird Count	metr1017027
Anas americana	American wigeon		2 (U U	2000	S3B,SUM	03B	NJCR, NCN, NC		10	Christmas Bird Count	msu 1017937
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	1 (0	2000	S4B, S3N,SUM	S5B	N5B,N4N5N,	Go Secure ate (Group 3, Low	10	Christmas Bird Count	mstr101/940
Melanitta nigra	Black Scoter	Anatidae	2 (0 0	2000	S2B,S2N,SUM S2E	3,S3M,S1N	N4B,N4N	G5 Secure	10	Christmas Bird Count	mstr1017942
Chroicocephalus ridibundu	Black-headed Gull	Laridae	56 (0 0	2000	S1B. S3N SUM	S1B.S3N	N3B.N3N4N	G5 Sensitive	10	Christmas Bird Count	mstr1017945
Certhia americana	Brown Creener	Certhiidae	Δ (0 0	2000	\$3	S3B	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1017950
Aconthis flormers	Common Dodroll	Eringillidee	115		2000		SCD SE	NED NENI NE		10	Christmas Dird Count	metr1017057
			110 (0 0	2000	2330, 34N,3Uľ	33			10		
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	208 (0	2000	<u>S4</u>	54B,S5N	N4B,N4N,NU	60 Secure Special Concern	10	Christmas Bird Count	mstr101/96/
Pagophila eburnea	Ivory Gull	Laridae	1 (0 0	2000	S1N,SUM	S2N	N1B,N1N,N1	G4 At risk Endangered Endangered Endangered	10	Christmas Bird Count	mstr1017975
Larus fuscus	Lesser Black-backed G	ι Laridae	6 (0 0	2000	S3N.SUM	S3N	NUN,N4N5M	G5 Secure	10	Christmas Bird Count	mstr1017976
Avthva affinis	Lesser Scaup	Anatidae	1 (0 0	2000	S3N SUM	S2N	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1017977
Anas platurburshas	Mallard	Anatidao	110		2000		S3P			10	Christman Dird Count	metr1017079
			440 (U U	2000	33D,3UIVI	000	CVI, NIGN, DUN		10		
Zenalda macroura	Mourning Dove	Columbidae	31 (0	2000	S3	S2B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017981
Accipiter gentilis	Northern Goshawk	Accipitridae	3 (0 0	2000	S3	S3B	N4B,N4N5N,	G5 Secure	10	Christmas Bird Count	mstr1017983
Anas acuta	Northern Pintail	Anatidae	318 (0 0	2000	S3B.SUM	S3B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1017985
Lanius excubitor	Northern Shrike	Laniidae	2 (0 0	2000	S3N SUM	S3N	N5B N5N N5	G5 Secure	10	Christmas Bird Count	mstr1017987
			<u>د</u> (2000		COM		VITA Constitue Constra Vulnership Constra (mature)	10		motr1017000
raico peregrinus subsp. a	Peregrine Falcon	raiconidae	1 (0	2000	53M, S2N	52M	N3B	5414 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1017989
Calidris maritima	Purple Sandpiper	Scolopacidae	65 0	00	2000	S3N,SUM	S3N	N3N4B,N3N4	G5 Secure	10	Christmas Bird Count	mstr1017993
Loxia curvirostra	Red Crossbill	Fringillidae	0 (0 0	2000	S1S2	S2S3	N5B,N5N,N5	G5 At Risk Threatened Endangered Endangered	10	Christmas Bird Count	mstr1017994
Avthya fuliqula	Tufted Duck	Anatidae	6 (0 0	2000	S1N SUM	SNA	N1N NI IM	G5 /agrant/ Accident:	10	Christmas Rird Count	mstr1018007
Troglodytoo troglodytoo		Tradadutidaa			2000		011/1 02040			10	Christmas Dird Court	motr1019010
Troglodytes troglodytes	winter wren	noglodylidae	1 (0 0	2000	S3B,SUM	3354B	NOR		10	Christmas Bird Count	111SU 1010012
Anthus rubescens	American Pipit	Motacillidae	0 (0	2001	S3B, S4M S	53B,S5M	N5B,N4N,N5	G5 Secure	10	Christmas Bird Count	mstr1018021
Anas americana	American Wigeon	Anatidae	4 (0 0	2001	S3B,SUM	S3B	N5B,N5N,N5	G5 Undetermined	10	Christmas Bird Count	mstr1018023
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	10 (0 0	2001	S4B S3N SUM	S5B	N5B N4N5N	G5 Secure ate (Group 3 Low	10	Christmas Bird Count	mstr1018025
Chroiceaenhalus ridihund		Laridao	65		2001			N2D N2NIANI		10	Christmas Dird Count	motr1010020
Chroicocephaius ridibund	Diack-neaded Gull		00 (0 0	2001	STB, SSN, SUM S	010,03N	INSE,INSIN4IN,		10		
Certhia americana	Brown Creeper	Certhildae	1 (0	2001	S3	S3B	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1018034
Bucephala albeola	Bufflehead	Anatidae	1 (0 0	2001	S2N,SUM	S1S2N	N5B,N5N,N5	G5 Secure	10	Christmas Bird Count	mstr1018035
Acanthis flammea	Common Redpoll	Fringillidae	1 (0 0	2001	32S3B. S4N SUM	S5	N5B.N5N.N5	G5 Secure	10	Christmas Bird Count	mstr1018041
Coccothraustes vosportin	Evening Grosbook	Fringillidae	103		2001	Q/ Q/	SAR SEN	NAR NAN NU	G5 Secure Special Concern	10	Christmas Bird Count	mstr1018052
Ardon bergelin		Ardoidac	130		2001					10		motr1010002
Aruea nerodias	Great Blue Heron	Ardeidae	U (U U	2001	SZB,SUM	97R	INDE,INJIN,N5		10	Christmas Bird Count	msu 1018050
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic	2 (0 0	2001	S3B,S3M,S3N	S3B	N3N4B,N3N4	G5 Sensitive	10	Christmas Bird Count	mstr1018057
Somateria spectabilis	King Eider	Anatidae	0 (0 0	2001	S2N,SUM	S3N	NUB,NUN,NU	G5 Undetermined ate (Group 3, Low	10	Christmas Bird Count	mstr1018063
Larus fuscus	Lesser Black-backed G	Laridae	4 (0 0	2001	S3N SUM	S3N	NUN N4N5M	G5 Secure	10	Christmas Bird Count	mstr1018064
		Apotidoc			2001		CON			10		motr101000-
Ayunya animis	Lesser Scaup	Analuae	i (<u> </u>	2001	SJN,SUM	SZIN	CN, NCN, ACN	GD DECUIE	10	Christmas Bird Count	

GNAME	GCOMNAME	FAMILY Ob	erver TotalNumber Month	Dav	Year	SRANK 2015 SRA	NK 2010	NRANK GRAN	GeneralStatus COSEWIC ST PROVINCIAL SARA DESCR HABIT/SITE NAME Acc	racy SYNAME	CITATION	IDNUM
Anas platyrhynchos	Mallard	Anatidae	/10 0	0	2001	S3B SUM	S3B	N5B N5N N5		10	Christmas Bird Count	mstr1018068
			419 0	0	2001	000,000	000			10	Christmas Did Count	matra040074
Zenalda macroura	Nourning Dove	Columbidae	6 0	0	2001	53	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018071
Accipiter gentilis	Northern Goshawk	Accipitridae	2 0	0	2001	S3	S3B	N4B,N4N5N,	S5 Secure	10	Christmas Bird Count	mstr1018073
Anas acuta	Northern Pintail	Anatidae	243 0	0	2001	S3B,SUM	S3B	N5B,N5N,N5	S5 Secure	10	Christmas Bird Count	mstr1018074
Lanius excubitor	Northern Shrike	Laniidae	3 0	0	2001	S3N SUM	S3N	N5B N5N N5	35 Secure	10	Christmas Bird Count	mstr1018075
Ealco peregrinus subsp. a	Peregrine Falcon	Ealconidae	1 0	0	2001	S3M S2N	S2M	N3B (TA Sensitive Special Concern Vulnerable Concern (apatum/t	10	Christmas Bird Count	mstr1018076
Calidria maritima		Caslanasidas	40 0	0	2001		02M			10	Christmas Dird Count	motr1010000
		Scolopacidae	40 0	0	2001	53N,50M	SON	IN3IN4D,IN3IN4		10		IIIsti 1016060
Alca torda	Razorbill	Alcidae	1 0	0	2001	S3B,S3M	S3B	N5B,N4N,N5	35 Secure	10	Christmas Bird Count	mstr1018081
Aythya fuligula	Tufted Duck	Anatidae	7 0	0	2001	S1N,SUM	SNA	N1N,NUM	35 /agrant/ Accidenta	10	Christmas Bird Count	mstr1018092
Anthus rubescens	American Pipit	Motacillidae	1 0	0	2002	S3B, S4M S	3B,S5M	N5B,N4N,N5	S5 Secure	10	Christmas Bird Count	mstr1018102
Anas americana	American Wigeon	Anatidae	2 0	0	2002	S3B SUM	S3B	N5B N5N N5	35 Undetermined	10	Christmas Bird Count	mstr1018104
Magaganyla alayan	Poltod Kingfishor	Aleedinidee	2 0	0	2002		SED	NED NAMEN		10	Christmas Bird Count	motr1019106
Chasics such along width under		Alceuli liude	<u> </u>	0	2002				So Secure are (Group 5, Low	10	Christmas Dird Count	motra0404040
Chroicocephalus holbundi	Black-fieaded Gull	Landae	17 0	0	2002	51B, 53N, 50M 5	DIB,SSIN	IN3B,IN3IN4IN,		10	Christmas Bird Count	mstr1018110
Certhia americana	Brown Creeper	Certhiidae	3 0	0	2002	S3	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018116
Quiscalus quiscula	Common Grackle	lcteridae	1 0	0	2002	S5B,S3?N, SUN	S5B	N5B,NUN,N5	35 Secure	10	Christmas Bird Count	mstr1018120
Acanthis flammea	Common Redpoll	Fringillidae	14 0	0	2002	32S3B, S4N,SUM	S5	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018123
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	173 0	0	2002	S4 S	54B S5N	N4B N4N NU	5 Secure Special Concern	10	Christmas Bird Count	mstr1018128
Phalacrocoray carbo	Great Cormorant	Phalacrocoracic	0 0	0	2002	S3B S3M S3N	\$3B		25 Sansitiva	10	Christmas Bird Count	metr1018133
			0 0	0	2002		330	INSIN4D,INSIN4		10		115010101033
Larus fuscus	Lesser Black-backed G	l Laridae	4 0	0	2002	S3N,SUM	S3N	NUN,N4N5M	5 Secure	10	Christmas Bird Count	mstr1018141
Aythya affinis	Lesser Scaup	Anatidae	2 0	0	2002	S3N,SUM	S2N	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018142
Anas platyrhynchos	Mallard	Anatidae	415 0	0	2002	S3B,SUM	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018145
Zenaida macroura	Mourning Dove	Columbidae	59 0	0	2002	S3	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018147
Accipiter gentilis	Northern Goshawk	Accipitridae	1 0	0	2002	\$3	S3B	N4B N4N5N	35 Secure	10	Christmas Bird Count	mstr1018149
	Northorn Dintail	Anatidao	205 0	0	2002	S2R SLIM	S3B			10	Christmas Bird Count	metr1018151
		Folconidae	233 0	0	2002		COD		ITA Consistivo Consorn Vulnorable Consorn (anatum/t	10	Christmas Dird Count	motr1019150
raico peregrinus subsp. a		raiconidae	0 0	U	2002	SSIVI, SZIN	SZIVI	NOB (Sensitive Special Concern Vulnerable Concern (anatum/f	10		
Calidris maritima	Purple Sandpiper	Scolopacidae	12 0	0	2002	S3N,SUM	S3N	N3N4B,N3N4	5 Secure	10	Christmas Bird Count	mstr1018156
Aythya fuligula	Tufted Duck	Anatidae	11 0	0	2002	S1N,SUM	SNA	N1N,NUM	65 /agrant/ Accidenta	10	Christmas Bird Count	mstr1018165
Anthus rubescens	American Pipit	Motacillidae	1 0	0	2003	S3B, S4M S	3B,S5M	N5B,N4N,N5	5 Secure	10	Christmas Bird Count	mstr1018175
Anas americana	American Wideon	Anatidae	8 0	0	2003	S3B.SUM	S3B	N5B.N5N.N5	5 Undetermined	10	Christmas Bird Count	mstr1018177
Megaceryle alovon	Relted Kingfisher	Alcedinidae	2 O	0	2000	SAB S3N SLIM	S5R	N5R N/N5N	S Secure ate (Group 3 Low	10	Christmas Bird Count	mstr1018170
Chroiceann halve rid			<u> </u>	0	2003			NOD, NHINON,	So Constitue	10	Christmas Dird Court	motr1010173
Chiroicocephaius ridibundi	Diack-neaded Gull	Landae	42 0	0	2003	STB, S3N, SUM S	018,53N	N3B,N3N4N,	bo Sensitive	10	Christmas Bird Count	
Quiscalus quiscula	Common Grackle	Icteridae	1 0	0	2003	S5B,S3?N, SUN	S5B	N5B,NUN,N5	35 Secure	10	Christmas Bird Count	mstr1018188
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	34 0	0	2003	S4 S	64B,S5N	N4B,N4N,NU	5 Secure Special Concern	10	Christmas Bird Count	mstr1018196
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic	6 0	0	2003	S3B,S3M,S3N	S3B	N3N4B,N3N4	35 Sensitive	10	Christmas Bird Count	mstr1018201
Larus fuscus	Lesser Black-backed G	i Laridae	4 0	0	2003	S3N SUM	S3N	NUN N4N5M	5 Secure	10	Christmas Bird Count	mstr1018208
		Anotidoo		0	2000		SON			10	Christmas Bird Count	motr1010200
Ayunya animis		Analidae	<u> </u>	0	2003	53N,50M	52IN			10		11150 10 10209
Anas platyrhynchos	Mallard	Anatidae	422 0	0	2003	S3B,SUM	S3B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018212
Zenaida macroura	Mourning Dove	Columbidae	2 0	0	2003	S3	S2B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018213
Accipiter gentilis	Northern Goshawk	Accipitridae	3 0	0	2003	S3	S3B	N4B,N4N5N,	35 Secure	10	Christmas Bird Count	mstr1018215
Anas acuta	Northern Pintail	Anatidae	188 0	0	2003	S3B.SUM	S3B	N5B.N5N.N5	35 Secure	10	Christmas Bird Count	mstr1018216
Calidris maritima	Purple Sandniner	Scolonacidae	150 0	0	2003	S3N SUM	S3N			10	Christmas Bird Count	metr1018220
		Otvivide	45 0	0	2003				So Secure Creatial Caracerra Multicerable Creatial Caracerra	10	Christmas Bird Count	mstr1010220
Asio flammeus	Short-eared Owi	Strigidae	1 0	0	2003	S3B,SUM	S3B	N4B,N3N,N4	5 Secure Special Concern Vulnerable Special Concern	10	Christmas Bird Count	mstr1018227
Aythya fuligula	Tufted Duck	Anatidae	10 0	0	2003	S1N,SUM	SNA	N1N,NUM	5 /agrant/ Accidenta	10	Christmas Bird Count	mstr1018230
Anas americana	American Wigeon	Anatidae	10 0	0	2004	S3B,SUM	S3B	N5B,N5N,N5	35 Undetermined	10	Christmas Bird Count	mstr1018242
Megacervle alcvon	Belted Kinafisher	Alcedinidae	2 0	0	2004	S4B, S3N,SUM	S5B	N5B.N4N5N.	35 Secure ate (Group 3. Low	10	Christmas Bird Count	mstr1018244
Chroicocephalus ridibundu	Black-headed Gull	Laridae	108 0	0	2004	S1B_S3N_SUMS	S1B S3N	N3B N3N4N	S Sensitive	10	Christmas Bird Count	mstr1018248
Carthia amaricana	Brown Crooper	Carthiidaa	100 0	0	2004		62D			10	Christmas Bird Count	motr1010240
			2 0	0	2004	33	336			10		11150 1018232
Acanthis flammea	Common Redpoll	Fringillidae	12 0	0	2004	52S3B, S4N,SUM	\$5	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018258
Coccothraustes vespertin	Evening Grosbeak	Fringillidae	180 0	0	2004	S4 S	64B,S5N	N4B,N4N,NU	5 Secure Special Concern	10	Christmas Bird Count	mstr1018266
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic	9 0	0	2004	S3B,S3M,S3N	S3B	N3N4B,N3N4	35 Sensitive	10	Christmas Bird Count	mstr1018272
Larus fuscus	Lesser Black-backed G	i Laridae	10 0	0	2004	S3N.SUM	S3N	NUN.N4N5M	35 Secure	10	Christmas Bird Count	mstr1018279
Avthva affinis	Lesser Scaup	Anatidae	4 0	0	2004	S3N SUM	S2N	N5B N5N N5	S Secure	10	Christmas Bird Count	mstr1018280
	Mallard	Anatidao	424 0	0	2004		62R			10	Christmas Bird Count	motr1010200
		Analiuae	434 0	0	2004	338,3010	335			10		11150 1018283
Zenalda macroura	Mourning Dove	Columbidae	1 0	0	2004	53	S2B	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018286
Accipiter gentilis	Northern Goshawk	Accipitridae	7 0	0	2004	S3	S3B	N4B,N4N5N,	35 Secure	10	Christmas Bird Count	mstr1018288
Anas acuta	Northern Pintail	Anatidae	346 0	0	2004	S3B,SUM	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018289
Lanius excubitor	Northern Shrike	Laniidae	1 0	0	2004	S3N,SUM	S3N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018290
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	1 0	0	2004	\$3M, \$2N	S2M	N3B C	T4 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1018293
Calidris maritima	Purple Sandniner	Scolonacidae	<u>.</u> 0	0	2004	S3N SUM	S3N	N3N4R N3N4	S Secure	10	Christmas Bird Count	mstr1018297
		Apotidae		0	2004		CNIA		No lograph Appident	10	Christmas Dird Coull	motr1010207
		Analiquae	/ 0	U	2004	STIN,SUIVI	SINA			10		
Anthus rubescens	American Pipit	Motacillidae	0 0	0	2005	S3B, S4M S	3B,S5M	N5B,N4N,N5	5 Secure	10	Christmas Bird Count	mstr1018319
Anas americana	American Wigeon	Anatidae	10 0	0	2005	S3B,SUM	S3B	N5B,N5N,N5	5 Undetermined	10	Christmas Bird Count	mstr1018321
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	2 0	0	2005	S4B, S3N,SUM	S5B	N5B,N4N5N,	S5 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1018323
Chroicocephalus ridibundu	Black-headed Gull	Laridae	108 0	0	2005	S1B, S3N,SUM S	51B,S3N	N3B,N3N4N.	S5 Sensitive	10	Christmas Bird Count	mstr1018327
Certhia americana	Brown Creeper	Certhiidae	2 0	0	2005	S3	S3B	N5B N5N N5	S5 Secure	10	Christmas Bird Count	mstr1018333
Acanthis flammea	Common Rednoll	Frindillidae	12 0	0	2005	2S3B S4N SUM	85	N5R N5N N5	35 Secure	10	Christmas Bird Count	mstr1018339
Cocothrouston voctortin	Evening Creebeek	Fringillidaa	100 0	0	2005	C/ 0			5 Secure Special Concorn	10	Christmas Dird Count	metr1019247
Dholo are a survey b		Dhalaar		0	2005					10		motra040050
	Great Cormorant	Phalacrocoracic	9 0	0	2005	238,23M,23N	SJB	N3N4B,N3N4	bo Sensitive	10	Unristmas Bird Count	INST 1018353
Larus fuscus	Lesser Black-backed G	i Laridae	10 0	0	2005	S3N,SUM	S3N	NUN,N4N5M	35 Secure	10	Christmas Bird Count	mstr1018360
Aythya affinis	Lesser Scaup	Anatidae	4 0	0	2005	S3N,SUM	S2N	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018361
Anas platyrhynchos	Mallard	Anatidae	434 0	0	2005	S3B,SUM	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018364
Zenaida macroura	Mourning Dove	Columbidae	1 0	0	2005	S3	S2B	N5B N5N N5	35 Secure	10	Christmas Bird Count	mstr1018367
Accipiter gentilie	Northern Coshowk	Accinitridae	7 0	0	2005	63	S3R		S Secure	10	Christmas Bird Count	mstr1018360
		Anotida		0	2003		000			10	Christmas Dird Coull	motr1040270
Anas acuta	Northern Pintail	Anatidae	346 0	0	2005	S3B,SUM	53B	NSB,NSN,NS		10	Unristmas Bird Count	mstr1018370
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	1 0	0	2005	S3M, S2N	S2M	N3B C	14 Sensitive Special Concern Vulnerable Concern (anatum/t	10	Christmas Bird Count	mstr1018372
Calidris maritima	Purple Sandpiper	Scolopacidae	47 0	0	2005	S3N,SUM	S3N	N3N4B,N3N4	35 Secure	10	Christmas Bird Count	mstr1018376
Calidris alba	Sanderling	Scolopacidae	0 0	0	2005	S3M	S4N	N3B,N4N5N,	5 Secure	10	Christmas Bird Count	mstr1018383
Plectrophenax nivalis	Snow Bunting	Emberizidae	0 0	0	2005	S5M S2N	S5N	N5B N5N N5	S5 Secure	10	Christmas Bird Count	mstr1018386
		Anatidao	7 0	0	2005		SNIA		Source Councer Secure S	10	Christmas Bird Count	metr1018300
		Analide		0	2005					10		matr1010390
Anas americana	American Wigeon	Anatidae	4 0	0	2006	S3B,SUM	SJB	N5B,N5N,N5		10	Unristmas Bird Count	mstr1018405
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	2 0	0	2006	S4B, S3N,SUM	S5B	N5B,N4N5N,	55 Secure ate (Group 3, Low	10	Christmas Bird Count	mstr1018408
Chroicocephalus ridibundu	Black-headed Gull	Laridae	185 0	0	2006	S1B, S3N,SUM S	S1B,S3N	N3B,N3N4N,	35 Sensitive	10	Christmas Bird Count	mstr1018412
Certhia americana	Brown Creeper	Certhiidae	2 0	0	2006	S3	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018417
Acanthis flammea	Common Redpoll	Fringillidae	1 0	0	2006	2S3B. S4N SUM	\$ 5	N5B.N5N.N5	So Secure	10	Christmas Bird Count	mstr1018422
Coccothraustee voeportin	Evening Grosbook	Fringillidae	02 0	0	2000	Q/ 0	AR SEN	NAR NAN NU	S Secure Special Concern	10	Christmas Bird Count	mstr1018/30
Dholooroocrev series	Croat Cormonate	Dhalaaraaraa	32 0	0	2000		20,00N			10	Christmas Dird Coull	motr1019425
	Great Cormorant	Phalacrocoraci	43 0	0	2006	538,53M,53N	53B	INJIN4B,INJIN4		10	Christmas Bird Count	111501018435
Charadrius vociferus	Killdeer	Charadriidae	1 0	0	2006	S3B,SUM	S2B	N5B,N4N5N,	5 Sensitive Indidate (Low Prior	10	Christmas Bird Count	mstr1018443
Larus fuscus	Lesser Black-backed G	i Laridae	10 0	0	2006	S3N,SUM	S3N	NUN,N4N5M	35 Secure	10	Christmas Bird Count	mstr1018444
Aythya affinis	Lesser Scaup	Anatidae	4 0	0	2006	S3N,SUM	S2N	N5B,N5N,N5	5 Secure	10	Christmas Bird Count	mstr1018445
Anas platyrhynchos	Mallard	Anatidae	289 0	0	2006	S3B,SUM	S3B	N5B,N5N,N5	35 Secure	10	Christmas Bird Count	mstr1018447

GNAME	GCOMNAME	FAMILY	Observer Tot	talNumber Month	Day	Year	SRANK_2015 SRA	NK_2010	NRANK GR	ANK	GeneralStatus COSEWIC_ST	PROVINCIAL	SARA DESCR_HABIT/S	SITE_NAME Ac	curacy SYNAME	CITATION	IDNUM
Zenaida macroura	Mourning Dove	Columbidae		1 0	0	2006	S3	S2B	N5B,N5N,N5	G5	Secure				10	Christmas Bird Count	mstr1018449
Accipiter gentilis	Northern Goshawk	Accipitridae		3 0	0	2006	S3	S3B	N4B,N4N5N,	G5	Secure				10	Christmas Bird Count	mstr1018451
Anas acuta	Northern Pintail	Anatidae		252 0	0	2006	S3B.SUM	S3B	N5B.N5N.N5	G5	Secure				10	Christmas Bird Count	mstr1018452
Calidris maritima	Purple Sandpiper	Scolopacidae		6 0	0	2006	S3N.SUM	S3N	N3N4B.N3N4	G5	Secure				10	Christmas Bird Count	mstr1018457
Alca torda	Razorhill	Alcidae		1 0	0	2006	S3B S3M	S3B	N5B N4N N5	G5	Secure				10	Christmas Bird Count	mstr1018458
Avthva fuligula	Tufted Duck	Anatidae		9 0	0	2006	S1N.SUM	SNA	N1N.NUM	G5	/agrant/ Accident:				10	Christmas Bird Count	mstr1018468
Anas americana	American Wigeon	Anatidae		3 0	0	2007	S3B.SUM	S3B	N5B.N5N.N5	G5	Undetermined				10	Christmas Bird Count	mstr1018481
Megacervle alcvon	Belted Kingfisher	Alcedinidae		2 0	0	2007	S4B. S3N.SUM	S5B	N5B.N4N5N.	G5	Secure ate (Group 3, Low				10	Christmas Bird Count	mstr1018485
Chroicocephalus ridibundu	Black-headed Gull	Laridae		50 0	0	2007	S1B, S3N,SUM	S1B.S3N	N3B.N3N4N.	G5	Sensitive				10	Christmas Bird Count	mstr1018488
Anas discors	Blue-winged Teal	Anatidae		1 0	0	2007	SUB, S1M	S2B	N5B.N5M	G5	Sensitive				10	Christmas Bird Count	mstr1018490
Bucephala albeola	Bufflehead	Anatidae		1 0	0	2007	S2N SUM	S1S2N	N5B N5N N5	G5	Secure				10	Christmas Bird Count	mstr1018493
Coccothraustes vespertin	Evening Grosbeak	Fringillidae		42 0	0	2007	S4	S4B S5N	N4B N4N NU	G5	Secure Special Concern				10	Christmas Bird Count	mstr1018503
Phalacrocorax carbo	Great Cormorant	Phalacrocoracic		18 0	0	2007	S3B S3M S3N	S3B	N3N4B N3N4	G5	Sensitive				10	Christmas Bird Count	mstr1018508
Falco rusticolus	Gyrfalcon	Falconidae		1 0	0	2007	S2S3N SUM	S2S3N	N4N5B N5N	G5	Secure				10	Christmas Bird Count	mstr1018511
	Lesser Black-backed Gu	Laridae		7 0	0	2007	S3N SUM	S3N		G5	Secure				10	Christmas Bird Count	mstr1018517
Avthya affinis	Lesser Scaun	Anatidae		2 0	0	2007	S3N SUM	S2N	N5B N5N N5	G5	Secure				10	Christmas Bird Count	mstr1018518
	Mallard	Anatidae		387 0	0	2007	S3R SLIM	S3B	N5B N5N N5	G5	Secure				10	Christmas Bird Count	mstr1018520
Zonoido moorouro	Maliaru	Columbidoo		<u> </u>	0	2007	03D,301VI	53D 52D		05	Secure				10	Christmas Bird Count	motr1019522
	Nourning Dove			2 0	0	2007	53	52B		Go	Secure				10	Christmas Bird Count	mstr1018523
Accipiter genuits	Northern Gosnawk	Accipitridae		2 0	0	2007		SJB		Go	Secure				10	Christmas Bird Count	mstr1018525
Anas acuta	Northern Pintali	Anatidae		212 0	0	2007	S3B,SUM	S3B		G5	Secure				10	Christmas Bird Count	mstr1018526
Lanius excubitor	Northern Shrike	Laniidae		2 0	0	2007	S3N,SUM	S3N	N5B,N5N,N5	G5	Secure				10	Christmas Bird Count	mstr1018527
Calidris maritima	Purple Sandpiper	Scolopacidae		65 0	0	2007	S3N,SUM	S3N	N3N4B,N3N4	G5	Secure				10	Christmas Bird Count	mstr1018531
Loxia curvirostra	Red Crossbill	Fringillidae		10 0	0	2007	S1S2	S2S3	N5B,N5N,N5	G5	At Risk Threatened	Endangered	Endangered		10	Christmas Bird Count	mstr1018532
Agelaius phoeniceus	Red-winged Blackbird	Icteridae		1 0	0	2007	S1B,SUM	S1S2B	N5B,N5N,N5	G5	Sensitive				10	Christmas Bird Count	mstr1018534
Aythya fuligula	Tufted Duck	Anatidae		10 0	0	2007	S1N,SUM	SNA	N1N,NUM	G5	/agrant/ Accident:				10	Christmas Bird Count	mstr1018541
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	20	2002	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's Harbour	100	NF.Birds	mstr1006898
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 3	9	2002	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t River outflow	Rennies River Outflow	10	NF.Birds	mstr1006817
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 12	11	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t urban lake		100	Canadian Wildlife Service	mstr1009469
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Paul Lingear	1 10	2	2001	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's	10000	The Osprey	mstr1007003
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Vars. Obs.	1 0	0	2001	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's	10000	The Osprey	mstr1007005
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Jytte Selno	1 3	2	2003	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's	10000	NF.Birds	mstr1007007
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	12	2003	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's	10000	The Osprey	mstr1007008
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Vars. Obs.	1 12	26	2003	S3M. S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t	St. John's	10000	The Osprev	mstr1007010
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Jared Clarke	1 1	26	2008	S3M. S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t urban lake		1000	Canadian Wildlife Service	mstr1009471
Chordeiles minor	Common Nighthawk	Caprimulgidae	Todd Boland	0 6	2	1998	SNA	SNA	N4B N3M	G5	May be at risk Special Concern	Threatened	Threatened Lake		100	Canadian Wildlife Service	mstr1009369
Chaetura pelagica	Chimney Swift	Anodidae	Todd Boland	1 5		1998	SNR	SNR	N4B N3M	G4G5	/agrant/ Accident: Threatened	Threatened	Threatened Lake		1000	Canadian Wildlife Service	mstr1009339
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 1	5	2002	S3M_S2N	S2M	N3R	G4T4	Sensitive Special Concern	Vulnerable	Concern (anatum/t	Quidi Vidi Lake	100	NF Birds	mstr1006863
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Drown Doug Phelan	1 1	7	2002	S3M S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable	Concern (anatum/t		100	NF Birds	mstr1006896
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dug Fileian Dwayna Sabina	1 1	12	2002	SOM SON	S2M	NOD	C4T4	Sensitive Special Concern	Vulnerable			1000	Canadian Wildlife Service	motr1006070
Agia flammaus		Strigidae			13	2004	SOIN, SZIN	52IVI		G414	Sensitive Special Concern	Vulnerable		Virginia River Traii	1000		mstr1000979
Asio fiammeus	Short-eared Owl	Strigidae	John Weils		1	2008	S3B,SUM	S3B	N4B,N3N,N4	G5	Secure Special Concern	Vulnerable	Special Concern scrub		100		mstr1009456
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	10	2007	S3M, S2N	S2M	N3B	G414	Sensitive Special Concern	Vulnerable (Concern (anatum/t freshwater lake		1000	Canadian Wildlife Service	mstr1009239
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	8	2007	S3M, S2N	S2M	N3B	G414	Sensitive Special Concern	Vulnerable (Concern (anatum/t freshwater lake		1000	Canadian Wildlife Service	mstr1009240
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	22	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t freshwater lake		1000	Canadian Wildlife Service	mstr1009242
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	14	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/t freshwater lake		1000	Canadian Wildlife Service	mstr1009244
Histrionicus histrionicus	Harlequin Duck	Anatidae	Doug Hynes	1 12	22	2005	S3B, S2N,SUM	53B,S2N	N4B,N3N,N4	G4	Secure Special Concern	Vulnerable	Special Concern	Freshwater Bay	5000	NF.Birds	mstr1006158
Histrionicus histrionicus	Harlequin Duck	Anatidae	Bill Montevecchi;	1 3	1	1998	S3B, S2N,SUM	53B,S2N	N4B,N3N,N4	G4	Secure Special Concern	Vulnerable	Special Concern	Freshwater Bay	5000	NF.Birds	mstr1006168
Pagophila eburnea	lvory Gull	Laridae		1 1	16	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi;	1000	NF.Birds	mstr1006590
Pagophila eburnea	lvory Gull	Laridae		1 1	15	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk Endangered	Endangered	Endangered of	Virginia River; Quidi Vidi Lake; St	1000	NF.Birds	mstr1006591
Pagophila eburnea	Ivory Gull	Laridae		1 1	12	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi ;	1000	NF.Birds	mstr1006592
Pagophila eburnea	Ivory Gull	Laridae		1 1	0	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Gut	1000	NF.Birds	mstr1006593
Pagophila eburnea	lvorv Gull	Laridae		1 2	2	2002	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Gut:	1000	NF.Birds	mstr1006594
Pagophila eburnea	lvorv Gull	Laridae		1 2	5	2002	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Gut:	1000	NF.Birds	mstr1006595
Pagophila eburnea	lvory Gull	Laridae		1 2	5	2002	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Gut:	1000	NF.Birds	mstr1006596
Pagophila eburnea	Ivory Gull	Laridae		1 1	0	1998	S1N SUM	S2N	N1B N1N N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Lake	1000	NF Birds	mstr1006597
Pagophila eburnea	Ivory Gull	Laridae		1 1	12	1998	S1N SUM	S2N	N1B N1N N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Lake: St. John's	1000	NF Birds	mstr1006598
Pagophila eburnea	lvory Gull	Laridae		1 1	30	1008	S1N SUM	S2N	N1B N1N N1	G4	At risk Endangered	Endangered	Endangered	Quidi Vidi Lake; St. John's	1000	NF Birds	mstr1006599
	Rusty Blackbird	Icteridae	Jared Clarke	1 1	27	2003	S2S3B SLIM	S3B		G4	Secure Special Concern	Vulnerable	Special Concern	Lundrigan's Marsh	100	NF Birds	mstr1007570
Funhagus carolinus	Rusty Blackhird	Icteridae		1 5	10	2003	S2S3R SLIM	S3R	N4R NI IN N/	G4	Secure Special Concern	Vulnerable	Special Concern	Lundrigan's Marsh	100	NF Birds	mstr1007572
		Anatidaa		1 0	19	2002		SSB 60M	NAR NON NA	G4	Secure Special Concern	Vulnoroble	Special Concern	St John's Norrows	1000	Montevecchi list	mstr1005032
Histrionicus histrionicus		Anatidaa		1 11	21	19//		SCR CON		C4	Source Special Concern	Vulnarable	Special Concorp	St John's Narrows Chain Deals	100	The Opprov	mstr1005033
Histricalisus histrical		Anatidae		1 11	21	1900			NAD NON NA	64	Secure Special Concern	Vullearchi			1000		mstr 1005054
		Constructed	Dava Press	1 5	21	1988	SUN SUN SUM	SNIA	N4D,N3N,N4	64	May be at rick Or with C		Threatened	Cape Spear QV Lake	1000		mstr1000200
			Dave BIOWN	1 9	24	2002	SINA	SINA		G5	At Diale	Frederationed	Inteatened	Foot Foods Ot Julius	100		mstr1007429
		Filigillidae	larad Olevia		13	2004	5152	0200		G5	ALKISK Inreatened			East End; St. John's	100	INF.DIIUS	mstr100/438
Falco peregrinus subsp. a	Peregrine Faicon	Falconidae		1 11	25	2007	SJM, SZN	SZIM	N3B	6414	Sensitive Special Concern	vuinerable (Concern (anatum/t municpal dump		1000	Canadian Wildlife Service	mstr1000000
Falco peregrinus subsp. a			John Wells	2 3	11	2007	S3M, S2N	S2M	N3B	G414	Sensitive Special Concern	vuinerable (Concern (anatum/t municipal landfill		100	Canadian Wildlife Service	mstr1000238
⊢aico peregrinus subsp. a	Peregrine Falcon	⊢aiconidae	Jared Clarke	1 2	25	2007	S3M, S2N	S2M	N3B	G414	Sensitive Special Concern	vuinerable (Concern (anatum/t municipal landfill		100	Canadian Wildlife Service	mstr1009241
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	4	2011	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Concern	Vulnerable (Concern (anatum/twest end of Quid	Quidi Vidi Lake, West End	10	Bruce Mactavish, NF.birds,	, mstr1021740
Asio flammeus	Short-eared Owl	Strigidae	I odd Boland	1 2	25	2004	S3B,SUM	S3B	N4B,N3N,N4	G5	Secure Special Concern	Vulnerable	Special Concern		1000	Wildlife Division SEOW Sig	1 mstr1021994
Chaetura pelagica	Chimney Swift	Apodidae	Anne Hughes, To	1 5	10	2009	SNR	SNR	N4B,N3M	G4G5	/agrant/ Accident: Threatened	Threatened	Threatened	Quidi Vidi Lake	1000	NF.Birds	mstr1022070
Hirundo rustica	Barn Swallow	Hirundinidae	gryan@mail.gov.r	5 6	3	2006	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			North East	1000	Nf.Birds, Data Entry by WD) mstr1027810
Hirundo rustica	Barn Swallow	Hirundinidae	Lisa Giroux	1 4	20	2012	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Bowring Park Duck Pond	1000	Nf.Birds, Data Entry by WD) mstr1027834
Hirundo rustica	Barn Swallow	Hirundinidae	Jared Clarke	1 6	11	2003	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Long Pond	1000	Nf.Birds, Data Entry by WD) mstr1028002
Hirundo rustica	Barn Swallow	Hirundinidae	Jared Clarke	1 5	31	2004	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Long Pond	1000	Nf.Birds, Data Entry by WD) mstr1028005
Hirundo rustica	Barn Swallow	Hirundinidae	Anne Hughes	1 6	9	2008	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Long Pond	1000	Nf.Birds, Data Entry by WD) mstr1028027
Hirundo rustica	Barn Swallow	Hirundinidae	Anne Hughes	1 5	10	2009	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD) mstr1028134
Hirundo rustica	Barn Swallow	Hirundinidae	Anne Hughes	1 5	22	2011	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Kent's Pond	1000	Nf.Birds, Data Entry by WD) mstr1028206
Hirundo rustica	Barn Swallow	Hirundinidae	Anne Hughes	1 6	15	2000	S2B,SUM	S1S2B	N3N4B,N3N4	G5	Secure Threatened			Kenny's Pond	1000	Nf.Birds, Data Entry by WD) mstr1028210
Hirundo rustica	Barn Swallow	Hirundinidae	Bruce Mactavish	1 6		2010	S2B SUM	S1S2B	N3N4B N3N4	G5	Secure Threatened			West End of Virginia Lake	1000	Nf.Birds. Data Entry by WD	0 mstr1028260
Hirundo rustica	Barn Swallow	Hirundinidae	Leslev Sweetannl	2 6	8	2010	S2B SUM	S1S2B	N3N4B N3N4	G5	Secure Threatened			Virginia Lake	1000	Nf.Birds Data Entry by WD) mstr1028262
Hirundo rustica	Barn Swallow	Hirundinidae	Bruce Mactavish	1 5	20	2010	S2R SLIM	S1S2B	N3N4R N3N4	G5	Secure Threatened		1	undrigan's Marsh Virginia Lako	1000	Nf Birds Data Entry by WD) mstr1028343
Hirundo rustica	Barn Swallow	Hirundinidae	lared Clarka	1 3 2 6	29	2011	S2B,50W	S1S2B	N3N/R N3N/	C5	Secure Threatened		1	Long Dond	1000	Nf Birde Data Entry by MD) mstr1028815
Hirundo rustica	Barn Swallow	Hirundinidae	Todd Bolond	2 0	10	2003		S102D S182D	NON4D,NON4	05				Long Dond	1000	Nf Birdo, Data Entry by WD	mstr1020015
				J 5	28	2006	SZD,SUIVI	SIJZD SNIA	INGIN4D,INGIN4	65	Secure Inreatened	Vederand	Special Canada	Long Pond	1000	NI.DIIUS, DAIA ENTRY BY WD	motr1022422
Cisus maritimus		Condulid		5	9	1993	SINA	SINA	NJ NJ	G3	Sensitive Special Concern	vuinerable	Special Concern	Il one Dand Ot Jubert	1000		mstr1025059
Somatochiora Walshii	Drushed-tipped Emerald		Larson D.J.	7	11	19/8	5354	5455	IN5	G5	Secure			Long Pond, St. Johns"	1000		111SU 1035058
Somatochlora walshii	Brusned-tipped Emerald	Corduliidae	Larson D.J.	7	23	1978	\$3\$4	5455	N5	G5	Secure			"Long Pond, St. Johns"	1000	2DDragonflydata.xls	mstr1035059
Ophiogomphus colubrinus	Boreal Snake Tail/ Club	Gomphidae	Larson D.J.	7	23	1978	S3	S3?	N5	G5	Undetermined			LongPond, St. Johns	1000	2DDragonflydata.xls	mstr1035087
Enallagma civile	Northern Bluet	Coenagrionidae	Larson D.J.	6	22	1979	S2	S3S4	N5	G5	Undetermined			"Pippy Park, St. Johns"	1000	2DDragonflydata.xls	mstr1035112
Colias eurytheme	Orange Sulphur	Pieridae	Ross				S3	S3B	N5B,N5M	G5	Secure			St. Johns	10000	Ross Newfoundland Data.x	c mstr1040895
Callophrys augustinus	Brown Elfin	Lycaenidae	Ross				S3		N5	G5	Secure			St. Johns	10000	Ross Newfoundland Data.x	c mstr1041080
Callophrys augustinus	Brown Elfin	Lycaenidae	Ross				S3		N5	G5	Secure			Oxen Pond	1000	Ross Newfoundland Data.x	c mstr1041081

GNAME	GCOMNAME	FAMILY	Observer Total	Number Month	Dav Ye	ar	SRANK 2015 SRA	NK 2010	NRANK GRA	NK Gen	neralStatus C	OSEWIC ST	PROVINCIAL	SARA D	ESCR HABIT/SITE NAME	ccuracy	SYNAME CITATION	IDNUM
Danaus plexippus	Monarch	Nymphalidae	Ross				SNA	SNA	N3B NNRM	G4 /agra	ant/ Accident: S	Special Concern		Special Concern	South Side Hill St. Johns	1000	Ross Newfo	undland Data x mstr1041939
	Monarch	Nymphalidae	Ross				SNA	SNA	N3B NNRM	G4 dgre	ant/ Accident: S	Special Concern		Special Concern	St Johns	10000	Ross Newfo	oundland Data x mstr10/19/1
	Monarch	Nymphalidae	Ross					SNA		G4 agra	ant/ Accidente S			Special Concern	on Dond Potenical Cardon St. Joh	10000	Ross Newlo	oundland Data x matr1041042
Danaus piexippus		Nymphalidae	Ross	4 7	47	4000		SINA		G4 'agra	ani/ Accidenta S	Special Concern	Thursday	Special Concern	en Pond Bolanical Garden, St. Jon	1000	Ross Newlo	bundiand Data.x mstr1041942
Catharus minimus	Gray-cheeked Thrush	Turdidae	R. Burrows	1 /	1/	1988	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Ihreatened		Oxen Pond, St. John's	1000	Gray-Cheel	ked Thrush, SS/mstr1042098
Catharus minimus	Gray-cheeked Thrush	Turdidae	R. Burrows	1 5	28	1988	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		Oxen Pond, St. John's	1000	Gray-Cheel	ked Thrush, SS/ mstr1042099
Catharus minimus	Gray-cheeked Thrush	Turdidae	R. Burrows	1 5	28	1989	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		Oxen Pond, St. John's	1000	Gray-Cheel	ked Thrush, SS/ mstr1042100
Catharus minimus	Gray-cheeked Thrush	Turdidae	B. Mactavish, J. F	5	29	1988	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		St. JohnÆs	10000	Gray-Cheel	ked Thrush, SS/ mstr1042101
Catharus minimus	Gray-cheeked Thrush	Turdidae	B. S. Jackson	1 5	27	1980	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		Long Pond	1000	Gray-Cheel	ked Thrush, SS/ mstr1042102
Catharus minimus	Gray-cheeked Thrush	Turdidae	R. Burrows	1 5	28	1988	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		Long Pond	1000	Gray-Cheel	ked Thrush, SS/mstr1042103
Catharus minimus	Grav-cheeked Thrush	Turdidae	R Burrows	1 6	2	1990	S2B SUM	S2S3B	N5B N5M	G5	Secure ind	didate (Mid Prior	Threatened		Kents Pond St John's	1000	Grav-Cheel	ked Thrush SS/mstr1042104
Catharus minimus	Gray-cheeked Thrush	Turdidae	B Mactavish	2 5	25	1080	S2B SUM	S2S3B	N5B N5M	G5	Secure ind	didate (Mid Priori	Threatened		White Hills St. John's	1000	Gray-Cheel	red Thrush, SS/mstr10/2106
	Deservine Felger	Tululuae		2 5	2J 47	1909		S233D			Secure into		Vulnarable	Concern (an atum)!	VVIIILE TIIIIS, SL. JUIIITS	1000	Glay-Clieer	the Entry by M/D metra 020227
Faico peregninus subsp. a	Peregnine Faicon	Faiconidae		1 5	1/	2009	SOIVI, SZIN	52101		G414 3	Sensitive S		Vuinerable		Lunungan's Marsh	1000	NI.BIIUS, Da	
Eupnagus carolinus	Rusty Blackbird	Icteridae	Harry B.	1 5	21	2002	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure S	Special Concern	Vuinerable	Special Concern	St. Jonn's Area	10000	Nf.Birds, Da	ata Entry by WD mstr1027838
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	7	2009	S3M, S2N	S2M	N3B	G414 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		5000	Nf.Birds, Da	ata Entry by WD mstr1027946
Circus cyaneus	Northern Harrier	Accipitridae	Jytte Selno	1 9	30	2001	S3B,SUM	S3?B	N5B,N4N	G5	Secure				Cuckhold Cove Trail	1000	Nf.Birds, Da	ata Entry by WD mstr1028925
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Jytte Selno	1 5	29	2001	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		5000	Nf.Birds, Da	ata Entry by WD mstr1028234
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	John Pratt	1 10	15	2001	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		5000	Nf.Birds, Da	ata Entry by WD mstr1028235
Accipiter gentilis	Northern Goshawk	Accipitridae	Doug Hynes	1 11	27	2005	S3	S3B	N4B N4N5N	G5	Secure			ι	Conifer Tree	1000	Nf Birds Da	ata Entry by WD mstr1029594
Histrionicus histrionicus	Harlequin Duck	Anatidae	Doug Hypes	1 12	22	2005	S3B S2N SUM	3B S2N	NAB N3N N4	G4	Secure S	Special Concern	Vulnerahle	Special Concern		1000	Nf Birds Da	ata Entry by WD mstr1029595
Histrionicus histrionicus	Harlequin Duck	Anatidae	Todd Boland	1 3	22	1008	S3B S2N SUM	3B S2N		G4	Secure S	Special Concern	Vulnerable	Special Concern	Near St. John's Bay	1000	Nf Birds, Do	ata Entry by WD mstr1020500
		Folgonidae	Dovid Chanhard	1 10	2	1990				04	Secure 3		VUITETADIE	Special Concern	OF Anderson Avenue St. Johnie	1000	Nf Dirde Do	ata Entry by WD IIsti 1029392
	Gynaicon		David Snepherd	1 10	24	2006	525319,50101	5253N		Go	Secure				25 Anderson Avenue, St. John S	1000	NI.Birds, Da	
Catharus minimus	Gray-Cheeked Thrush	lurdidae	Howard Clase	1 10	7	2002	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Ihreatened			1000	Nf.Birds, Da	ata Entry by WD mstr1027917
Circus cyaneus	Northern Harrier	Accipitridae	Jared Clarke	1 1	4	2012	S3B,SUM	S3?B	N5B,N4N	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027829
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 12	26	1998	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		10000	Nf.Birds, Da	ata Entry by WD mstr1027839
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 1	24	1999	S3	S3B	N4B,N4N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027840
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 12	27	1999	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		10000	Nf.Birds. Da	ata Entry by WD mstr1027842
Pagophila eburnea	Ivory Gull	Laridae	Paul Linegar	1 12	28	1999	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk	Endangered	Endangered	Endangered		10000	Nf Birds Da	ata Entry by WD mstr1027843
	Red Crosshill	Frincillidae	Anne Hughes	2 3	18	2000	S1S2	S2S3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered		10000	Nif Rirde Dr	ata Entry by WD mstr1027844
Acciniter contilio	Northern Cochowk	Accinitridae	Dirk Hilberg	1 5	26	2000	C102	SZE		G5	Secure	medicileu	Lindaliyeleu	Lindangered		10000	Ni Dirdo Da	a Entry by WD motr1027077
		Accipitidae			20	2003	00	000	NICOINALD, NICO	00	Constitute	Densiel O ::		Concern for the		10000		
⊢aico peregrinus subsp. a	Peregrine Falcon	raiconidae	LIDDY Creelman	1 12	31	2003	53M, S2N	52M	N3B	6414	sensitive S	Special Concern	vuinerable	Concern (anatum/t		10000	Nt.Birds, Da	ata Entry by WD mstr102/854
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 1	11	2004	S3	S3B	N4B,N4N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027855
Falco rusticolus	Gyrfalcon	Falconidae	Paul Linegar	1 12	28	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027857
Accipiter gentilis	Northern Goshawk	Accipitridae	Jared Clarke	1 2	5	2006	S3	S3B	N4B,N4N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027860
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Paul Linegar	2 12	29	2008	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t		10000	Nf.Birds, Da	ata Entry by WD mstr1027869
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	2 10	24	2009	S3	S3B	N4B.N4N5N	G5	Secure			\		10000	Nf.Birds, Da	ata Entry by WD mstr1027871
Falco sparverius	American Kestrel	Falconidae	Ken Knowles	1 10	5	2995	S2B SUM	S2B	N5B N1N N5	G5 Un	ndetermined ate	e (Group 3 Low				10000	Nf Birds, Da	ata Entry by WD mstr1027873
Accipitor gontilis	Northorn Coshawk	Accinitridao	Mark Maftai	1 2	27	2000	C2D,00101	62B		G5 011	Socuro					10000	Nf Birds, Dr	ata Entry by WD mstr1027823
	Northern Goshawk	Accipitituae		1 3	22	2011		SON		G3	Atrial	Friday rays d	Endonmorod	Fudancerad		10000	NI.BIIUS, Da	ata Entry by WD IIIsti 1027655
Pagophila eburnea	Ivory Guil		Todd Boland	1 12	21	1999	STN,SUM	SZIN	NTB,NTN,NT	G4	At risk	Endangered	Endangered	Endangered		10000	Nf.Birds, Da	ata Entry by WD mstr1027790
Loxia curvirostra	Red Crossbill	Fringillidae	Anne Hughes	2 4	10	2000	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Ihreatened	Endangered	Endangered		10000	Nf.Birds, Da	ata Entry by WD mstr1027791
Pagophila eburnea	Ivory Gull	Laridae	Bruce Mactavish	5 2	2	2002	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered		10000	Nf.Birds, Da	ata Entry by WD mstr1027795
Asio flammeus	Short-eared Owl	Strigidae	Paul Linegar	1 12	27	2002	S3B,SUM	S3B	N4B,N3N,N4	G5	Secure S	Special Concern	Vulnerable	Special Concern		10000	Nf.Birds, Da	ata Entry by WD mstr1027798
Aegolius acadicus	Northern Saw-Whet Ow	Strigidae	Neighbour of Paul	1 4	21	2003	S3?	S1?	N5B,N5N,N5	G5 Un	ndetermined					10000	Nf.Birds, Da	ata Entry by WD mstr1027800
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Paul Linegar	1 12	28	2004	S2S3	S3B	N5B.N5N.N5	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027805
Bubo scandiacus	Snowy Owl	Strigidae	Paul Linegar	1 12	28	2004	S3N SUM	SNA	N5B N5N N5	G5	Secure					10000	Nf Birds, D	ata Entry by WD mstr1027806
	Red Crossbill	Fringillidae	Paul Linegar	10 12	20	2006	\$1\$2	\$2\$3	N5B N5N N5	G5	At Rick	Threatened	Endangered	Endangered		10000	Nf Birds, De	ata Entry by WD mstr1027811
	Red Crossbill	Fringillidae	Doul Linegar	25 2	17	2000	6162 6162	6263		C5	At Rick	Threatened	Endangered	Endangered	a and aprupa tr	10000	Nf Birda, De	ata Entry by WD mstr1027011
	Red Clossbill	Annigillidae	Paul Linegal	25 2	17	2006	3132	3233		G5	ALKISK	Inreatened	Endangered	Endangered	e and spruce li	10000	NI.BIIUS, Da	
Accipiter gentilis	Northern Goshawk	Accipitridae	Paul Linegar	1 12	29	2008	\$3	S3B	N4B,N4N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027817
Loxia curvirostra	Red Crossbill	Fringillidae	Paul Linegar -	-99 12	29	2008	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered		10000	Nf.Birds, Da	ata Entry by WD mstr1027818
Accipiter gentilis	Northern Goshawk	Accipitridae	Paul Linegar	1 12	30	2011	S3	S3B	N4B,N4N5N,	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027825
Circus cyaneus	Northern Harrier	Accipitridae	Paul Linegar	1 12	30	2011	S3B,SUM	S3?B	N5B,N4N	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027826
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Jared Clarke	-99 1	2	2012	S2S3	S3B	N5B,N5N,N5	G5	Secure					10000	Nf.Birds, Da	ata Entry by WD mstr1027827
Bubo scandiacus	Snowy Owl	Strigidae	qolfman otto@va	1 12	5	2008	S3N.SUM	SNA	N5B.N5N.N5	G5	Secure				115 Forest Road	1000	Nf.Birds, Da	ata Entry by WD mstr1027971
Bubo scandiacus	Snowy Owl	Strigidae	Wayne Tucker	1 11	12	2001	S3N SUM	SNA	N5B N5N N5	G5	Secure				23 Oakridge Drive	1000	Nf Birds, Da	ata Entry by WD mstr1028258
	Pod Crosshill	Eringillidaa	Dava Brown	2 2	20	2001	\$1\$2	6263		C5	At Dick	Throatonod	Endongorod	Endangorod	45 Smithville Croscont	1000	Nf Birds, Do	ata Entry by WD matr1027085
		Fringillidae		2 3	30	2000	0102	0200		GJ		Threatened	Endangered	Endenmend	40 Silili Wie Clescent	1000	Nf Dirds, Da	ta Entry by WD IIIsti 1027905
Loxia curvirostra	Red Crossbill	Fringillidae	lan Jones	6 12	31	2008	5152	5253	IN5B,IN5IN,IN5	Go	At RISK	Inreatened	Endangered	Endangered	SUM West of Inco Innovation Centre	1000	Nf.Birds, Da	ata Entry by WD mstr1027922
Accipiter gentilis	Northern Goshawk	Accipitridae	John Wells	1 3	24	2003	S3	S3B	N4B,N4N5N,	G5	Secure				Above Long Pond	1000	Nf.Birds, Da	ata Entry by WD mstr1028048
Bubo scandiacus	Snowy Owl	Strigidae	Anne Hughes	1 11	26	2001	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure				Culture Centre near Memorial Univ	1000	Nf.Birds, Da	ata Entry by WD mstr1027965
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Chris Brown	1 1	3	2001	S3M, S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t	all Field, North Side of Quidi Vidi La	1000	Nf.Birds, Da	ata Entry by WD mstr1028188
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 12	16	2007	S3	S3B	N4B,N4N5N,	G5	Secure				Bally Hall Golf Course	1000	Nf.Birds, Da	ata Entry by WD mstr1028231
Bubo scandiacus	Snowy Owl	Strigidae	John Pratt	1 11	11	2001	S3N.SUM	SNA	N5B,N5N.N5	G5	Secure				Bally Hally Estates Area	1000	Nf.Birds, Da	ata Entry by WD mstr1028199
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	15	2003	S3M_S2N	S2M	N3B	G4T4 S	Sensitive S	Special Concern	Vulnerable	Concern (anatum/t	Bally Hally Golf Course	1000	Nf Birds, Da	ata Entry by WD mstr1028191
Bubo scandiacue	Snowy Owl	Strigidae	dolfman otto@va	1 2	21	2010	S3N SUM	SNA	N5R N5N N5	G5	Secure				Rally Hally Colf Course	1000	Nif Rirdo Do	ata Entry by WD metr1028102
	Northern Coohout	Accipitridae	Doug Pholon	_00 4	12	2010	C2	SSE		G5	Secure				Hally Colf Course 400 Long Day	1000	Ni.Diius, Da	ata Entry by WD motr1020192
					13	2003		000	NED MAN NE	CE ''						1000	INI. BIIUS, Da	ata Entry by WD IIISU 1020109
raico sparverius	American Kestrel	raiconidae	goiman_otto_yan	1 11	21	2006	SZB,SUM	97R	NDB,N1N,N5	GD UN	idelermined ate	e (Group 3, Low	- · · · ·	- · ·	Bally Haly Golf Course	1000	Nt.Birds, Da	
Loxia curvirostra	Red Crossbill	Fringillidae	Dan Jeddore	1 12	31	2007	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Inreatened	Endangered	Endangered	Barnes Road	1000	Nf.Birds, Da	ata Entry by WD mstr1027896
Asio flammeus	Short-eared Owl	Strigidae	Todd Boland	1 2	25	2004	S3B,SUM	S3B	N4B,N3N,N4	G5	Secure S	Special Concern	Vulnerable	Special Concern	Behind St. Pat's Ballpark	1000	Nf.Birds, Da	ata Entry by WD mstr1027802
Loxia curvirostra	Red Crossbill	Fringillidae	Todd Boland	20 4	12	2008	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	In larch trees Behind the NRC Building	1000	Nf.Birds, Da	ata Entry by WD mstr1027814
Loxia curvirostra	Red Crossbill	Fringillidae	Dave Fifield	6 4	28	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	Arts & Music Building, Memorial U	1000	Nf.Birds, Da	ata Entry by WD mstr1027923
Asio flammeus	Short-eared Owl	Strididae	Bruce Mactavish	1 12	6	2003	S3B.SUM	S3B	N4B.N3N.N4	G5	Secure S	Special Concern	Vulnerable	Special Concern	In Long Pond Road and Pine Bud 4	1000	Nf.Birds Da	ata Entry by WD mstr1027943
Circus cvaneus	Northern Harrier	Accinitridae	Leslev Sweetannl	1 10	8	2010	S3B SUM	S37B	N5B N4N	G5	Secure				Blackhead - Cane Spear Road	10000	Nf Rirde De	ata Entry by WD mstr1027731
	Northern Harrior	Accinitridae	Bruce Mactavish	1 4	27	2012	S3R SLIM	S32P	N5R N/N	G5	Secure				Rigekhead Cano Speer Pood	10000	Nif Dirdo, Do	ata Entry by WD metr1027732
Chordoilee min		Continuation	Todd Polord	1 4 1 7	21	2012		CNIA		CE M		Special Comment	Throaters	Throaters	Diachtical Cape Spear Road	4000	INI.DIIUS, Da	Ma = H(y, y, y) = H(y) = H(y
	Common Nighthawk		I OUU BOIAND	1 /	31	2006	SINA	SINA	IN4B,IN3M	Go Ma	ay be at risk S	Special Concern	inreatened	Inreatened	Botantical Gardens	1000	Nt.Birds, Da	
Catharus minimus	Gray-Cheeked Thrush	lurdidae	Anne Hughes	1 6	12	2009	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Ihreatened		Cape Spear - Cape Spear Road	5000	Nf.Birds, Da	ata Entry by WD mstr1027709
Catharus minimus	Gray-Cheeked Thrush	Turdidae	Anne Hughes	1 6	15	2009	S2B,SUM	S2S3B	N5B,N5M	G5	Secure ind	didate (Mid Prior	Threatened		Cape Spear - Cape Spear Road	5000	Nf.Birds, Da	ata Entry by WD mstr1027710
Accipiter gentilis	Northern Goshawk	Accipitridae	Todd Boland	1 9	12	2003	S3	S3B	N4B,N4N5N,	G5	Secure				Cape Spear - Cape Spear Road	5000	Nf.Birds, Da	ata Entry by WD mstr1027715
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 8	28	2009	S3	S3B	N4B,N4N5N,	G5	Secure				Cape Spear - Cape Spear Road	5000	Nf.Birds, Da	ata Entry by WD mstr1027716
Loxia curvirostra	Red Crossbill	Fringillidae	Jared Clarke	1 5	25	2003	S1S2	S2S3	N5B.N5N.N5	G5	At Risk	Threatened	Endangered	Endangered	Cape Spear - Lundrigan's Marsh	5000	Nf.Birds, Da	ata Entry by WD mstr1028341
Loxia curvirostra	Red Crossbill	Frindillidae	Dave Brown	2 6	9	2003	S1S2	S2S3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered	Cane Snear Road	5000	Nf Rirde De	ata Entry by WD mstr1027705
Buteo lagonus		Accinitridae	Todd Boland	1 10	11	2002	5752	S3R	N5R N5N N5	G5	Secure		Lindingorou	Lindingolou	Cane Spear Dead	5000	Nif Dirdo, Do	ata Entry by WD metr1027707
Euphoque corolinue	Ruety Blockbird	Ictoridaa		1 5	6	2003	6200 6200 CLIM	SSD	NAR NILINI NIA	GA	Secure 0	Special Concern	Vulnoroble	Special Concern	Cape Opear Noau	5000	NI Dius, De	a Entry by WD motr1027709
Euphagus carolinus					0	2004	SZSJB,SUM	0000 00000	IN4D, INUIN, IN4	64	Secure S	special Concern	vuinerable	Special Concern	Cape Spear Road	5000	INT.BIRDS, Da	
	Gray-Cheeked Thrush		Anne Hugnes		2	2010	SZB,SUM	0203B	INDB,INDIVI	60	Secure ind		Threatened	T 1 4 1	Cape Spear Road	5000	Nt.Birds, Da	ata Entry by WD mstr102/712
Chordeiles minor	Common Nighthawk	Caprimulgidae	Anne Hughes	1 8	26	2011	SNA	SNA	N4B,N3M	G5 Ma	ay be at risk S	Special Concern	Ihreatened	Ihreatened	Cape Spear Road	5000	Nf.Birds, Da	ata Entry by WD mstr1027713
Histrionicus histrionicus	Harlequin Duck	Anatidae	Cliff Doran	2 6	1	2010	S3B, S2N,SUM	3B,S2N	N4B,N3N,N4	G4	Secure S	Special Concern	Vulnerable	Special Concern	ape Spear Road - Brista Cove Rive	1000	Nf.Birds, Da	ata Entry by WD mstr1027717
Falco rusticolus	Gyrfalcon	Falconidae	Paul B.	1 11	8	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Building, Memorial University of Ne	1000	Nf.Birds, Da	ata Entry by WD mstr1027935
Loxia curvirostra	Red Crossbill	Fringillidae	Jared Clarke	1 5	14	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	stry-Physics Building, Memorial Uni	1000	Nf.Birds, Da	ata Entry by WD mstr1027940
Bubo scandiacus	Snowy Owl	Strigidae	Doug Phalen	1 11	26	2001	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure		-	-	of Newfoundland Drive & Loov Ba	1000	Nf.Birds. Da	ata Entry by WD mstr1028232
Accipiter gentilis	Northern Goshawk	Accipitridae	John Wells	1 10	11	2002	\$3	S3B	N4B.N4N5N	G5	Secure				Cuckold's Cove Trail, Signal Hill	1000	Nf.Birds Da	ata Entry by WD mstr1027954
Accipiter gentilis	Northern Goshawk	Accinitridae	Jared Clarke	1 3	21	2003	S3	S3B	N4B N4N5N	G5	Secure				Cuckold's Cove Trail, Signal Hill	1000	Nf Rirde De	ata Entry by WD mstr1027955
Chordeiles minor	Common Nighthowk	Caprimulaidae		1 0	25	2000	SNIA	SNA	N/R N2M	G5 Ma	av he at rick	Special Concern	Threatened	Threatened	Dead Man's Dond, Signal Lill	1000	Nif Dirdo, Do	ta Entry by WD metr1027372
				1 9	20	2002	SINA	ONA			ay be at HSK S	Special Concern	meatened	rineatened		100		
Duteo lagopus	Rough-Legged Hawk	Accipitridae	DI UCE IVIACIAVISN	ı 3	24	2002	3233	33D	INDE,INDIN,IND	60	Secure				Dump	1000	NT.BIRDS, Da	ata Entry by WD mstr 1027796

GNAME	GCOMNAME	FAMILY	Observer	TotalNumber Month	Dav	Year	SRANK 2015 SRA	NK 2010	NRANK G	RANK	GeneralStatus COSEWIC S	T PROVINCIAL	SARA [DESCR HABIT/SITE	NAME Ac	ccuracy S	YNAME CITATION IDNUM
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Bruce Mactavish	1 1	1 11	2004	S2S3	S3B	N5B N5N N5	G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1027801
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Bruce Mactavish	1 3	R 6	2004	S2S3	S3B	N5B N5N N5	G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1027807
Buteo lagopus	Rough Logged Hawk	Accipitridae	Jarad Clarka			2005	6263	53D		65	Secure				Dump	1000	Nf Birde, Data Entry by WD mstr1027007
Buteo lagopus	Rough-Legged Hawk	Accipitridae		1 1		2006	5253	53B		G5	Secure				Duffip	1000	NI.Birds, Data Entry by WD Instr 1027808
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Jared Clarke	1 2	2 5	2006	S2S3	S3B	N5B,N5N,N5	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1027809
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Bruce Mactavish	1 1	1 11	2009	S2S3	S3B	N5B,N5N,N5	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1027820
Accipiter gentilis	Northern Goshawk	Accipitridae	Jytte Selno	1 3	3 16	2001	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1027876
Falco rusticolus	Gyrfalcon	Falconidae	Dave Brown	1 11	1 28	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028096
Accipiter gentilis	Northern Goshawk	Accipitridae	Todd Boland	4 1	1 24	1998	S3	S3B	N4B,N4N5N,	G5	Secure			Dump	Dump	1000	Nf.Birds, Data Entry by WD mstr1028263
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 12	2 13	1998	S3M. S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t	·	Dump	1000	Nf.Birds, Data Entry by WD mstr1028264
Accipiter gentilis	Northern Goshawk	Accinitridae	Bruce Mactavish	2 2	2 13	1999	S3	S3B	N4B N4N5N	G5	Secure				Dump	1000	Nf Birds Data Entry by WD mstr1028266
	Northern Coshawk	Accipitridae	Todd Boland	1 3	2 28	1000	63	S3B		C5	Secure			Dump	Dump	1000	Nf Birde, Data Entry by WD metr1028267
Accipiter gentilis	Northern Ceekeyde	Accipititude			20	1999		000	N4D, N4NJN,	GJ	Secure			Dump	Dump	1000	Ni.Dirds, Data Entry by WD IIIsti 1020207
Accipiter gentilis	Northern Gosnawk	Accipitridae	Bruce Mactavish	1 12	2 6	1999	53	SJB	N4B,N4N5N,	Go	Secure				Dump	1000	NT.BIrds, Data Entry by WD mstr1028268
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	3 1	1 18	2000	\$3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028269
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish a	1 2	2 6	2000	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028270
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	1 18	2001	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Cone	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028272
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 4	4 8	2001	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028273
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 3	3 12	2002	S3	S3B	N4B.N4N5N.	G5	Secure		•	Dump	Dump	1000	Nf.Birds, Data Entry by WD mstr1028275
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 3	3 24	2002	\$3	S3B	N4B N4N5N	G5	Secure			Dump	Dump	1000	Nf Birds Data Entry by WD mstr1028277
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	John Wells & Bru	1 3	3 24	2002	S3M S2N	S2M	N3B	GATA	Sensitive Special Con	corn Vulnorable	Concern (anatum/t	Bamp	Dump	1000	Nf Birds, Data Entry by WD mstr1028278
Accipitor gontilis	Northorn Coshawk	Accinitridao	Bruco Moctovich	1 11	, <u>2</u> 4 1 5	2002	63	S2R		65	Socuro			Dump	Dump	1000	Nf Birds, Data Entry by WD mstr 1020270
Accipiter gentilis	Northern Goshawk	Accipitridae	Druce Mactavisti	1 11		2002		336	N4D,N4N3N,	G5	Secure			Dump	Dump	1000	Ni.Dirus, Data Entry by WD IIIsti 1020201
Accipiter gentilis	Northern Gosnawk	Accipitridae	Bruce Mactavish (2 1	1 2	2003	53	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	NT.BIrds, Data Entry by WD mstr1028282
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	3 2	2003	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028283
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	-99 1	1 1	2004	S3	S3B	N4B,N4N5N,	G5	Secure			Dump	Dump	1000	Nf.Birds, Data Entry by WD mstr1028285
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 2	2 29	2004	S3	S3B	N4B,N4N5N,	G5	Secure			Dump	Dump	1000	Nf.Birds, Data Entry by WD mstr1028287
Falco rusticolus	Gyrfalcon	Falconidae	Jared Clarke	1 11	1 28	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028288
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 1	1 9	2005	S3	S3B	N4B.N4N5N.	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028289
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 2	2 20	2005	S2S3N SUM	S2S3N	N4N5B N5N	G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1028291
	Northern Coshawk	Accinitridae	Bruce Mactavish	1 2	20	2000	63	\$3B		G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1028202
	Currfeleen	Feleenidee	Druce Mactavish		2 20	2005			NAMED MEN	65	Secure				Dump	1000	Ni.Dirus, Data Entry by WD IIIsti 1020292
Faico fusticolus	Gynaicon	Faiconidae	Bruce Mactavish	1 2	2 21	2005	5253N,5UM	5253IN	N4N5B,N5N,	Go	Secure				Dump	1000	NT.BIrds, Data Entry by WD mstr1028294
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 2	2 27	2005	\$3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nt.Birds, Data Entry by WD mstr1028295
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 3	3 6	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028296
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 3	3 6	2005	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028297
Accipiter gentilis	Northern Goshawk	Accipitridae	Jared Clarke	2 1	1 1	2006	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028304
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 3	3 5	2006	S3	S3B	N4B.N4N5N.	G5	Secure				Dump	1000	Nf.Birds. Data Entry by WD mstr1028311
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	3 5	2006	S3M_S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf Birds, Data Entry by WD mstr1028312
Acciniter gentilis	Northern Goshawk	Accinitridae	Jared Clarke	1 12	2 10	2000	\$3	S3B		G5	Secure		Concorn (anatanin		Dump	1000	Nf Birds, Data Entry by WD mstr1028315
	Curfalaan	Feleenidee		1 12	2 10	2000			NANED NEN	65	Secure				Dump	1000	Nf Birde, Data Entry by WD mist 1020313
	Gynaicon	Faiconidae		1 12	2 20	2000	3233N,SUIVI	000		GS	Secure				Dump	1000	NI. Birds, Data Entry by WD IIIsti 1020310
Accipiter gentilis	Northern Gosnawk	Accipitridae	Bruce Mactavish (1 2	2 25	2007	53	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	NT.BIrds, Data Entry by WD mstr1028318
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	2 25	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028319
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	2 3	3 11	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028322
Accipiter gentilis	Northern Goshawk	Accipitridae	Jared Clarke	1 11	1 25	2007	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028323
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Jared Clarke	1 11	1 25	2007	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028324
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	3 1	1 2	2008	S3	S3B	N4B.N4N5N.	G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1028326
Accipiter gentilis	Northern Goshawk	Accinitridae	Bruce Mactavish	3 1		2008	<u> </u>	S3B	N4B N4N5N	G5	Secure				Dump	1000	Nf Birds, Data Entry by WD mstr1028328
Falco porogrinus suben a	Porogrino Eoloon	Falconidao	Bruco Mactavish	1 2		2000	S3M S2N	SOM	N2D	C4T4	Sonsitivo Special Con		Concorn (anatum/t		Dump	1000	Nf Birds, Data Entry by WD mstr 1020020
A sciniter nentilie		Assistivides	Diuce Mactavisii	1 2	<u> </u>	2000	33101, 3210			0414					Dump	1000	Ni.Dirds, Data Entry by WD IIIsti 1020330
Accipiter gentilis	Northern Gosnawk	Accipitridae	Bruce Mactavish	1 2	2 25	2008	53	SJB	N4B,N4N5N,	Go	Secure		0 / / /		Dump	1000	NT.BIrds, Data Entry by WD mstr1028331
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	2 25	2008	S3M, S2N	S2M	N3B	G414	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028332
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	2 1	1 1	2009	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028333
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 3	3 8	2009	S3	S3B	N4B,N4N5N,	G5	Secure				Dump	1000	Nf.Birds, Data Entry by WD mstr1028334
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	3 8	2009	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Dump	1000	Nf.Birds, Data Entry by WD mstr1028335
Accipiter gentilis	Northern Goshawk	Accipitridae	Doug Hynes	1 8	3 23	2007	S3	S3B	N4B.N4N5N.	G5	Secure				East Coast Trail	5000	Nf.Birds, Data Entry by WD mstr1027864
I oxia curvirostra	Red Crossbill	Fringillidae	Paul Linegar	-99 7	7 7	2011	S1S2	S2S3	N5B N5N N5	G5	At Risk Threatene	d Endangered	Endangered		East End	5000	Nf Birds, Data Entry by WD mstr1027823
	Ped Crossbill	Fringillidae	Libby Creelman	00 8	, 2 13	2011	\$152	\$253	N5B N5N N5	C5	At Risk Threatene	d Endangered	Endangered		East End	5000	Nf Birds, Data Entry by WD metr1028240
		l miginicae		-99 0	1 20	2004		0200		65	At risk Endergan					1000	Ni. Dirds, Data Entry by WD mistr 1020240
Pagophila eburnea		Landae	Bruce Maclavish	1 1	30	1998	STN,SUM	SZIN		G4	ALTISK Endangere	ed Endangered		Eas		1000	NI.Birds, Data Entry by WD mstr 1028061
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	2 18	2001	S3M, S2N	S2M	N3B	G414	Sensitive Special Con	cern Vulnerable	Concern (anatum/t	Eas	st End of Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028079
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	golfman_otto_yah	1 2	2 26	2008	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t	Eas	t End of Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028120
Pagophila eburnea	Ivory Gull	Laridae	Kenneth Knowles	-99 1	1 16	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk Endangere	ed Endangered	Endangered	Quidi \	/idi Lake at Chicken Proces:	1000	Nf.Birds, Data Entry by WD mstr1028186
Falco rusticolus	Gyrfalcon	Falconidae	Jared Clarke	1 12	2 11	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure			East	of Virginia River Outflow	1000	Nf.Birds, Data Entry by WD mstr1028143
Loxia curvirostra	Red Crossbill	Fringillidae	John Wells	1 5	5 6	2002	S1S2	S2S3	N5B.N5N.N5	G5	At Risk Threatene	ed Endangered	Endangered	Pine Clump, lucation	Building, Memorial Univers	1000	Nf.Birds, Data Entry by WD mstr1027912
Falco rusticolus	Gyrfalcon	Falconidae	Jared Clarke	1 5	5 19	2004	S2S3N SUM	S2S3N	N4N5B N5N	G5	Secure	5	5	Building	Memorial University of Ne	1000	Nf Birds Data Entry by WD mstr1027913
Falco sparverius	American Kestrel	Falconidae	Howard Clase	1 12	ງ <u>າ</u> ວ	2001	S2B SLIM	S2B	N5B N1N N5	C5	Undetermined ate (Group 3	Low				1000	Nf Birds, Data Entry by WD mstr1027042
	Northorn Cochowk	Accipitridac	Appo Morio MoEl	1 2		2011	62D,00M	S2D		C5		LOW		Avenue		1000	Nf Pirde, Data Entry by WD matr1027342
	Puoty Ploatehind	lotoridas		1 3		2001		00D	NICO NUMERIA	65			Special Company			1000	NI.DIIUS, Data EIIII Y DY WD IIISti 1027700
Euphagus carolinus		oticiendae	Interior Gregory	1 3	18	2000	5253B,5UM	SUB	IN4D,INUIN,IN4	G4	Secure Special Con	vuinerable	Special Concern			1000	INI. BIRDS, DATA ENTRY BY WD MSTF1028213
Bubo scandiacus	Snowy Owl	Strigidae	Dave Fifield	1 4	+ 26	1998	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure				Harbour	1000	Nt.Birds, Data Entry by WD mstr1030871
Accipiter gentilis	Northern Goshawk	Accipitridae	Jared Clarke	1 9	29	2008	S3	S3B	N4B,N4N5N,	G5	Secure			Н	ealth Sciences Centre	1000	Nf.Birds, Data Entry by WD mstr1027952
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	John Pratt	1 1	1 26	2000	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Hotel Newfoundland	1000	Nf.Birds, Data Entry by WD mstr1027911
Euphagus carolinus	Rusty Blackbird	Icteridae	Ken Knowles	1 6	6 12	2000	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure Special Con	cern Vulnerable	Special Concern		Kenny's Pond	1000	Nf.Birds, Data Entry by WD mstr1028209
Falco sparverius	American Kestrel	Falconidae	Todd Boland	1 3	3 20	2002	S2B.SUM	S2B	N5B.N1N.N5	G5	Undetermined ate (Group 3.	Low	· · ·		Kings Bridge Road	1000	Nf.Birds, Data Entry by WD mstr1027947
Accipiter gentilis	Northern Goshawk	Accinitridae	Todd Boland	1 3	3 20	2002		S3B	N4B N4N5N	G5	Secure				King's Bridge Road	1000	Nf Birds, Data Entry by WD mstr1027948
	Northern Coshawk	Accipitridae	Bruce Mactavish	1 12	2 6	2002	63	S3B		C5	Secure					1000	Nf Birds, Data Entry by WD mstr1027702
		Folgonidae	Druce Mactavish	1 12	2 0	2000		SOM	NOD	00	Consitive Createl Con		Concern (on at un /t			1000	Ni.Dirds, Data Entry by WD mistri 1027732
Faico peregninus subsp. a	Peregnine Faicon	Faiconidae	Bruce Maclavish	1 12	2 0	2000	53IVI, 52IN	52101	IN3B	G414	Sensitive Special Con					1000	NI.Birds, Data Entry by WD mstr 1028271
Loxia curvirostra	Red Crossbill	Fringillidae	Nat & Dave	10 2	2 22	2009	S1S2	\$2\$3	N5B,N5N,N5	G5	At Risk I hreatene	ed Endangered	Endangered	L	eft Pond in Pippy Park	1000	Nf.Birds, Data Entry by WD mstr1028179
Euphagus carolinus	Rusty Blackbird	Icteridae	John Wells	1 5	ō 17	2000	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure Special Con	cern Vulnerable	Special Concern		Long Pond	100	Nf.Birds, Data Entry by WD mstr1027992
Accipiter gentilis	Northern Goshawk	Accipitridae	Howard Clase	1 5	5 16	2003	S3	S3B	N4B,N4N5N,	G5	Secure				Long Pond	100	Nf.Birds, Data Entry by WD mstr1028814
Accipiter gentilis	Northern Goshawk	Accipitridae	Anne Hughes	1 7	7 15	2004	S3	S3B	N4B,N4N5N,	G5	Secure				Long Pond	100	Nf.Birds, Data Entry by WD mstr1028010
Circus cvaneus	Northern Harrier	Accipitridae	Gene & Karen He	2 11	1 18	2006	S3B.SUM	S3?B	N5B.N4N	G5	Secure				Long Pond	100	Nf.Birds. Data Entry by WD mstr1028817
Loxia curvirostra	Red Crossbill	Fringillidae	Paul Linegar	-99 11	1 10	2006	S1S2	S2S3	N5B.N5N N5	G5	At Risk Threatene	d Endandered	Endangered		Long Pond	100	Nf.Birds, Data Entry by WD mstr1028020
	Red Crosshill	Frindillidae	Todd Boland	10 4	1 7	2000	S1S2	S2S3	N5R N5N N5	G5	At Risk Threatons	d Endangered	Endangered		Long Pond	100	Nf Rirds Data Entry by WD metr1028818
	Red Crocobill	Fringillidae	Michael Dermente	1 4	. /	2007	C102	6763	NED NEN NE	05	At Dick Threater					100	NE Rirde Data Entry by WD Hist 1020010
				1 4	+ 13	2007	0102	0200		65				In Jacob Arres		100	NEDiate Date Estavlad VD IIISU 1020019
		Fringillidae		-99 4	+ 22	2007	5152	5253	NOB,N5N,N5	G5	At RISK I hreatene	eu Endangered	Endangered	in larch trees		100	INT.BIRDS, Data Entry by WD mstr1028820
Accipiter gentilis	Northern Goshawk	Accipitridae	I odd Boland	1 4	13	2008	\$3	S3B	N4B,N4N5N,	G5	Secure				Long Pond	100	Nt.Birds, Data Entry by WD mstr1028024
Accipiter gentilis	Northern Goshawk	Accipitridae	Anne Hughes	1 5	D 24	2008	S3	S3B	N4B,N4N5N,	G5	Secure				Long Pond	100	Nf.Birds, Data Entry by WD mstr1028026
Loxia curvirostra	Red Crossbill	Fringillidae	Anne Hughes	5 1	1 22	2009	S1S2	S2S3	N5B,N5N,N5	G5	At Risk Threatene	ed Endangered	Endangered	In larch trees	Long Pond	100	Nf.Birds, Data Entry by WD mstr1028029
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Alvan Buckley	1 12	2 16	2009	S3M, S2N	S2M	N3B	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t		Long Pond	100	Nf.Birds, Data Entry by WD mstr1028034
Accipiter gentilis	Northern Goshawk	Accipitridae	Brendan Kelly	1 6	6 21	2011	S3	S3B	N4B,N4N5N.	G5	Secure				Long Pond	100	Nf.Birds, Data Entry by WD mstr1028041
Accipiter gentilis	Northern Goshawk	Accipitridae	Michael Parmente	1 1	1 7	2012	S3	S3B	N4B.N4N5N	G5	Secure				Lona Pond	100	Nf,Birds, Data Entry by WD mstr1028042
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Alvan Buckley	1 10	2 15	2012	S3M_S2N	S2M	N3R	G4T4	Sensitive Special Con	cern Vulnerable	Concern (anatum/t	and Be	hind NRC: South West of th	1000	Nf Birds Data Entry by WD metr1028033
Funhagus carolinus	Rusty Blackbird		Ken Knowles	1 5	5 10	2009	S2S2R CLIM	S3R		C4			Special Concorn		Lundrigan's Marsh	1000	Nf Rirde Data Entry by WD Inst 1020000
	Rusty Diackbillu	lotoridas		1 5	1 19	2002		000		04			Special Concern		Lundrigon's Marsh	1000	NE Dirdo, Data Entry by WD IIISti 1020338
	RUSIY BIACKDIRD	Iclendae		4	+ 21	2003	5253B,5UM	00B	IN4B,INUN,IN4	G4	Secure Special Con	vuinerable	Special Concern			1000	INI. BIRDS, Data Entry by WD mStr1028340
⊢alco sparverius	American Kestrel	Falconidae	Bruce Mactavish	1 11	1 9	2002	S2B,SUM	S2B	N5B,N1N,N5	G5	Undetermined ate (Group 3,	LOW		M	acdonald Drive School	1000	Nt.Birds, Data Entry by WD mstr1028216

GNAME	GCOMNAME	FAMILY	Observer Total	Number Month	Dav	Year	SRANK 2015 SR	RANK 2010	NRANK GR	ANK Gen	eralStatus	COSEWIC ST	PROVINCIAL	SARA DESC	R HABIT/SITE NAME A	ccuracv	SYNAME CITATION IDNUM
Euphagus carolinus	Rusty Blackbird	Icteridae	Bruce Mactavish	1 5	5	2012	S2S3B SUM	S3B	N4B NUN N4	G4	Secure	Special Concern	Vulnerable	Special Concern	Maddox Cove Road - Beaver Pond	1000	Nf Birds, Data Entry by WD mstr1027063
Euphagus carolinus	Rusty Blackbird	Icteridae	Catherine Barrett	1 5	6	2012	S2S3B SUM	S3B		G4	Secure	Special Concern	Vulnerable	Special Concern	Maddox Cove Road - Beaver Pond	1000	Nf Birds, Data Entry by WD metr1027064
	Rusty Blackbird	lotoridae		1 J	7	2012	5255D,50M	53D		C4	Secure	Special Concern	Vulnerable	Special Concern	Maddox Cove Road - Deaver Pond	1000	Nf Dirds, Data Entry by WD Insti 1027065
	Rusty Blackbild	loteridae	J.williams@m.sym	2 5	1	2012	3233B,30M	33D	N4D,NUN,N4	G4	Secure	Special Concern	Vullerable		Maddox Cove Road - Beaver Polid	1000	NI. Birds, Data Entry by WD Insti 1027005
Euphagus carolinus	Rusty Blackbird	Icteridae	Gene & Karen He	2 5	9	2012	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure	Special Concern	Vulnerable	Special Concern	Maddox Cove Road - Beaver Pond	1000	Nf.Birds, Data Entry by WD mstr1027066
Euphagus carolinus	Rusty Blackbird	Icteridae	Ed Hayden	2 5	14	2012	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure	Special Concern	Vulnerable	Special Concern In the	hydro wireMaddox Cove Road - Beaver Pond	1000	Nf.Birds, Data Entry by WD mstr1027067
Euphagus carolinus	Rusty Blackbird	lcteridae	M. Roche	2 5	20	2012	S2S3B,SUM	S3B	N4B,NUN,N4	G4	Secure	Special Concern	Vulnerable	Special Concern	Maddox Cove Road - Beaver Pond	1000	Nf.Birds, Data Entry by WD mstr1027068
Accipiter gentilis	Northern Goshawk	Accipitridae	Ken Knowles	1 1	24	2004	S3	S3B	N4B,N4N5N,	G5	Secure				Marine Drive	1000	Nf.Birds, Data Entry by WD mstr1028357
Bubo scandiacus	Snowy Owl	Strigidae	Ken Knowles	1 3	22	2012	S3N,SUM	SNA	N5B,N5N,N5	G5	Secure				Queen of Peace Church, Torbay F	1000	Nf.Birds, Data Entry by WD mstr1028255
Loxia curvirostra	Red Crossbill	Fringillidae	Dave Brown	12 4	16	2002	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	orial University of Newfoundland Ca	1000	Nf.Birds, Data Entry by WD mstr1027929
Loxia curvirostra	Red Crossbill	Fringillidae	Jared Clarke	1 4	17	2002	S1S2	S2S3	N5B.N5N.N5	G5	At Risk	Threatened	Endangered	Endangered	orial University of Newfoundland Ca	1000	Nf.Birds, Data Entry by WD mstr1027931
	Northern Harrier	Accinitridae	Jared Clarke	1 5	17	2002	S3B SUM	S32B	N5B N4N	G5	Secure				Mount Scio Road	1000	Nf Birds, Data Entry by WD mstr1027959
	Northern Coshawk	Accipitridae		1 0	8	2002	\$3	S3B		C5	Secure				MUN Botantical Gardens	1000	Nf Birds, Data Entry by WD moti 102/000
Ruba coordinous	Spower Oud	Strigidoo	Jarad Clarka	1 11	26	2002		SNA	NED NEN NE	C5	Secure				N Dovoro Contro poor Purton's Pu	1000	Nf Dirds, Data Entry by WD mstr1020100
				1 11	20	2001				05	Secure At Diale	Thus stops al	En den nene d	Fudencia	Mundu Deind	1000	Ni. Dirds, Data Entry by WD IIIsti 1027930
Loxia curvirostra	Red Crossbill	Fringillidae		1 11	20	2006	5152	5253	N5B,N5N,N5	65	At RISK	Inreatened	Endangered	Endangered	Munay Poina	1000	NT.Birds, Data Entry by WD mstr1027770
Dolichonyx oryzivorus	Bobolink	Icteridae	Dave Fifield	1 9	19	2000	S1B,SUM	S2B	N5B,N4N5M	G5 Ma	ly be at risk	Inreatened	Vulnerable		Mundy Pond	1000	Nf.Birds, Data Entry by WD mstr1027764
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 4	5	2003	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Mundy Pond	1000	Nf.Birds, Data Entry by WD mstr1027767
Falco rusticolus	Gyrfalcon	Falconidae	Dave Brown	1 11	7	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Mundy Pond	1000	Nf.Birds, Data Entry by WD mstr1027769
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 2	25	2008	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Mundy Pond	1000	Nf.Birds, Data Entry by WD mstr1027771
Accipiter gentilis	Northern Goshawk	Accipitridae	John Wells	1 11	27	2011	S3	S3B	N4B,N4N5N,	G5	Secure				Mundy Pond	1000	Nf.Birds, Data Entry by WD mstr1027778
Dolichonyx oryzivorus	Bobolink	İcteridae	slorenz@mail.con	1 10) 4	2007	S1B.SUM	S2B	N5B.N4N5M	G5 Ma	v be at risk	Threatened	Vulnerable		Mundy Pond Towards Soccer Field	1000	Nf.Birds. Data Entry by WD mstr1027760
Pagophila eburnea	lvory Gull	Laridae	Todd Boland	2 2	7	2002	S1N SUM	S2N	N1B N1N N1	G4	At risk	Endangered	Endangered	Endangered	Near Quidi Vidi Brewery	1000	Nf Birds, Data Entry by WD mstr1028148
	Short-eared Owl	Strigidae	lohn Wells	1 1	7	2002	S3B SLIM	S3B		G5	Secure	Special Concern	Vulnerable	Special Concern	Near the Geo Centre	1000	Nf Birds, Data Entry by WD metr1027028
	Curfoloon	Ecloopideo	Karon Horzhorg	1 1	1	2000	5352N SUM	SOSON		05 C5	Secure		Vullerable	opecial concern	Near Virginia Diver End of Lake	1000	Nf. Dirds, Data Entry by WD mstr1029100
	Northern Cochevil	Assistiates			16	2003	3233IN,3UIVI	02001		GS	Secure				Near Virginia River End Or Lake	5000	NI. Dirds, Data Entry by WD IIISti 1020100
Accipiter gentilis	Northern Goshawk	Accipitridae			10	2003	53	53B	IN4B,IN4INDIN,	Go	Secure	-			Newloundiand Drive	5000	NI.Birds, Data Entry by WD mstr 1028247
Loxia curvirostra	Red Crossbill	Fringillidae	Gene Herzberg	1 6	12	2011	5152	5253	N5B,N5N,N5	G5	At RISK	Inreatened	Endangered	Endangered	North East	5000	NT.Birds, Data Entry by WD mstr1027757
Loxia curvirostra	Red Crossbill	⊢ringillidae	Gene & Karen He	3 2	22	2008	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Ihreatened	Endangered	Endangered	North East	5000	Nt.Birds, Data Entry by WD mstr1027813
Loxia curvirostra	Red Crossbill	Fringillidae	Gene Herzberg	4 1	11	2009	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	North East	5000	Nf.Birds, Data Entry by WD mstr1027819
Loxia curvirostra	Red Crossbill	Fringillidae	Gene Herzberg	11 1	31	2009	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered	North East	5000	Nf.Birds, Data Entry by WD mstr1027821
Accipiter gentilis	Northern Goshawk	Accipitridae	Anne Hughes	2 6	24	2004	S3	S3B	N4B,N4N5N,	G5	Secure				North Side of Long Pond	1000	Nf.Birds, Data Entry by WD mstr1028009
Accipiter gentilis	Northern Goshawk	Accipitridae	Anne Hughes	1 3	24	2008	S3	S3B	N4B,N4N5N.	G5	Secure				North Side of Long Pond	1000	Nf.Birds, Data Entry by WD mstr1028823
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	12	2003	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	North Side of Quidi Vidi Gut	1000	Nf.Birds. Data Entry by WD mstr1028187
Bubo scandiacus	Snowy Owl	Strinidae	Cliff Doran	1 11	2	2010	S3N SUM	SNA	N5B N5N N5	G5	Secure				orthern Radar - 25 Anderson Aven	1000	Nf Rirds Data Entry by WD mstr1027882
	Bod Crosshill	Eringillidao	Michael Parmente	3 5	27	2010	\$1\$2	6263	NER NEN NE	C5	At Dick	Throatonod	Endangorod	Endangorod	Oven Bond Retanical Cardon	1000	Ni. Birds, Data Entry by WD mstr1027002
	Red Crossbill	Fringillidae		<u> </u>	21	2000	S152	0200		GJ	At Diek	Threatened	Endangered	Endengered	of Education Building, Momorial Lin	1000	Ni. Dirds, Data Entry by WD IIIsti 1027914
	Red Crossbill	Fringillidae		1 4	3	2009	5152	5253		Go		Inrealeneo	Endangered	Endangered	al Education Building, Memorial On	1000	NI.Birds, Data Entry by WD mstr 1027908
Accipiter gentilis	Northern Goshawk	Accipitridae	Dirk Hilbers	1 4	15	2003	\$3	S3B	N4B,N4N5N,	G5	Secure				Pippy Park	1000	Nf.Birds, Data Entry by WD mstr1028183
Accipiter gentilis	Northern Goshawk	Accipitridae	Chris Brown	1 1	10	2003	S3	S3B	N4B,N4N5N,	G5	Secure				Pleasantville	1000	Nf.Birds, Data Entry by WD mstr1028197
Accipiter gentilis	Northern Goshawk	Accipitridae	Martin Renner	1 2	15	2000	S3	S3B	N4B,N4N5N,	G5	Secure				Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028144
Accipiter gentilis	Northern Goshawk	Accipitridae	Dave Brown	1 1	5	2002	S3	S3B	N4B,N4N5N,	G5	Secure				Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028147
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	John Pratt	1 2	27	2002	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028149
Falco rusticolus	Gyrfalcon	Falconidae	Howard Clase	1 2	6	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028151
Falco rusticolus	Gvrfalcon	Falconidae	Bruce Mactavish	1 2	16	2004	S2S3N.SUM	S2S3N	N4N5B.N5N.	G5	Secure				Quidi Vidi	1000	Nf Birds, Data Entry by WD mstr1028152
	Red Crossbill	Fringillidae	Paul Linegar	10 2	27	2008	S1S2	\$2\$3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered In lar	rch trees Quidi Vidi	1000	Nf Birds, Data Entry by WD mstr1028154
Ealco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 12) /	2000	S3M S2N	S2M	N3B	CATA S	Sonsitivo	Special Concern	Vulnerable	Concern (anatum/t		1000	Nf Birds, Data Entry by WD moti 1020104
Falco peregrinus subsp. a		Falconidae		1 12	4	2001	SOW, SZN	SZIVI	NOD		Sensitive	Special Concern	Vulnerable			1000	Ni. Dirds, Data Entry by WD Insti 1020150
Faico peregrinus subsp. a	Peregnine Falcon	Falconidae	Dave Brown		4	2002	S3IVI, SZIN	SZIVI	N3B	G414 3	Sensitive	Special Concern	Vulnerable (1000	NI.Birds, Data Entry by WD mstr 1028159
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 1	5	2002	S3M, S2N	S2M	N3B	G414 8	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028161
Falco rusticolus	Gyrfalcon	Falconidae	David Shepherd	1 4	14	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028169
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	2 11	10	2009	S3	S3B	N4B,N4N5N,	G5	Secure				Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028174
Pagophila eburnea	lvory Gull	Laridae	Bruce Mactavish	2 2	1	2002	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	Quidi Vidi Gut	1000	Nf.Birds, Data Entry by WD mstr1027889
Accipiter gentilis	Northern Goshawk	Accipitridae	Jytte Selno	1 2	11	2002	S3	S3B	N4B,N4N5N,	G5	Secure				Quidi Vidi Gut	1000	Nf.Birds, Data Entry by WD mstr1027890
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 1	12	2003	S3	S3B	N4B.N4N5N.	G5	Secure				Quidi Vidi Gut	1000	Nf.Birds, Data Entry by WD mstr1027891
Pagophila eburnea	Ivory Gull	Laridae	Howard Clase	1 1	12	1998	S1N SUM	S2N	N1B N1N N1	G4	At risk	Endangered	Endangered	Endangered	Quidi Vidi Gut	1000	Nf Birds, Data Entry by WD mstr1027892
Pagophila eburnea	Ivory Gull	Laridae	Bruce Mactavish	2 2	5	2002	S1N SUM	S2N	N1B N1N N1	G4	Atrisk	Endangered	Endangered	Endangered	Quidi Vidi Gut	1000	Nf Birds, Data Entry by WD mstr1028082
Pagophila eburnea	Ivery Cull	Laridae	Bruce Mactavish	2 2	0	2002	S1N SUM	S2N	N1B N1N N1	G4	Atrick	Endangered	Endangered	Endangered	Quidi Vidi Cut	1000	Nf Birds, Data Entry by WD metr1028084
	Northern Cochevil	Agginitridag	Diuce Mactavish	2 2	9	2002		0211		04	ALTISK Coolumo	Lindangered	Lilualiyeleu	Lindangered		1000	Ni. Dirds, Data Entry by WD Insti 1020004
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Maclavish	1 12	2 <u>2</u>	2002	53	53B	IN4B,IN4INDIN,	Go	Secure	0				1000	NI.Birds, Data Entry by WD mstr 1027847
Faico peregrinus subsp. a		Faiconidae	Todd Boland	1 1	25	1998	S3M, S2N	SZM	N3B	G414 8	Sensitive	Special Concern	Vuinerable (Quidi Vidi Lake	1000	NT.Birds, Data Entry by WD mstr1028060
Chordelles minor	Common Nighthawk	Caprimulgidae	e Todd Boland	1 6	2	1998	SNA	SNA	N4B,N3M	G5 Ma	iy be at risk	Special Concern	Ihreatened	Ihreatened	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028063
Falco peregrinus subsp. a	a Peregrine Falcon	Falconidae	Bruce Mactavish	1 12	2 21	1999	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028064
Accipiter gentilis	Northern Goshawk	Accipitridae	Dave Brown	1 1	15	2000	S3	S3B	N4B,N4N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028065
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 1	15	2000	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028066
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 2	21	2000	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028070
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 3	18	2000	S3M, S2N	S2M	N3B	G4T4	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028071
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	10	2000	S3M S2N	S2M	N3B	GATA S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf Birds, Data Entry by WD metr1028073
Falco peregrinus suben a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	12 20	2001	S3M S2N	S2M	N3R	GATA G	Sensitivo	Special Concern	Vulnerable	Concern (anatum/t		1000	NI Rirde Data Entry by WD matr1020076
Falco porogrinuo suber	Deregrine Falcon	Falconidae	Bruco Mostovich	1 4	20	2001	S2M S2N	C2M	NIOD		Sonoitivo	Special Concern	Vulnorable	Concern (anatum/t		1000	Ni Dirde, Data Entry by WD IIISti 1020070
Talco peregninus subsp. a		Falconidae		1 1 1	20	2002	SOIVI, SZIN	SZIVI	NOD		Sensitive	Special Concern				1000	
raico peregrinus subsp. a	Peregrine Falcon	Faiconidae	Loga Boland	1 2	7	2002	53M, S2N	S2M	N3B	G414 S	Sensitive	Special Concern	vuinerable (Joncern (anatum/t	Quidi Vidi Lake	1000	NT.BIRDS, Data Entry by WD mstr1028083
⊢alco peregrinus subsp. a	Peregrine Falcon	⊦alconidae	John Wells	1 2	11	2002	S3M, S2N	S2M	N3B	G414 S	Sensitive	Special Concern	Vulnerable (oncern (anatum/t	Quidi Vidi Lake	1000	Nt.Birds, Data Entry by WD mstr1028085
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Ken Knowles	1 2	26	2003	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028088
Falco rusticolus	Gyrfalcon	Falconidae	Jared Clarke	1 1	20	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028090
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 1	30	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028091
Falco rusticolus	Gyrfalcon	Falconidae	Jared Clarke	1 2	29	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028092
Falco rusticolus	Gvrfalcon	Falconidae	Bruce Mactavish	1 3	13	2004	S2S3N SUM	S2S3N	N4N5B N5N	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028094
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 2	20	2004	S2S3N SUM	\$2\$3N	N4N5R N5N	G5	Secure				Quidi Vidi Lake	1000	Nf Rirds Data Entry by WD mstr1028095
Falco rusticolus	Gyrfalcon	Falconidae	Jonnifer Harding	1 1	10	2004	S2S3N SLIM	\$250N	NANER NEN	G5	Secure					1000	Ni Birde Data Entry by WD mou 1020000
Falso rusticolus	Cyrfeleer	Folgenide		1 1	12	2003		S200N	NANED NEW	05	Secure					1000	NI. DIIUS, Data EIILIY DY VVD IIISti 1020097 Nif Dirda, Data Entry by M/D matrid 000000
	Gynalcon	Faiconidae		1	19	2005	SZSSIN,SUM	3233N	IN4INOD,INON,	65	Secure			On	a pole. Quidi Vidi Lake	1000	INI. BIIOS, DATA ENTRY DY WD MSTr1028098
Falco rusticolus	Gyrtalcon	Falconidae	Bruce Mactavish	1 1	28	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nt.Birds, Data Entry by WD mstr1028099
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 2	5	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028101
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 3	19	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure				Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028102
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 12	2 11	2005	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5	Secure			East E	nd of Lake Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028103
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 4	1	2006	S3M. S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds. Data Entry by WD mstr1028106
Falco neregrinus suben	Peregrine Falcon	Falconidae	Derm Kenny	1 1	1	2006	S3M S2N	S2M	N3R	G4T4	Sensitive	Special Concern	Vulnerable	Concern (anatum/t	Quidi Vidi Lake	1000	Nf Rirds Data Entry by WD mstr1028108
Falco peregrinus suben	Peregrine Falcon	Falconidao	Bruce Mactavish	1 1		2000	S3M S2N	S2M	N3R	G4T4	Sensitive	Special Concorn	Vulnerable	Concern (anatum/t		1000	Nf Rirds, Data Entry by WD motr1020100
Paganhila shuma subsp. 8		l aridaa		1 1	14	2007		S2IVI								1000	Nichinda, Data Entry by WD III5ti 1020108
Fagophila epurnea				1 1 1	20	2007		SZIN		04	ALTISK					1000	INI.DIIUS, DAIA ENITY DY WD MSIF1028110
⊢aico peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	22	2007	53M, S2N	S2M	N3B	G414 S	Sensitive	Special Concern	vulnerable (Joncern (anatum/t	Quidi Vidi Lake	1000	NT.Birds, Data Entry by WD mstr1028111
⊢alco peregrinus subsp. a	Peregrine Falcon	⊦alconidae	Bruce Mactavish	1 1	23	2007	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028112
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Jared Clarke	1 1	27	2008	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028116
Falco peregrinus subsp. a	a Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	25	2008	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028118
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	26	2008	S3M, S2N	S2M	N3B	G4T4 S	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028119
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	3	2008	S3M. S2N	S2M	N3B	G4T4	Sensitive	Special Concern	Vulnerable (Concern (anatum/t	Quidi Vidi Lake	1000	Nf.Birds. Data Entry by WD mstr1028121
Falco neregrinus suben	Peregrine Falcon	Falconidae	Bruce Mactavish	1 5	1/	2008	S3M_S2N	S2M	N3B	G4T4	Sensitive	Special Concern	Vulnerable	Concern (anatum/t	Quidi Vidi Lake	1000	Nf Rirds, Data Entry by WD mstr1028126
Dagonhilo churree		Loridoo	Bruce Meeterich		14	2000		C2IVI C2IVI		64		Endengered		Endongorod		1000	Ni Dirdo, Data Entry by WD III50 1020120
r ayophila eburnea		Lanuae		<u>i</u> 1	13	2009	311N,301VI	SZIN		U 4	ALLISK	Enuangered	Enualigered	Endangered		1000	

GNAME	GCOMNAME	FAMILY	Observer Tot	alNumber Month	Dav	Year	SRANK 2015 SR	ANK 2010	NRANK GRAN	JK Gene	ralStatus (COSEWIC ST	PROVINCIAL	SARA D	DESCR HABIT/SITE NAME	Accuracy	SYNAME CITATION IDNUM
Buteo logopuo	Bough Loggod Howk	Accinitridac		1 1	22	2011	C1C2010 010	C2D			Require		INOVINOIAL			1000	Nf Pirda, Data Entry by WD matr1029127
	Rough-Legged Hawk	Accipitituae			23	2011	0014 001	0014			becule	0	Mada and I.I.	O		1000	NEDICE, Data Entry by WD Institut20107
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Ken Knowles	1 3	11	2001	S3M, S2N	S2M	N3B	G414 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Vidi Lake - Virginia River Inflow to	1000	Nf.Birds, Data Entry by WD mstr1028218
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	golfman_otto_yah	1 2	16	2010	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	idi Vidi Lake by Virginia River Outfl	1000	Nf.Birds, Data Entry by WD mstr1028135
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Todd Boland	1 3	20	2002	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Vidi Lake next to Rennies River Or	1000	Nf.Birds, Data Entry by WD mstr1028086
Ealco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 1	1	2001	S3M S2N	S2M	N3B	2474 9	onsitivo	Special Concern	Vulnerable	Concern (anatum/t	ti Vidi Lake off the Virginia River M	1000	Nf Birds, Data Entry by WD metr1028072
Falco peregilitus subsp. a		Falconidae	Bruce Mactavish		1	2001	00M 00N	0014	NOD	3414 S			Vullielable			1000	NEBICS, Data Entry by WD Institute20072
Faico peregrinus subsp. a	Peregrine Faicon	Faiconidae	Bruce Mactavish		30	2001	531VI, 521N	52111	N3B	3414 5	ensitive	Special Concern	vuinerable	Concern (anatum/t	Quidi vidi Lake vvest	1000	NT.BIRDS, Data Entry by WD mstr 1028077
Pagophila eburnea	Ivory Gull	Laridae	Todd Boland	1 2	2 1	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	Quidi Vidi Lake/St. John's Harbour	1000	Nf.Birds, Data Entry by WD mstr1028062
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Gene Herzberg	1 2	11	2012	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Quidi Vidi toward the Cemetery	1000	Nf.Birds, Data Entry by WD mstr1028155
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 10	ר 2	2007	S3M_S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Road South of Shea Heights	1000	Nf Birds, Data Entry by WD mstr1027753
False peregrinus subep. a		Falconidae	Bruce Mactavish	1 10	21	2001	SOM SON	62M	NOD		onoitivo	Special Concern	Vulnerable	Concorn (anatum/t	Sower Outlet	1000	NE Dida Data Entry by WD matri027702
Faico peregrinus subsp. a		Faiconidae	Bruce Maclavish	1 1	24	2001	SSIVI, SZIN	52111	INOD	3414 3	ensilive	Special Concern	vuinerable	Concern (anatum/t	Sewer Oullet	1000	NI. Dirds, Data Entry by WD Instit 1027793
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish,	2 1	5	2008	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Signal Hill	1000	Nf.Birds, Data Entry by WD mstr1027902
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 12	2 31	2007	S3	S3B	N4B,N4N5N,	G5 S	Secure				Signal Hill	1000	Nf.Birds, Data Entry by WD mstr1027956
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Jytte Selno	1 4	18	2001	S2S3	S3B	N5B N5N N5	G5 S	Secure				Signal Hill Road	1000	Nf Birds, Data Entry by WD mstr1027925
	Derogripo Eoloop	Folgonidag	Dava Brown	1 10		2005	SOM SON	S3M	N2D		opoitivo	Special Concern	Vulporable	Concorn (onatum/t	Signal Hill	1000	NE Birdo Data Entry by WD mat 1027900
Faico peregrinus subsp. a		Faiconidae	Dave Blown		J 5	2005	531VI, 521N	52111		3414 3		Special Concern	vuinerapie	Concern (anatum/t		1000	NI. Dirds, Data Entry by WD Instit 1027699
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish,	2 1	5	2008	S3	S3B	N4B,N4N5N,	G5 S	Secure				Signall Hill	1000	Nf.Birds, Data Entry by WD mstr1027901
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 4	. 17	2004	S3	S3B	N4B,N4N5N,	G5 S	Secure				Soccer Pitch	1000	Nf.Birds, Data Entry by WD mstr1027803
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	2 1	5	2003	S3	S3B	N4B.N4N5N	G5 5	Secure				South Side of the Harbour	1000	Nf Birds, Data Entry by WD mstr1027835
Pubo coordigouo	Spower Oud	Strigidoo	Vincent	1 12	$\frac{1}{2}$	2000	S2NI SLIM	SNA		C5 0	Soouro				Coorgo's Court off Morry monting P	1000	Nif Birdo, Data Entry by WD mat 1027096
			VIIICent	1 12	2 17	2009	33N,30IVI	SINA		65 6	Secure				George's Court on Menymeeting R	1000	Ni.Bilds, Data Eility by WD histi 1027000
Falco rusticolus	Gyrtalcon	Falconidae	Bruce Mactavish	1 11	1 9	2004	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5 S	Secure				Pat's Ball Park next to Carpasian R	1000	Nf.Birds, Data Entry by WD mstr1027941
Loxia curvirostra	Red Crossbill	Fringillidae	Dave Fifield	1 3	19	2000	S1S2	S2S3	N5B,N5N,N5	G5 /	At Risk	Threatened	Endangered	Endangered	Sycamore Place	1000	Nf.Birds, Data Entry by WD mstr1027966
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Alex Bond	1 11	1 2	2008	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	The Gut at Quidi Vidi Harbour	1000	Nf Birds, Data Entry by WD mstr1028157
Asia flammous	Short pared Owl	Strigidoo	Todd Bolan	1 1		1008	SSR SLIM	C2P		C5 9		Special Concorn	Vulnorablo	Special Concorn	Torbay Poad	5000	Nif Birdo, Data Entry by WD matri028252
Asio liamineus	Short-eared Own	Siliyiuae		1 4	0	1990	330,3010	330		0.5		Special Concern	vuinerable	Special Concern		5000	
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Howard Clase	1 3	8	2005	\$2\$3	S3B	N5B,N5N,N5	G5 S	Secure				Torbay Road	5000	Nf.Birds, Data Entry by WD mstr1028254
Asio flammeus	Short-eared Owl	Strigidae	Chris Brown	1 5	28	2002	S3B,SUM	S3B	N4B,N3N,N4	G5 S	Secure	Special Concern	Vulnerable	Special Concern	oad side of the Airport near the PAI	1000	Nf.Birds, Data Entry by WD mstr1028256
Buteo lagopus	Rough-Legged Hawk	Accipitridae	Bill Tucker	1 3	1	2003	S2S3	S3B	N5B.N5N.N5	G5 S	Secure				Tracev Place	1000	Nf.Birds, Data Entry by WD mstr1028233
Chordeiles minor	Common Nighthawk	Caprimulaidae	Bruce Mactavish	1 6	0	2008	SNA	SNA	N/B N3M	G5 May	he at risk	Special Concern	Threatened	Threatened		1000	Nf Birds, Data Entry by WD mstr1028054
	Bough Lorger Lloude	Accinitrial	Jorod Clarks		3	2000	000			C5 Ividy	Sooure		meateneu	meaterieu		4000	Ni Dirdo, Data Litti y by WD III5ti 1020034
Buleo lagopus	Rough-Legged Hawk	Accipitridae	Jared Clarke	1 4	6	2012	5253	33B	CVI, VICVI, DCVI	65 8	becure		_ ·		University Avenue	1000	NI.BIIOS, Data Entry by WD mstr1027894
Pagophila eburnea	Ivory Gull	Laridae	Bill Montevecchi	1 1	15	1998	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered	Virginia River at Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028217
Pagophila eburnea	Ivory Gull	Laridae	Gene Herzberg	1 1	28	2007	S1N.SUM	S2N	N1B.N1N.N1	G4	At risk	Endangered	Endangered	Endangered	Virginia River Outlet	1000	Nf Birds, Data Entry by WD mstr1028220
Pagophila ehurpoa	lyory Gull	Laridae	Paul Linegar	1 0	1	2007	S1N SUM	S2N	N1R N1N N1	G4	At rick	Endangorod	Endangorod	Endangered	Virginia Pilvor Outlot	1000	Nf Rirde Data Entry by M/D metr1028221
						2007										1000	NI Dirde, Data Entry by WD III5ti 1020221
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Doug Phelan	1 1	13	2004	S3M, S2N	S2M	N3B	G414 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	Virginia River Trail	1000	Nf.Birds, Data Entry by WD mstr1027920
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 2	15	2001	S3	S3B	N4B,N4N5N,	G5 S	Secure				Waterford Bridge Road	5000	Nf.Birds, Data Entry by WD mstr1027738
Accipiter gentilis	Northern Goshawk	Accipitridae	Bruce Mactavish	1 1	30	2001	S3	S3B	N4B N4N5N	G5 5	Secure				Waterford River	1000	Nf Birds, Data Entry by WD mstr1027794
Accipitor gontilis	Northorn Coshawk	Accipitridao	Jarod Clarko	1 6	1	2001	63	COD COD		C5 9	Socuro				West End of Long Pond	1000	Nf Birds, Data Entry by WD metri029006
		Accipitituae		1 0		2004		000			Secure	0		• • • •		1000	NI. Dirds, Data Einry by WD Insu 102000
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Dave Brown	1 12	2 11	2007	S3M, S2N	S2M	N3B	G414 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi	1000	Nf.Birds, Data Entry by WD mstr1028153
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	27	2002	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028047
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 2	14	2000	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi Lake	1000	Nf Birds, Data Entry by WD mstr1028068
Ealco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	8	2007	S3M S2N	\$2M	N3B	24T4 S	onsitivo	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi Lake	1000	Nif Birds, Data Entry by WD mstr1028113
Talco peregrinus subsp. a			Diuce Mactavisii	1 J	0	2007	0014, 0214	02101	NOD	0414 0			Vullerable			1000	
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	10	2007	S3M, S2N	S2M	N3B	3414 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028114
Falco rusticolus	Gyrfalcon	Falconidae	Bruce Mactavish	1 2	22	2008	S2S3N,SUM	S2S3N	N4N5B,N5N,	G5 S	Secure				West End of Quidi Vidi Lake	1000	Nf.Birds, Data Entry by WD mstr1028117
Falco peregrinus subsp. a	Peregrine Falcon	Falconidae	golfman otto vah	1 4	13	2008	S3M, S2N	S2M	N3B	G4T4 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t	West End of Quidi Vidi Lake	1000	Nf Birds, Data Entry by WD mstr1028125
Ealco peregrinus subsp. a	Peregrine Falcon	Falconidae	Bruce Mactavish	1 3	1	2011	S3M S2N	\$2M	N3B	GATA S	onsitivo	Special Concern	Vulnerable	Concern (anatum/t	West End Quidi Vidi Lake	1000	Nf Birds, Data Entry by WD mstr1028138
Taleo peregilitas subsp. a		Obviolation				2011						Opecial Concern	vullerable	Concern (anatum/t		1000	N.Dids, Data Entry by WD mat 1020130
Bubo scandiacus	Showy Owi	Strigidae	Jared Clarke	1 11	23	2001	S3N,SUM	SNA	N5B,N5N,N5	G5 3	secure				/vindow at Sobey's on Torbay Roac	1000	NT.Birds, Data Entry by WD mstr1028198
Accipiter gentilis	Northern Goshawk	Accipitridae	John Wells	2 1	6	2003	S3	S3B	N4B,N4N5N,	G5 S	Secure				ien's Compensation Building, Fores	1000	Nf.Birds, Data Entry by WD mstr1027970
Circus cyaneus	Northern Harrier	Accipitridae	Vincent	1 5	25	2009	S3B,SUM	S3?B	N5B,N4N	G5 S	Secure					10000	Nf.Birds, Data Entry by WD mstr1027875
Bubo scandiacus	Spower Owl	Strigidae	Todd Boland	1 1	13	1008	S3N SLIM	SNA	N5B N5N N5	C5 9	Socuro					10000	Nif Birds, Data Entry by WD mstr1028500
Dubo scandiacus	Chowy Owl	Otrigidae			10	0004									the France on Deaf of 00 Onlyidge De	10000	NEDicas, Data Entry by WD matrix 1020000
Bubo scandiacus	Showy Owl	Strigidae	Wayne Lucker	1 11	1 12	2001	S3N,SUM	SNA	N5B,N5N,N5	G5 S	Secure				Jth Face on Roof of 23 Oakridge Di	1000	Nf.Birds, Data Entry by WD mstr1028259
Accipiter gentilis	Northern Goshawk	Accipitridae	Todd Boland	1 11	1 12	2000	S3	S3B	N4B,N4N5N,	G5 S	Secure					1000	Nf.Birds, Data Entry by WD mstr1030071
Loxia curvirostra	Red Crossbill	Fringillidae	J Wells	3 5	21	1971	S1S2	S2S3	N5B,N5N,N5	G5 /	At Risk	Threatened	Endangered	Endangered	St. John's	10000	Montevecchi B, & Wren S. mstr1045456
Loxia curvirostra	Red Crossbill	Frindillidae	Ilandry	4 6	14	1971	S1S2	S2S3	N5B N5N N5	G5 /	At Risk	Threatened	Endangered	Endangered	St. John's	10000	Montevecchi B & Wren S mstr1045458
	Red Creechill	Fringillidae		4 5	40	1060	6162	6200		C5 /		Threatened	Endangered	Endangered	St. Johnia	10000	Montovocili D. & Wien C. matri045450
	Red Crossbill	Fringillidae	G Greeniee	1 5	13	1969	5152	5253		Go A	AL RISK	Threatened	Endangered	Endangered	St. Johns	10000	Montevecchi B; & Wren S. Insti 1043439
Dolichonyx oryzivorus	Bobolink	Icteridae	B. Mactavish	9	24	1984	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		KentA†s Pond	1000	The Status of Bobolink (Dol mstr1047821
Dolichonyx oryzivorus	Bobolink	Icteridae	C. Brown, M. Parr	6	25	1985	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		Kilbride	1000	The Status of Bobolink (Dol mstr1047822
Dolichonyx oryziyorus	Bobolink	Icteridae	fide B Mactavish	5	31	1986	S1B SUM	S2B	N5B N4N5M	G5 May	he at risk	Threatened	Vulnerable		Kilbride	1000	The Status of Bobolink (Dol mstr1047823
	Debelink	latarida a		5		1000		020				Threatened	Vulnerable		Kilbride	1000	
Dolicnonyx oryzivorus	Bodolink	Icteridae	IVI. Parmenter		0	1980	51B,50M	52B	N5B,N4N5M	G5 May	be at risk	Inreatened	vuinerable		Kiidride	1000	The Status of Bobolink (Dol mstr 1047824
Dolichonyx oryzivorus	Bobolink	lcteridae	J. Pratt, D. Lemor	5	29	1988	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		Kilbride	1000	The Status of Bobolink (Dol mstr1047825
Dolichonyx oryzivorus	Bobolink	Icteridae	D. Phelan	7	5	1988	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		Kilbride	1000	The Status of Bobolink (Dol mstr1047826
Dolichonyx oryzivorus	Bobolink	Icteridae	P Linegar B Mac	5	31	1989	S1B SUM	S2B	N5B N4N5M	G5 May	be at risk	Threatened	Vulnerable		Kilbride	1000	The Status of Bobolink (Dol mstr1047827
	Pobolink	lotoridao	P. Maataviah K. k	7	25	1000	S1D SLIM	62D		C5 May	be at rick	Threatened	Vulnorable		Kilbrido	1000	The Status of Bebolink (Del matri047929
		lotenuae	D. Waciavisii, K. P	1	20	1991		32D		GJ Iviay	be at HSK	Threatened	vuinerable		Nibilde	1000	
Dolichonyx oryzivorus	Bobolink	Icteridae	R. Burrows	6	2	1989	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		Larry's Bog, St. John's	100	The Status of Bobolink (Dol mstr1047830
Dolichonyx oryzivorus	Bobolink	Icteridae	R. Burrows	9	0	1992	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		Mundy Pond	100	The Status of Bobolink (Dol mstr1047843
Dolichonvx orvzivorus	Bobolink	Icteridae	M. Parmenter	Q	25	1983	S1B.SUM	S2B	N5B.N4N5M	G5 May	be at risk	Threatened	Vulnerable		Mundy Pond	100	The Status of Bobolink (Dol mstr1047844
	Bobolink	Ictoridae	I Noseworthy	5	24	1087	S1B SLIM	S2B	N5B N4N5M	C5 May	he at rick	Threatened	Vulnerable		Dippy Dark St. John's	1000	The Status of Bobolink (Dol mstr1047863
	Dobolinik	lotorid		- 5	24 45	1007		020			boot	Theorem				1000	
Dolichonyx oryzivorus	DODOIINK	icieridae	UNKNOWN	5	15	1974	SIB,SUM	52B	INDB,IN4IN5M	Go May	be at risk	Inreatened	vuinerable		St. John's	10000	I ne Status of Bodolink (Dol mstr104/896
Dolichonyx oryzivorus	Bobolink	lcteridae	D. Barton	6	1	1977	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		St. John's	10000	The Status of Bobolink (Dol mstr1047897
Dolichonyx oryzivorus	Bobolink	Icteridae	L. M. Tuck	6	25	1977	S1B,SUM	S2B	N5B,N4N5M	G5 May	be at risk	Threatened	Vulnerable		St. John's	10000	The Status of Bobolink (Dol mstr1047898
Riparia riparia	Bank Swallow	Hirundinidaa	unknown	1 5	7	2000	S1S2B SUM	S3B	N5B N5M	G5 (Secure	Threatened			Kennu's Pond St. John's	1000	The Status of Bank Swallow mstr10/17063
	Donk Swallow					2000		000	NED NEM	C5 (Sooure	Threater and				1000	
Riparia riparia	Bank Swallow	Hirundinidae	D. Hilders	<u> </u>	9	2003	5152B,50M	53B	N5B,N5M	G5 3	Secure	Inreatened			Long Pond, St. John's	1000	The Status of Bank Swallow mstr 1047976
Riparia riparia	Bank Swallow	Hirundinidae	A. Hughes	2 6	5	2003	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			Long Pond, St. John's	1000	The Status of Bank Swallow mstr1047977
Riparia riparia	Bank Swallow	Hirundinidae	J. Clarke	1 5	23	2004	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			Long Pond, St. John's	1000	The Status of Bank Swallov mstr1047978
Riparia riparia	Bank Swallow	Hirundinidae	.I. Clarke	1 5	31	2004	S1S2B SUM	S3B	N5B N5M	G5	Secure	Threatened			Long Pond St. John's	1000	The Status of Bank Swallow mstr1047979
Piparia riparia	Bank Swallow	Hirundinidae		1 0	4	2004	S1928 CLIM	C3D	NED NEM	G5 (Secure	Throatanad			Long Dond Of Johnson	1000	The Status of Dank Swallow metr1017090
	Dalik Swallow			ı 6	1	2004	3132B,3UM	SSB	INDRI, DONI	50 8	becure	rineatened			Long Pona, St. John's	1000	The Status of Bank Swallow MStr 104/980
Riparia riparia	Bank Swallow	Hirundinidae	J. Clarke	1 5	28	2006	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Ihreatened			Long Pond, St. John's	1000	The Status of Bank Swallow mstr1047981
Riparia riparia	Bank Swallow	Hirundinidae	D. Brown	1 5	27	2007	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			Long Pond, St. John's	1000	The Status of Bank Swallow mstr1047982
Riparia riparia	Bank Swallow	Hirundinidae	B. Mactavish J. F. u	nknown 5	29	1988	S1S2B SUM	S3B	N5B N5M	G5 G5	Secure	Threatened			Mundy Pond St. John's	1000	The Status of Bank Swallov mstr1047988
Diparia riparia	Book Swallow	Linundinida -	B Mostavish		20	1004	\$1525,00M	C2D	NED NEM	G5 (Socure	Throatened			Mundy Pond, Ot. Johnson	1000	The Status of Dank Swallow metr/0/7000
	Dalik Swallow	niiundinidae	D. IVIACIAVISN U	9	28	1991	3132B,3UM	33B		60 8	becure	rineatened			iviunay Pona, St. John's	1000	The Status of Bank Swallow MStr104/989
Riparia riparia	Bank Swallow	Hirundinidae	T. Boland	2 9	12	2004	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			Mundy Pond, St. John's	1000	The Status of Bank Swallow mstr1047990
Riparia riparia	Bank Swallow	Hirundinidae	G. Ryan	2 6	3	2006	S1S2B.SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			NE. St. John's	10000	The Status of Bank Swallow mstr1047992
Riparia riparia	Bank Swallow	Hirundinidae	H Clase	inknown 6	3	198/	S1S2B SUM	S3B	N5B N5M	G5 G5	Secure	Threatened			Oven Pond St. John's	1000	The Status of Bank Swallow mstr10/18000
				200	10	1004		000		CF (Theorem				1000	
rtiparia riparia	Darik Swallow	riirundinidae	J. VVEIIS	200 6	13	1984	5152B,SUM	53B	NOB,NOM	60 8	secure	Inreatened			Oxen Pond, St. John's	1000	The Status of Bank Swallow mstr1048001
Riparia riparia	Bank Swallow	Hirundinidae	D. Brown	1 8	26	2003	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			Quidi Vidi Lake, St. John's	1000	The Status of Bank Swallow mstr1048010
Riparia riparia	Bank Swallow	Hirundinidae	R. Burrows u	nknown 5	16	1986	S1S2B.SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			St. John's	10000	The Status of Bank Swallow mstr1048023
Riparia riparia	Bank Swallow	Hirundinidae	R Burrows R Me	nknown 5	16	1986	S1S2B SUM	S3B	N5B N5M	G5	Secure	Threatened			St. John's	10000	The Status of Bank Swallow mstr1048024
Piparia riparia	Bank Swallow	Hirundinidae	K Knowles	1 0	06	1007	S1928 CLIM	C3D		G5 (Sourc	Throatanad			01. 001113 04 Jahnia	10000	The Status of Dank Swallow metr10/2002
				ı 9	20	1997	0102D,0UW	00D		35 35	Secure				St. John S	10000	
Riparia riparia	Bank Swallow	Hırundinidae	tide J. Pratt u	nknown 5	15	2000	S1S2B,SUM	S3B	N5B,N5M	G5 (Secure	Ihreatened			St. John's	10000	The Status of Bank Swallow mstr1048026
Riparia riparia	Bank Swallow	Hirundinidae	I. Stenhouse u	nknown 5	27	2000	S1S2B,SUM	S3B	N5B,N5M	G5 S	Secure	Threatened			St. John's	10000	The Status of Bank Swallow mstr1048027
Chaetura pelagica	Chimney Swift	Apodidae	Bruce Mactavish	1 8	30	2016	SNR	SNR	N4B.N3M	G4G5 /agrar	t/ Accident:	Threatened	Threatened	Threatened	Quidi Vidi Lake on The Blvd	10000	NF.Birds, Aug 30, 2016 MSTR1050954
	Red Crossbill	Fringillidee	Todd Boland	3 40) 1	2010	Q1Q2	5763	NSR NEN NE	C5		Threatanad	Endangarad	Endangered		1000	Nif hirds December 2 2016 MCTD1051264
		- myilluae		J 12		2010	0102	0200	CVI, VICVI, COVI							1000	
⊢aico peregrinus subsp. a	Peregrine Falcon	Falconidae	Frank King	1 12	2 12	2016	S3M, S2N	S2M	N3B	414 S	ensitive	Special Concern	Vulnerable	Concern (anatum/t		1000	Nt.birds, December 12, 201 MSTR1051372
Pagophila eburnea	Ivory Gull	Laridae	Ken Knowles	1 12	2 9	2016	S1N,SUM	S2N	N1B,N1N,N1	G4	At risk	Endangered	Endangered	Endangered		1000	Nf.birds, December 9, 2016 MSTR1051374

GNAME	GCOMNAME	FAMILY	Observer	TotalNumber Month	Day	Year	SRANK_2015 SF	RANK_2010	NRANK G	RANK	GeneralStatus	COSEWIC_ST	PROVINCIAL	SARA	DESCR_HABIT/SITE_NAME	Accuracy	SYNAME	CITATION	IDNUM
Anas americana	American Wigeon	Anatidae	iNaturalist user: s	: 11	10	2017	S3B.SUM	S3B	N5B.N5N.N5	G5	Undetermined					12372		iNaturalist record export	20 MSTR1051708
Anas americana	American Wigeon	Anatidae	iNaturalist user: s	11	17	2017	S3B SUM	S3B	N5B N5N N5	G5	Undetermined					968		iNaturalist record export	20 MSTR1051709
Anas americana	American Wigeon	Anatidae	iNaturalist user: s	11	21	2017	S3B SLIM	S3B	N5B N5N N5	G5	Undetermined					968		iNaturalist record export	20 MSTR1051710
Anas americana	American Wigeon	Anatidaa	iNaturalist user. s	. 11	21	2017		53D		05	Undetermined					900		iNaturalist record export	20 MSTR1051710
Anas americana	American Wigeon	Analidae	inaturalist user: s		21	2017	S3B,SUM	53B		Go	Undetermined					908		inaturalist record export	20 MSTR 1051711
Megaceryle alcyon	Belted Kingfisher	Alcedinidae	iNaturalist user: s	i <u>2</u>	3	2018	S4B, S3N,SUM	S5B	N5B,N4N5N,	G5	Secure	ate (Group 3, Low			nies River Trail, St. John's, NL, (Car 180		iNaturalist record export	20 MSTR1051805
Chroicocephalus ridibuno	di Black-headed Gull	Laridae	iNaturalist user: le	1	1	2013	S1B, S3N,SUM	S1B,S3N	N3B,N3N4N,	G5	Sensitive				Quidi Vidi Lake	1000		iNaturalist record export	20 MSTR1051844
Anas acuta	Northern Pintail	Anatidae	iNaturalist user: s	i 1	7	2018	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure					180		iNaturalist record export	20 MSTR1051971
Aythya fuligula	Tufted Duck	Anatidae	iNaturalist user: s	i 12	13	2017	S1N,SUM	SNA	N1N,NUM	G5	/agrant/ Acciden	nta			i Vidi Lake, St. John's, NL A1A,	Ca 968		iNaturalist record export	20 MSTR1052200
Tringa melanoleuca	Greater Yellowlegs	Scolopacidae	iNaturalist user: s	. 8	27	2017	S3B, S4M	S4B,S5M	N5B,N4N,N5	G5	Secure				St. John's, NL, Canada	12372		iNaturalist record export	20 MSTR1052289
Anas platvrhvnchos	Mallard	Anatidae	iNaturalist user: u	5	28	2017	S3B.SUM	S3B	N5B.N5N.N5	G5	Secure					8		iNaturalist record export	20 MSTR1052471
Anas platyrhynchos	Mallard	Anatidae	iNaturalist user: le	12	25	2012	S3B SUM	S3B	N5B N5N N5	G5	Secure				Quidi Vidi Lake	1000		iNaturalist record export	20 MSTR1052472
	Mallard	Anatidao	iNaturalist usor: c	11	10	2012	S2R SLIM	S3B		C5	Socuro					267		iNaturalist record expert	20 MSTR1002472
	Mallard	Anatidaa	iNaturalist user. s		19	2017		530	NED NEN NE	65	Secure					100		iNaturalist record export	20 MSTR 1032400
Anas platymynchos		Analidae	inaturalist user. It	. 12	23	2017	53D,5UIVI	33D		G5	Secure					122		iNaturalist record export	20 MOTR 1052465
Xanthoria parietina	Maritime Sunburst Licr	ne l'eloschistacea	a inaturalist user: jp	10	21	2017	5153	SNR	CNI	GS	Secure				DIVISION NO. 1, CA-INF, CA	8		Inaturalist record export	20 MSTR1052491
Ondatra zibethicus	Muskrat	Muridae	iNaturalist user: h	7	14	2016	S3S4	S5	N5	G5	Secure				Pippy Park	5000		iNaturalist record export	20 MSTR1052575
Morus bassanus	Northern Gannet	Sulidae	iNaturalist user: h	7	10	2016	S2B,S2M	S1B	N4B,N5N	G5	Secure				Cape Spear	1000		iNaturalist record export	20 MSTR1052615
Anas acuta	Northern Pintail	Anatidae	iNaturalist user: s	i 12	7	2017	S3B,SUM	S3B	N5B,N5N,N5	G5	Secure					968		iNaturalist record export	20 MSTR1052637
Usnea longissima	Old Man's Beard	Parmeliaceae	iNaturalist user: k	i 10	22	2017	S3S5	SNR	N5	G5	Secure				C A Pippy Park, St. John's, NL,	CA 1000		iNaturalist record export	20 MSTR1052652
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	iNaturalist user: s	12	13	2017	S1B.SUM	S1B	N5B.N4N5N.	G5	Undetermined					968		iNaturalist record export	20 MSTR1052689
Podilymbus podiceps	Pied-billed Grebe	Podicipedidae	iNaturalist user: s	: 1	7	2018	S1B SUM	S1B	N5B N4N5N	G5	Undetermined					968		iNaturalist record export	20 MSTR1052692
Calidris maritima	Purple Sandniner	Scolonacidae	iNaturalist user: la	12	24	2010	S3N SUM	S3N	N3N4R N3N4	G5	Secure				Cane Snear	1000		iNaturalist record export	20 MSTR1052731
	Short eared Owl	Strigidag	iNaturalist user: h	7	10	2012		C3D	NAB NON	65	Sourc	Special Concorn	Vulnorabla	Special Concorn	Cono Shoor	1000		iNaturalist record export	20 MSTR1052949
		Anatidae	iNaturalist user: N	1	10	2010		SUD	IN4D,INOIN,IN4	65			vuinerable	Special Concern		1000		inaturalist record export	20 WOTR 1002040
Aythya fuligula		Anatidae	inaturalist user: n	2	/	2018	SIN,SUM	SNA	NTN,NUM	G5	agrant/ Accident	llé			1/41 ATA£98 Burtons Pond Rd, S	SL 36		inaturalist record export	
Aythya fuligula	Lutted Duck	Anatidae	iNaturalist user: p	3	5	2008	S1N,SUM	SNA	N1N,NUM	G5	'agrant/ Accident	172			Quidi Vidi, St. John's, NL, Cana	ida 1000		iNaturalist record export	20 MSTR1052966
Aythya fuligula	Tufted Duck	Anatidae	iNaturalist user: le	12	30	2012	S1N,SUM	SNA	N1N,NUM	G5	'agrant/ Acciden	nta			n's, Newfoundland and Labrado	or, C 1000		iNaturalist record export	20 MSTR1052967
Aythya fuligula	Tufted Duck	Anatidae	iNaturalist user: u	10	9	2017	S1N,SUM	SNA	N1N,NUM	G5	'agrant/ Accident	nta			Pond Walk, St. John's, NL A1A (DE4 10		iNaturalist record export	20 MSTR1052968
Aythya fuligula	Tufted Duck	Anatidae	iNaturalist user: s	: 10	29	2017	S1N,SUM	SNA	N1N,NUM	G5	/agrant/ Accident	nta			St. John's, NL, Canada	12372		iNaturalist record export	20 MSTR1052969
Aythya fuligula	Tufted Duck	Anatidae	iNaturalist user: s	i 11	7	2017	S1N,SUM	SNA	N1N,NUM	G5	/agrant/ Accident	nta			St. John's, NL, Canada	12372		iNaturalist record export	20 MSTR1052970
Avthva fuliqula	Tufted Duck	Anatidae	iNaturalist user: s	i 11	17	2017	S1N.SUM	SNA	N1N.NUM	G5	/agrant/ Accident	nta			i Vidi Lake, St. John's, NL A1A.	Ca 968		iNaturalist record export	20 MSTR1052971
Avthva fuliqula	Tuffed Duck	Anatidae	iNaturalist user: s	11	21	2017	S1N SUM	SNA	N1N NUM	G5	/agrant/ Accident	nt:			i Vidi Lake St. John's NI A1A	Ca 968		iNaturalist record export	20 MSTR1052972
Avthya fuliqula	Tuffed Duck	Anatidae	iNaturalist user: s	12	2	2017	S1N SUM	SNA		G5	/agrant/ Accident	nt:			adv Pond St. John's NI A1E C	an 367		iNaturalist record export	20 MSTR1052973
	Tuffed Duck	Anatidao	iNaturalist usor: s	12	2	2017		SNA		C5	/agrant/ Accident	ite			ndy Fond, St. John's, NEATE, C	an 31/		iNaturalist record export	20 MSTR1052070
Ayuriya luligula	Chiran au Cuvift	Anadidae	Cab frame Chile fr	1 12	0	2017		SNA		0105		lle .t. Thus stows al	Thus stops of	Thus stops al	his Pond, St. Johns, NE ATB, C	dilc 314		inaturalist record export	20 MSTR 1032974
Chaetura pelagica		Apodidae	Seb from Chile, fr		1	2017	SNR	SNR	IN4B,IN3M	G4G5	'agrant/ Acciden		Inreatened			100		nr.birds, sept 7, 2017	MSTR1053224
Falco peregrinus subsp.	a Peregrine Falcon	Falconidae	Lancy Cheng	1 9	29	2017	S3M, S2N	S2M	N3B	G414	Sensitive	Special Concern	Vulnerable	Concern (anatum/t		1000		nf.birds, sept 29, 2017	MSTR1053263
Aythya fuligula	Tufted Duck	Anatidae	Howard Clase	25 2	10	2018	S1N,SUM	SNA	N1N,NUM	G5	'agrant/ Acciden	ita				1000		nf.birds, feb 10, 2018	MSTR1053294
Falco peregrinus subsp.	a Peregrine Falcon	Falconidae	Shawn Inikon	1 2	10	2018	S3M, S2N	S2M	N3B	G4T4	Sensitive	Special Concern	Vulnerable	Concern (anatum/t		10000		nf.birds, feb 10, 2018	MSTR1053295
Loxia curvirostra	Red Crossbill	Fringillidae	Andrea Dicks, Wa	3 2	17	2018	S1S2	S2S3	N5B,N5N,N5	G5	At Risk	Threatened	Endangered	Endangered		1000		nf.birds, feb 17, 2018	MSTR1053297
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Ed Hayden	2 8	11	2017	S3M	S3N	N4N5B,N5M	G5	Secure					1000		nf.birds, August 11, 2017	/ MSTR1053310
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Gene Herzberg	1 8	25	2016	S3M	S3N	N4N5B,N5M	G5	Secure					1000		nf.birds, August 25, 2016	MSTR1053347
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Lancy Cheng	1 8	25	2016	S3M	S3N	N4N5B.N5M	G5	Secure					1000		nf.birds, August 25, 2016	6 MSTR1053353
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Gene Herzberg	2 9	17	2016	S3M	S3N	N4N5B.N5M	G5	Secure					1000		nf birds September 17	201MSTR1053358
Tringa flavipes		Scolonacidae	Ed Havden Chris	1 4	25	2018	S3M	S3N	N4N5B N5M	G5	Secure					1000		nf birds Apr 25, 2018	MSTR1053361
Tringa flavinos	Lossor Vollowlogs	Scolopacidao	Alvon Bucklov	· · · · ·	25	2010	S3M	SSN	NANER NEM	C5	Socuro					1000		nf birds, Apr 25, 2018	MSTP1053262
	Lesser Vellowlegs	Scolopacidae	Rivan Duckley	2 4	25	2010	SOM	001		GJ	Secure					1000		nf hirds, Apr 25, 2018	MSTR 1055502
Tringa havipes		Scolopacidae	Shower Fitzer		25	2018	SJIVI	SON		Go	Secure					1000		ni.birds, Apr 25, 2018	INIO I R 1003303
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Snawn Fitzpatrick	1 5	9	2018	S3M	S3N	N4N5B,N5M	G5	Secure					1000		nf.birds, May 9, 2018	MSTR1053365
I ringa flavipes	Lesser Yellowlegs	Scolopacidae	Gene Herzberg	1 9	9	2018	S3M	S3N	N4N5B,N5M	G5	Secure					1000		nt.birds, Sept 9, 2018	MS1R1053389
Tringa flavipes	Lesser Yellowlegs	Scolopacidae	Gene Herzberg	5 9	21	2018	S3M	S3N	N4N5B,N5M	G5	Secure					1000		nf.birds, Sept 21, 2018	MSTR1053391
Riparia riparia	Bank Swallow	Hirundinidae	Alvan Buckley, Ca	-99 5	28	2016	S1S2B,SUM	S3B	N5B,N5M	G5	Secure	Threatened			Virginia Lake	1000		Nf.birds, May 28, 2016	MSTR1051625
Riparia riparia	Bank Swallow	Hirundinidae	Bruce Mactavish	1 8	30	2016	S1S2B,SUM	S3B	N5B,N5M	G5	Secure	Threatened			Quidi Vidi Lake	10000		Nf.birds, August 30, 2016	6 MSTR1051632
Riparia riparia	Bank Swallow	Hirundinidae	Alvan Buckley	1 5	22	2017	S1S2B,SUM	S3B	N5B,N5M	G5	Secure	Threatened			QV Lake, near boathouse	1000		Nf.birds, May 22, 2017	MSTR1051636
Accipiter gentilis	Northern Goshawk	Accipitridae	Shawn Inikon	4	10	2018	S3	S3B	N4B.N4N5N.	G5	Secure					1000		nf.birds, April 10, 2018	MSTR1053846
Chordeiles minor	Common Nighthawk	Caprimulgidae	Todd Boland	4	10	2018	SNA	SNA	N4B.N3M	G5	Mav be at risk	Special Concern	Threatened	Threatened		1000		nf.birds, April 10, 2018	MSTR1053847
	Red Crossbill	Fringillidae	Todd Boland	1	7	2019	S1S2	\$2\$3	N5B N5N N5	G5	At Risk	Threatened	Endangered	Endangered		1000		nf birds . Jan 7 2018	MSTR1053929
	Red Crosshill	Fringillidae	Geoff Smith	1	28	2010	\$1\$2	\$253	N5B N5N N5	C5	At Rick	Threatened	Endangered	Endangered		1000		nf birds, Apr 28, 2010	MSTR105/328
		Folgonidae	Cooff Smith		20	2019	6102 62M 62N	5200 52M	NOD	C4T4	Sanaitiva	Special Concern	Vulparable			1000		nf birds, Apr 20, 2019	MOT01054320
Falso peregrinus subsp.		Falconida		Ζ.	ð	2019	SOIVI, SZIN	SZIVI	NOD	0414	Sensitive	Special Concern	Vulnerable	Concern (anatum)/t		1000		ni.biids, Feb 0, 2019	
Faico peregrinus subsp.		Faiconidae	Chris Brown	4	0	2019	SSIM, SZIN	5211	N3B	G414	Sensitive	Special Concern	Vuinerable			1000		ni.birds, Apr 6, 2019	MSTR1054315
Faico peregrinus subsp.	a Peregrine Falcon	Faiconidae	Andrea Dicks	4	2	2017	53M, 52N	S2M	N3B	G414	Sensitive	Special Concern	vulnerable	Concern (anatum/t	Fort Amherst	1000		nt.birds, april 2, 2017	mstr1055294
Chordeiles minor	Common Nighthawk	Caprimulgidae	Les Sweetapple	9	18	2019	SNA	SNA	N4B,N3M	G5	May be at risk	Special Concern	Ihreatened	Ihreatened		1000		nt.birds, Sep 18, 2019	mstr1056739
Chordeiles minor	Common Nighthawk	Caprimulgidae	Les Sweetapple,	9	20	2019	SNA	SNA	N4B,N3M	G5	May be at risk	Special Concern	Threatened	Threatened		1000		nf.birds, Sep 20, 2019	mstr1056740
Vermivora ruficapilla	Nashville Warbler	Parulidae	Bruce Mactavish	11	10	2019	S2B,SUM	S1B	N5B,N5M	G5	Undetermined					1000		nf.birds, Nov 10, 2019	mstr1056816
Coccothraustes vesperti	n Evening Grosbeak	Fringillidae	Todd Boland, Anr	12	1	2019	S4	S4B,S5N	N4B,N4N,NU	G5	Secure	Special Concern				1000		nf.birds, Dec 1, 2019	mstr1056830
Quiscalus guiscula	Common Grackle	Icteridae	Todd Boland. Ann	12	1	2019	S5B,S3?N. SUN	S5B	N5B.NUN.N5	G5	Secure					1000		nf.birds, Dec 1, 2019	mstr1056831
Circus cvaneus	Northern Harrier	Accipitridae	Bruce Mactavish	12	15	2019	S3B.SUM	S3?B	N5B.N4N	G5	Secure					1000		nf.birds. Dec 15, 2019	mstr1056838
Asio flammeus	Short-eared Owl	Strigidae	45 CBC Particina	12	28	2019	S3B SUM	S3B	N4B N3N N4	G5	Secure	Special Concern	Vulnerable	Special Concern		5000		nf birds, Dec 28, 2019	mstr1056850
Asio flammeus	Short-eared Owl	Strigidae	Michael Parmente	1	20	2020	S3B SUM	S3B	N4B N3N N4	G5	Secure	Special Concern	Vulnerable	Special Concern		1000		nf birds . Jan 2 2020	mstr1056858
Hirundo rustica	Barn Swallow	Hirundinidaa	Ed Havden	5	20	2020	S2B SUM	S1S2B	N3N4R N3N4	G5	Secure	Threatened	, anorabio	Special Contoint		1000		nf birds May 20, 2020	mstr1056916
i ili uliuo ruslica	Dam Gwallow			J	20	2020	520,5010	01020	1101170,110114	33	Occure	incalcheu				1000		11.01103, Way 20, 2020	mau 1000010

GNAME	GCOMNAME	OBSERVER MONTH	DAY	YEAR Verification	SRANK_2010	SRANK_2015	5 NRANK	GRANK	FAMILY	PROV_END_A	COSEWIC DESCR_HABIT	ACCURACY_M	SYNAME	SITE_NAME	SURVEYSITE	ACRONYMS_C	COLLECTION SOURCES ID	NUM EST_NF_ID
Sparganium fluctuans	Floating Bur-Reed	Robinson, B.L. & H. Schre		0 v	S2	S2S3	N5	G5	Sparganiaceae			1000	Sparganium and	Virginia Waters	Virginia Waters	GH; CAN	200 Bouchard, A. DaSF	P26251 476097
Diphasiastrum digitatum	southern running-pine	Fernald, M.L., K.M. Wiega 8	7	1911 v	S2	S2	N5	G5	Lycopodiaceae		Dry humus on e	ex 100	Lycopodium dig	St John's	St John's, south of.	GH, DAO	4393 Bouchard, A. DaSF	26426 376418
Potamogeton amplifolius	Large-Leaf Pondweed	Ayre, A.M.		1929 v	S2	S2S3	N5	G5	Potamogetonace			1000		Quidi Vidi	Quidi Vidi	NFLD	s.n. Bouchard, A. DaSF	P26202 628848
Juncus militaris	Bayonet Rush	Maunder, John E. 8	22	1967 v	S3	S3	N5	G5	Juncaceae		Dry, grassy are	a 10		Rennies River	St. John's, Rennies	RNFM	Herbarium of the SF	P43691 603241
Amelanchier fernaldii	Fernald Serviceberry	Maunder, John E. 6	6	1967	S1	S1	N3N4	G3?	Rosaceae		Candidate (Priority 3) Dry, open wood	ls 1000	Amelanchier sar	Kent's Pond	St. John's, Kent's Po	r NFM	Herbarium Data SF	P22199 619703
Carex rostrata	Beaked Sedge	Maunder, John E. 9	20	1967 v	S3S5	S3S4	N5	G5	Cyperaceae		Side of pond, w	e 100	Carex rostrata v	Long Pond	St. John's, Long Por	NFM	Herbarium Data SF	P22232 504185
Prunella vulgaris	Self-Heal	Maunder, John E. 7		1967 v	S3S4	S3S5	N5	G5	Lamiaceae			100		Kent's Pond	St. John's, Kent's Po	r NFM	Herbarium Data SF	P22125 544712
Hordeum jubatum subsp. jubatum	foxtail barley, squirreltail	gOlsen, O.A. 9	10	1973 v	S1S2	S2S3	N5	G5T5	Poaceae		Gravelly roadsid	d 1000	Critesion jubatu	Memorial Unive	er St. John's, MUN Cai	nNFM	Herbarium Data SF	22228 273772
Sparganium natans	Small Bur-Reed	Peter J. Scott 8	8	1968	S3S4	S3S4	N5	G5	Sparganiaceae		In water, just th	e 100	Sparganium mir	Penetanguisher	ne St. John's, end of Fi	NFLD	566 Jane Ayre Herba SF	P21916 470969
Carex viridula subsp. brachyrrhyncha	rocky shore sedge	Olsen, O.A. 8	3	1973 v	S1	S1	N1	G5T1	Cyperaceae		Candidate (Priority 3)	1000	Carex saxilittora	Memorial Unive	er St.John's, M.U.N. Ca	a NFM	CW 028 Herbarium Data SF	299269 299269
Omalotheca sylvatica	Woodland Cudweed	Joanna Shannon 10	4	1991	S3S4	S3S4	N4N5	G4G5	Asteraceae		Grassy area, ur	ns 10	Gnaphalium sylv	Memorial Unive	er St. John's, MUN can	n NFLD	s.n. Jane Ayre Herba SF	P21619 451915
Persicaria amphibia	water smartweed	Botanical Garden		1999	S2	S2	N5	G5	Polygonaceae		Bog habitat.	1000	Polygonum amp	Juniper Ponds /	St. Johns Outer Ring	3	MUN Botanical (SF	P21832 414337
Ribes hirtellum	Smooth Gooseberry	Botanical Garden		1999	S3S4	S3S4	N5	G5	Grossulariaceae		Wetland/riparia	n 1000	Grossularia hirte	Juniper Ponds /	St. Johns Outer Ring	3	MUN Botanical (SF	P21765 468865
Eriophorum russeolum	Russet Cotton-Grass	Hanel, C., Parsons, M., ar 6	12	2002 v	S3	S3	N5	G5	Cyperaceae		Bog patch in hu	ır 10		Golf Course, N	d St. John's, C.A. Pipp	NFM	CH 020612-16 Field work. SF	P22316 567005
Nymphaea odorata subsp. odorata	fragrant waterlily, water i	n Horwood, C.		2002	S3	S3	N5	G5	Nymphaeaceae		Standing water	a 100	Castalia odorata	Fogarty's Wetla	ar St. John's, C.A. Pipp	l.	Horwood, C. 200 SF	P22438 533381
Prunella vulgaris	Self-Heal	Hanel, C., Parsons, M., ar 6	7	2002	S3S4	S3S5	N5	G5	Lamiaceae		Mature Picea a	n 10		Mount Scio Esc	a St. John's, C.A. Pipp	עי	Field work. SF	P22451 544712
Eleocharis ovata	Ovate Spikerush	Ayre, A.M.		1.9E+07 v	S1	S1	N5	G5	Cyperaceae		Marsh.	1000	Scirpus ovatus;	Quidi Vidi	Quidi Vidi.	GH; NFLD	s.n. Bouchard, A. DaSF	P25534 518908
Hordeum jubatum subsp. jubatum	foxtail barley, squirreltail	∮Maunder, John E. 8	3	1967 v	S1S2	S2S3	N5	G5T5	Poaceae			1000	Critesion jubatu		St. John's, near Arts	NFM	Herbarium Data SF	P22227 273772
Arabis alpina	Alpine Rockcress	Maunder, John E. 6	14	1968 v	S3	S3	N5	G5	Brassicaceae			50	Arabis alpina for		St. John's, in garder	NFM	Herbarium Data SF	P47657 298324
Aralia hispida	Bristly Sarsaparilla	Maunder, John E. 9	20	1967 v	S4S5	S3S4	N5	G5	Araliaceae			50			St. John's, Torbay ro	NFM	Herbarium Data SF	P49265 592087
Fraxinus nigra	Black Ash	Maunder, John E. 7	18	1967 v	S3	S3	N5	G5	Oleaceae			50			St. John's, Kenny's I	NFM	Herbarium Data SF	P50050 455413
Diphasiastrum sitchense	Sitka clubmoss, tufted g	roTuomikoski, R. 6	3	1949 v	S3	S3S4	N5	G5	Lycopodiaceae			1000	Lycopodium site	Signal Hill(NF)	Signal Hill	CAN	Herbarium Data SF	P53229 561120
Warnstorfia fluitans	a Moss	Tuomikoski, R. 6	3	1949 v		S3S4	N5	G5	Calliergonaceae			1000		Signal Hill(NF)	Signal Hill	CAN	Herbarium Data SF	P55395 942313
Poa pratensis subsp. irrigata	spreading bluegrass	Robinson, B.L.; Schrenk, I 8	4	1894 v	S3	S3	NNA	G5TU	Poaceae		Open woods	1000	Poa irrigata; P.	St. John's(NF)		CAN	Herbarium Data SF	P52295 424365
Rhinanthus minor	Little Yellow-Rattle	Robinson, B.L.; Schrenk, I 7	31	1894 v	S3	S3	N5	G5	Scrophulariacea		Fields	1000		St. John's(NF)		CAN	Herbarium Data SF	P54458 483438
Sphagnum strictum	a Peatmoss	Damman, A.W.H.; Tusko, 7	14	1964 v	S2	S3S4	N4N5	G5	Sphagnaceae		Small boggy po	d 1000		St. John's(NF)	Soldiers Pond, SW of	CAN	Herbarium Data SF	257282
Buxbaumia minakatae	Hump-Backed Elves	R. Tuomikoski		0 v	S1	S2?	N1N3	G2G4	Buxbaumiaceae		Candidate (Group 1, H	10000			Waterford Bridge, S		Email Communi SF	255674 255674



2012 Edition

Part I. Conservation Data Centre Subnational Rarity Ranks

Biological diversity or biodiversity can be described at a number of levels, from molecules to ecosystems. Biodiversity is a combination of species diversity (the variety of species), genetic diversity (the genetic variability among individuals of that species), and ecological diversity (the variety of ecosystems/habitats in which they live). Conservation Data Centres (CDCs), as part of The NatureServe* international network, track biodiversity at two levels: species and ecological communities. Species and ecological communities are referred to as **elements** of biodiversity. Elements are ranked in each jurisdiction (province or state) and at global and national levels in order to help prioritize conservation efforts.

NatureServe and all CDCs (called Heritage Programs in the US) use a standardized element ranking system that has evolved over some 30 years, with input from hundreds of scientists, managers and conservationists. The following material describes this element ranking system at the subnational (S) or provincial level and explains how ranks are assigned for species elements of biodiversity. (The community ranking process is slightly different.)
* Formerly known as The Nature Conservancy (TNC)

Definitions of Provincial (subnational) ranks - SRANKS

- **S1 Critically Imperiled**—Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.
- **S2 Imperiled**—Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.
- **S3 Vulnerable**—Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.
- **S4 Apparently Secure**—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- **S5 Secure**—Common, widespread, and abundant in the jurisdiction.
- **SX** Presumed Extirpated—Species or ecosystem is believed to be extirpated from the jurisdiction (i.e., nation or state/province). Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

- SH Possibly Extirpated— Known from only historical records but still some hope of rediscovery. There is evidence that the species or ecosystem may no longer be present in the jurisdiction, but not enough to state this with certainty. Examples of such evidence include (1) that a species has not been documented in approximately 20-40 years despite some searching or some evidence of significant habitat loss or degradation; (2) that a species or ecosystem has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction.
- **S#S#** Range Rank A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).
- **SU Unrankable**—Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- SNR Unranked—National or subnational conservation status not yet assessed.
- **SNA** Not Applicable —A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.

Not applicable cases:

Hybrid – Element represents an interspecific hybrid without conservation value. (Note that hybrids may be assigned a numeric rank if they do have a conservation value.)

Exotic Origin – Element is not native to the nation or subnation.

Accidental/Nonregular – Element is not regularly found in the nation or subnation, in other words, infrequent and outside of normal range.

Not Confidently Present – Element's presence in the nation or subnation has been reported, but the report is unconfirmed or doubtful; Element has been falsely reported, and may or may not potentially occur; Element may potentially occur (e.g., habitat is suitable); Element was never present in the nation or subnation despite presence in surrounding areas.

No Definable Occurrences – Element is native and appears regularly but lacks practical conservation concern in the subnation because it is transient or occurs in a dispersed, unpredictable manner.

Synonym – Element reported as occurring in the nation or subnation, but the national or provincial data center does not recognize this taxon; therefore the Element is not assigned a national or subnational rank.

Rank Qualifier

S#? Inexact Numeric Rank—Denotes inexact numeric rank. This designation should not be used with any of the variant national or subnational conservation status ranks or NX, SX, NH, or SH.
Breeding Status Qualifiers⁴

- **B Breeding**—Conservation status refers to the breeding population of the species in the nation or state/province.
- **N Nonbreeding**—Conservation status refers to the non-breeding population of the species in the nation or state/province.
- M Migrant—Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province.

⁴ 4A breeding status is only used for species that have distinct breeding and/or nonbreeding populations in the nation or state/province. A breeding-status S-rank can be coupled with its complementary non-breeding-status S-rank if the species also winters in the nation or state/province. In addition, a breeding-status S-rank can also be coupled with a migrant-status S-rank if, on migration, the species occurs regularly at particular staging areas or concentration spots where it might warrant conservation attention. Multiple conservation status ranks (typically two, or rarely three) are separated by commas (e.g., S2B,S3N or SHN,S4B,S1M).

Part II. The Ranking Process

To rank species elements, 8-10 different biological criteria are assessed for each species. The ten factors considered in assigning status ranks are described below.

	MATRIX SCORE								
	Α	В	С	D	E	F	G	H	I
CRITERIA									
Population size	1-50	50-250	250-1000	1000-2500	2500-10000	10000-	100000-	>1000000	
						100000	1000000		
Range Extent	<100km ²	100-250km²	250-1000km ²	1000-	5000-20000	20000-	200000 -		
				5000km²	km²	200000 km²	2500000		
Oh ant taire Trans al		Dealine of 90	Dealine of 70	Decline of	Decline of	Decline of	<u>KM²</u>		Increase
Short-term Trend	Decline >90%				Decline of		Stable	of 10	of >25%
		90 /0	00 /0	50-7078	30-50%	10-30 %	(<10%	25%	01 ~20 /0
							change)	2070	
Long-term Trend	Decline >90%	Decline of 80-	Decline of 70-	Decline of	Decline of	Decline of	Relatively	Increase	Increase
0		90%	80%	50-70%	20 500/	10-30%	Stable	of 10-	of >25%
					30-50%		(<10%	25%	
							change)		
Area of Occupancy	<0.4km²	0.4-4km²	4-20km ²	20-100km ²	100-500km²	500-	2000-	>20000	
						2000km ²	20000km²	km²	
Number of Element	0.5	6-20	21-100	>100					
Occurrences (EOs)	0-5								
Number of EOs with	No	Very few (1-3)	Few (4-12)	Some (13-	Many (41-	Very Many			
Good Viability	occurrences		occurrences	40)	125)	(>125)			
	with excellent	with excellent	with excellent	occurrences	occurrences	occurrences			
	viability or	viability or	viability or	evcellent or	evcellent or	evcellent or			
	ecological	ecological	ecological	bood		aood			
	integrity	integrity	integrity	viability or	viability or	viability or			
		<u>9</u> ,		ecological	ecological	ecological			
				integrity	integrity	integrity			
Environmental	Very Narrow	Narrow	Moderate	Broad					
Specificity									
Threat Scope	Pervasive	Large (31-	Restricted	Small (1-					
	(71-100%)	70%)	(11-30%)	10%)					
Threat Severity	Pervasive	Large (31-	Restricted	Small (1-					
	(71-100%)	70%)	(11-30%)	10%)					

Ranking Matrix Eight ranking criteria and value of letter scores for each criterion.

1. Population Size

Population size is the estimated current total population of the species which is naturally occurring and wild within the area of interest (globe, nation, or subnation), and that is of reproductive age or stage (at an appropriate time of the year), including mature but currently non-reproducing individuals, which should be included in counts or estimates. Abundance is measured in different ways depending on the biology of the species. For animal populations it is usually measured by the number of individuals, for plants it may be measured by the area occupied by a distinct population, and for aquatic invertebrates it may be measured by the stream length that the species occupies:

> Z = Zero, no individuals believed extant (i.e., species presumed extinct) A = 1-50 individuals B = 50-250 individuals C = 250-1,000 individuals D = 1,000-2,500 individuals E = 2,500-10,000 individuals F = 10,000-100,000 individuals G = 100,000-1,000,000 individuals H = >1,000,000 individuals U = Unknown Null = Factor not assessed

*A value range (e.g., DE) can also be used to indicate uncertainty. (DE would indicate between 1000 – 10000 individuals).

2. Range Extent

This denotes the approximate range of the species as a percentage of the province's area. It is defined as the current area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred or projected sites of occurrence, but, *excluding* significant areas where the species does not occur due to unsuitable habitat. Thus the estimate of range for a species exhibiting a linear use of coastal forests or riverine habitats would not consider tracts of unsuitable habitat in the interior of the polygon.

```
Z = Zero (no occurrences believed extant; species presumed extinct or
ecosystem believed eliminated throughout its range)
A = <100 km<sup>2</sup>
(less than about 40 square miles)
B = 100-250 km<sup>2</sup>
(about 40-100 square miles)
C = 250-1,000 km<sup>2</sup>
(100-400 square miles)
D = 1,000-5,000 km<sup>2</sup>
(400-2,000 square miles)
E = 5,000-20,000 km<sup>2</sup>
```

(2,000-8,000 square miles) F = 20,000-200,000 km² (8,000-80,000 square miles) G = 200,000-2,500,000 km² (80,000-1,000,000 square miles) H = >2,500,000 km² (greater than 1,000,000 square miles)

3. Short-term Trend

The rating code that best describes the observed, estimated, inferred, or suspected degree of change in population size, extent of occurrence (range extent), area of occupancy, number of occurrences, and/or number of occurrences or percent area with good viability or ecological integrity over the short term, whichever most significantly affects the conservation status assessment in the area of interest (globe, nation, or subnation). Consider short-term historical trend within ten years or three generations (for long-lived taxa), whichever is the longer (up to a maximum of 100 years), or, for communities and systems, typically 30 years, depending on the characteristics of the type.

The trend may be recent or current, and the trend may or may not be known to be continuing. Trends may be smooth, irregular, or sporadic. Fluctuations will not normally count as trends, but an observed change should not be considered as merely a fluctuation rather than a trend unless there is evidence for this. Conservation Status Assessments: Factors for Assessing Extinction Risk 25 In considering trends, do not consider newly discovered but presumably long existing occurrences, nor newly discovered individuals in previously poorly known areas.

Also, consider fragmentation of previously larger occurrences into a greater number of smaller occurrences to represent a decreasing area of occupancy as well as decreasing number of good occurrences or populations.

A = Decline of >90% B = Decline of 80–90% C = Decline of 70–80% D = Decline of 50–70% E = Decline of 30–50% F = Decline of 10–30% G = Relatively Stable (\leq 10% change) H = Increase of 10–25% I = Increase of >25% U = Short-term trend unknown Null = Factor not assessed

4. Long-term Trend

The rating code that best describes the observed, estimated, inferred, or suspected degree of change in population size, extent of occurrence (range extent), area of occupancy, number of occurrences, and/or number of occurrences or percent area with

good viability or ecological integrity over the long term (ca. 200 years) in the area of interest (globe, nation, or subnation).

A = Decline of >90% B = Decline of 80–90% C = Decline of 70–80% D = Decline of 50–70% E = Decline of 30–50% F = Decline of 10–30% G = Relatively Stable (\leq 10% change) H = Increase of 10–25% I = Increase of >25% U = Long-term trend unknown Null = Factor not assessed

5. Area of Occupancy

Area of occupancy for taxa can be defined as (modified from the International Union for the Conservation of Nature 2001):

"...the area within its 'extent of occurrence', which is occupied by a taxon or ecosystem type, excluding cases of vagrancy. The measure reflects the fact that a taxon or type will not usually occur throughout the area of its extent of occurrence, which may contain unsuitable or unoccupied habitats. In some cases, (e.g., irreplaceable colonial nesting sites, crucial feeding sites for migratory taxa) the area of occupancy is the smallest area essential at any stage to the survival of existing populations of a taxon. The size of the area of occupancy will be a function of the scale at which it is measured, and should be at a scale appropriate to relevant biological or ecological aspects of the taxon or type, the nature of threats and the available data."

- **A** = <0.4km²
- **B** = 0.4-4
- **C** = 4-20 km²
- **D** = 20-100 km²
- **E** = 100-500 km²
- **F** = 500-2000 km²
- $G = 2000-20000 \text{ km}^2$
- H = >20000 km²

5b. Linear Distance of Occupancy

Ecosystems that occur as linear strips. They are often ecotonal between terrestrial and aquatic ecosystems. In undisturbed conditions, typical occurrences range in linear distance from 0.5 to 100 km.

A = $<4km^2$ **B** = 4-40**C** = $40-200 \text{ km}^2$

- $D = 200-1000 \text{ km}^2$
- **E** = 1000-5000 km²
- **F** = 5000-20000 km²
- $G = 20000-200000 \text{ km}^2$
- H = >200000 km²

6. Number of Element Occurrences (EOs)

An "element occurrence" is the mapping unit of CDC methodology. It is generally defined as an area of land or water on which an "element of biodiversity" (plant and animal species or natural community) is or was present. It is a physical location important to the conservation of a species or community, an area worth preserving to insure the survival of a community or species at risk. For a species it is generally the habitat occupied by a local population, for a community it is the area containing a stand or patch. What constitutes an occurrence also varies between species (e.g. hibernacula, den sites, breeding ponds where adults, egg masses and/or larvae have been identified, breeding colonies, etc.). Some species can have more than one type of occurrence, for example breeding and wintering occurrences.

A single letter code (below) represents the number of estimated occurrences believed extant for the species in the province. When a species' distribution is extremely limited and there are very few site occurrences, it is very susceptible to any number of ecological disturbances, both predictable and unpredictable. This criteria is therefore an important factor influencing SRANK when the number of occurrences is few. If the letter code for this field is A or B, the species usually qualifies for a rank of S1 or S2.

- A = 0 5 occurrences
- **B** = 6 20 occurrences
- **C** = 21 100 occurrences
- **D** = 101+ occurrences

7. Number of EOs with Good Viability

For species, an occurrence with at least good (i.e., excellent-to-good) viability exhibits favorable characteristics with respect to population size and/or quality and quantity of occupied habitat; and, if current conditions prevail, the occurrence is likely to persist for the foreseeable future (i.e., at least 20–30 years) in its current condition or better. See Hammerson et al. (2008) for more details. For ecosystems, an occurrence has excellent-to-good ecological integrity when it exhibits favorable characteristics with respect to reference conditions for structure, composition, and function, operating within the bounds of natural or historic disturbance regimes, and is of exemplary size (Faber-Langendoen et al. 2008). One would expect only minor to moderate alterations to these characteristics for an occurrence to maintain good ecological integrity.

For many occurrences, viability or ecological integrity assessments or ranks have been applied by biologists and ecologists throughout the NatureServe network. For species, these Element Occurrence (EO) ranks estimate the probability of persistence of the occurrence. For ecosystems, the rank is a succinct assessment of the degree to which, under current conditions, an occurrence of an ecosystem matches reference conditions for that system, without any presumptions made about future status or persistence. Ranks for species and ecosystems are based on a set of "occurrence rank factors," namely size (including population size and/or occupied area), abiotic and biotic condition, and landscape context. These factors may be further refined to specific indicators or metrics. The overall ranks range from A = Excellent viability/integrity, to D = Poor viability/integrity

A = No occurrences with excellent or good (assessed as A or B) viability or ecological integrity

B = Very few (1-3) occurrences with excellent or good viability or ecological integrity

C = Few (4–12) occurrences with excellent or good viability or ecological Integrity

D = Some (13–40) occurrences with excellent or good viability or ecological integrity

E = Many (41–125) occurrences with excellent or good viability or ecological integrity

F = Very many (>125) occurrences with excellent or good viability or ecological integrity

U = Unknown number of occurrences with excellent or good viability or ecological integrity

Null = Factor not assessed

8. Environmental Specificity

Environmental Specificity is the degree to which a species or ecosystem depends on a relatively scarce set of habitats, substrates, food types, or other abiotic and/ or biotic factors within the overall range. Relatively narrow requirements are thought to increase the vulnerability of a species or ecosystem. This factor is most important when the number of occurrences, and the range extent or area of occupancy, are largely unknown.

A = Very Narrow. Specialist or ecosystem with key requirements scarce. For species, specific habitat(s), substrate(s), food type(s), hosts, breeding/ non-breeding microhabitats, or other abiotic and/or biotic factor(s) are used or required by the species or ecosystem in the area of interest, with these habitat(s) and/or other requirements furthermore being scarce within the generalized range of the species or ecosystem within the area of interest, and the population (or the number of breeding attempts) expected to decline significantly if any of these key requirements become unavailable. For ecosystems, environmental requirements are both narrow

and scarce (e.g., calcareous seepage fens).

B = Narrow. Specialist or ecosystem with key requirements common. Specific habitat(s) or other abiotic and/or biotic factors (see above) are used or required by the species or ecosystem, but these key requirements are common and within the generalized range of the species or ecosystem within the area of interest. For ecosystems, environmental requirements

are narrow but common (e.g., floodplain forest, alpine tundra).

- C = Moderate. Generalist or community with some key requirements scarce. Broad-scale or diverse (general) habitat(s) or other abiotic and/or biotic factors are used or required by the species or ecosystem, but some key requirements are scarce in the generalized range of the species or ecosystem within the area of interest. For ecosystems, environmental requirements are broad but scarce (e.g., talus or cliff forests and woodlands, alvars, many rock outcrop communities dependent more on thin, droughty soils per se than specific substrate factors).
- D = Broad. Generalist or community with all key requirements common. Broad-scale or diverse (general) habitat(s) or abiotic and/or biotic factors are used or required by the species or ecosystem, with all key requirements common in the generalized range of the species or ecosystem in the area of interest. For animals, if the preferred food(s) or breeding/non-breeding microhabitat(s) become unavailable, the species switches to an alternative with no resulting decline in numbers of individuals or number of breeding attempts. For ecosystems, environmental requirements are broad and common (e.g., forests or prairies on glacial till, or forests and meadows on montane slopes).

9. Threat Severity

Within the scope (as defined spatially and temporally in assessing the scope of the Threat), severity is the level of damage to the species or ecosystem from the Threat that can reasonably be expected with continuation of current circumstances and trends (including potential new threats) (Table 7). Note that severity of Threats is assessed within a ten-year or three-generation time frame, whichever is longer (up to 100 years).

For species, severity is usually measured as the degree of reduction of the species' population. Surrogates for adult population size (e.g., area) should be used with caution, as occupied areas, for example, will have uneven habitat suitability and uneven population density. For ecosystems, severity is typically measured as the degree of degradation or decline in integrity (of one or more key characteristics).

Extreme	Within the scope, the Threat is likely to destroy or eliminate the occurrences of an ecological community, system or species, or reduce the species population by 71–100%
Serious	Within the scope, the Threat is likely to seriously degrade/reduce the effected occurrences or habitat or, for species, to reduce the species population by 31–70%
Moderate	Within the scope, the Threat is likely to moderately degrade/reduce the effected occurrences or habitat or, for species, to reduce the species population by 11–30%
Slight	Within the scope, the Threat is likely to only slightly degrade/reduce the effected occurrences or habitat or, for species, to reduce the species population by 1–10%

10. Threat Scope

Scope is defined herein as the proportion of the species or ecosystem that can reasonably be expected to be affected (that is, subject to one or more stresses) by the Threat within ten years with continuation of current circumstances and trends (Table 6). Current circumstances and trends include both existing as well as potential new threats. The ten-year time frame can be extended for some longer-term threats, such as global warming, that need to be addressed today. For species, scope is measured as the proportion of the species' population in the area of interest (globe, nation, or subnation) affected by the Threat. For ecosystems, scope is measured as the proportion of the occupied area of interest (globe, nation, or subnation) affected by the Threat. If a species or ecosystem is evenly distributed, then the proportion of the population or area affected is equivalent to the proportion of the range extent affected by the Threat; however, if the population or area is patchily distributed, then the proportion differs from that of range extent.

Pervasive
LargeAffects all or most (71–100%) of the total population or occurrencesCarge
RestrictedAffects much (31–70%) of the total population or occurrencesRestrictedAffects some (11–30%) of the total population or occurrences.SmallAffects a small (1–10%) proportion of the total population or
occurrences.

11. Intrinsic Vulnerability

Note that this factor is not used if the Threats status factor has been assessed.

Intrinsic Vulnerability is the observed, inferred, or suspected degree to which characteristics of the species or ecosystem (such as life history or behavior characteristics of species, or likelihood of regeneration or recolonization for ecosystems) make it vulnerable or resilient to natural or anthropogenic stresses or catastrophes. For ecosystems, Intrinsic Vulnerability is most readily assessed using the dominant species and vegetation structure that characterize the ecosystem, but it can also refer to ecological processes that make an ecosystem vulnerable or lack resiliency (e.g., shoreline fens along estuarine and marine coasts subject to rising sea levels).

Since geographically or ecologically disjunct or peripheral occurrences may show additional vulnerabilities not generally characteristic of a species or ecosystem, characteristics of Intrinsic Vulnerability are to be assessed for the species or ecosystem throughout the area of interest, or at least for its better occurrences. Information on population size, number of occurrences, area of occupancy, extent of occurrence, or environmental characteristics that affect resiliency should not be considered when assessing Intrinsic Vulnerability; these are addressed using other status factors.

Note that the Intrinsic Vulnerability characteristics exist independent of human influence, but may make the species or ecosystem more susceptible to disturbance by human activities. The extent and effects of current or projected extrinsic influences themselves should be addressed in the comments field of the Threats status factor.

A = Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (>20 years or five generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). Ecosystem occurrences are highly susceptible to changes in composition and structure that rarely if ever are reversed through natural processes even over substantial time periods (>100 years).

- B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5–20 years or 2–5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecosystem occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10–100 years).
- **C = Not Intrinsically Vulnerable.** Species matures quickly, reproduces frequently, and/or has high fecundity such that populations recover quickly (<5 years or 2 generations) from decreases in abundance; or species has high dispersal capability such that extirpated populations soon become reestablished through natural recolonization (unaided by humans). Ecosystem occurrences are resilient or resistant to irreversible changes in composition and structure and quickly recover (within 10 years).

U = Unknown Null = Factor not assessed

12. Other Considerations

Other considerations in determining the rank that are not apparent from the letter codes selected for the above criteria. Generally, these considerations will raise rather than lower the rank, e.g., "Never sexually reproduces" or "All occurrences are in areas under development".

References

Master, L., D. Faber-Langendoen, R. Bittman, G. A. Hammerson, B. Heidel, J. Nichols, L. Ramsay, and A. Tomaino. 2009. NatureServe Conservation Status Assessments: Factors for Assessing Extinction Risk. NatureServe, Arlington, VA.

DATA DICTIONARY

GNAME	Scientific Name of taxon
GCOMNAME	Common name of taxon
FAMILY	Family of taxon
OBSERVER	Person or persons who observed the taxon
TOTAL NUMBER	The number of specimens at a given observation.
MONTH	Month of survey
DAY	Day of survey
YEAR	Year of survey
SRANK_2010	Subnational rank - CDC ranking system
SRANK_2015	Subnational rank - CDC ranking system
NRANK	National Rank - CDC ranking system
GRANK	Global Rank - CDC ranking system
GeneralStatusRanks	General Status text for the province
COSEWIC_STATUS	Denotes the COSEWIC status.
PROVINCIAL_STATUS	Denotes if the species is on the provincial endangered species list.
SARA	Denotes if the species is on the federal SARA list.
HABITAT	Description of the habitat where plant or animal was found
SITE_NAME	The name of the place where the occurrence occurred
ACCURACY	The accuracy in metres of the location.
	Synonym for the plant or animal name in cases it is known by more
SYNAME	than one scientific name.
	Acronym of the herbarium where this specimen is kept, see the
HERDARIA	The collection number assigned to the specimen by the collector, this
COLLECTION NUMBER	should be used to refer to the specimen when contacting the herbarium
CITATION	Primary source of the data
	Field Office Number: Internal ACCDC record reference (not the
IDNUM	EONUM)

ACRONYM	HERBARIUM	ADDRESS	PO_BOX	CITY	PROVINCE	POSTALCODE		URL	PHONE	CORRESPONDENT	TITLE	EMAIL
ACAD	Acadia University	32 University Avenue	P O Box 48	Wolfville	Nova Scotia	B4P 2R6	Canada		[1] 902/ 585-1335	Ruth Newell	Curator	ruth newell@acadiau ca
							Canada	http://museums.ual				i anniori e accaracion
					Alls auto		O a mandra	berta.ca/vascularpl		la a chua l l a ll	Curator of Vascular	
ALIA				Edmonton	Alberta	16G 2E9	Canada	ants/index.aspx	[1] 780/ 492-5523	Jocelyn Hall	Plant Herbarium	Jocelyn.nail@ualberta.ca
			P.O. Box 3443								Chief Collection	
CAN	Canadian Museum of Nature		Station D	Ottawa	Ontario	K1P 6P4	Canada		[1] 613/ 364-4076.	Jennifer Doubt	Manager	jdoubt@mus-nature.ca
	Museum National d'Histoire											
со	Naturelle		B.P. 225	Concarneau		F-29125	France		[33] 2/ 98 97 0659	Marie Le Gal	Curator	ylegal@sb-roscoff.fr
	Eastern Cereal and Oilseed	Wm. Saunders Building,						http://res2.agr.ca/e				
DAO	and Agri-Food Canada	Farm		Ottawa	Ontario	K1A 0C6	Canada	m	[1] 613/ 759-1373	Paul Catling	Curator	catlingp@agr.gc.ca
		1350 Regent Street										
		Centre, Canadian Forest		En e dui et e u	Nava Dramaniala		O a mandra	http://www.Atl.cfs.		L. L. Lundaria	O. mater	
FFB	Atlantic Forestry Centre	Service	P. U. BOX 4000	Fredricton	New Brunswick	E3B 5P7	Canada	NRCan.gc.ca	[1] 506/ 452-3515	J. Huriey	Manager of	J.Edward.Hurley@NRCan.gc.ca
	Gray Herbarium, Harvard							http://www.huh.har			Systematics	
GH	University	22 Divinity Avenue		Cambridge	Massachusetts	02138-2020	USA	vard.edu	[1] 617/ 495-2365	Emily Wood	Collections	ewood@oeb.harvard.edu
									Contact [1] 709/			
GMNP	Gros Morne National Park		P.O. Box 130	Rocky Harbour	Newfoundland	A0K 4N0	Canada		458-2418	Michael Burzunski	Chief Park Interpreter	r Michael.Burzynski@pc.gc.ca
								http://www.fmnh.he			Director, Head	
ц	l Iniversity of Helsinki		P O Box 7	Helsinki		EIN-00014	Finland	Isinki.fi/english/bot	[358] 0/ 1011	Pertti Llotila	Curator of	pertti uotila@belsinki fi
			F.O. DOX 7			1 111-00014		any/index.num			Filanei Ogains	
								http://www.biomus.				
LD	Botanical Museum	Ostra Vallgatan 18		Lund		S-223 61	Sweden	lu.se/indexBe.html	[46] 46/ 222 95 58	Ingvar Kärnefelt	Director	ingvar.karnefelt@botmus.lu.se
	Herbarium fur Spezielle							http://staff-www.uni	[49] 6421/ 282			
МВ	Botanik, Philipps Universitat			Marburg		D-35032	Germany	marburg.de/	2091	Hans Weber	Curator	weberh@mailer.uni-marburg.de
								http://www.mahata				
мо	Missouri Botanical Gardens		P O Box 299	St Louis	Missouri	63166-0299	USA	nttp://www.mobot.o	[1] 314/ 577-5169	James Solomon	Plants	iim solomon@mobot org
			1 101 BOX 200		Milocouli		00/1	http://www.irbv.um				Jimoolomon@mobollorg
	Herbier Marie-Victorin,	4101, rue Sherbrooke						ontreal.ca/francais/				brouille@irbv.umontreal.ca;
МТ	Universite de Montreal	est		Montreal	Quebec	H1X 2B2	Canada	herbier/accueil.htm	[1] 514/ 872-8496	Luc Brouillet	Curator	luc.brouillet@umontreal.ca
	Massachusetts College of										Curator of Vascular	
NASC	Liberal Arts	375 Church Street		North Adams	Massachusetts	01247-4100	USA		[1] 413/ 662-5342	C. Hellquist	Plants	bhellqui@mcla.mass.edu
	Avre Herbarium Memorial											
NFLD	University of Newfoundland			St. John's	Newfoundland	A1B 3X9	Canada		[1] 709/ 737-7498	Peter Scott	Curator	pscott@mun.ca
	Provincial Museum of	0 Ronavonturo Avonuo	D O Boy 1800	St. John's	Nowfoundland	A1C 5D0	Canada	http://www.theroo	[1] 700/ 720 5007	Nathalie Djan-	Curator	nathaliadianchakar@thorooms.co
		9 Donaveniure Avenue	F.O. BOX 1000	St. JOHITS	NewIoundiand	ATC 5F9	Canada	ms.ca/museum/	[1] 709/729-5007	Cheka	Guraior	
		William and Lynda						http://www.nybg.or				
NY	New York Botanical Garden	Steere Herbarium		Bronx	New York	10458-5126	USA	g/	[1] 718/ 817-8626	Barbara Thiers	Director	bthiers@nybg.org
								http://www.uogueip	[1] 519/ 824-4120		Phanerogam	
OAC	Univeristy of Guelph			Guelph	Ontario	N1G 2W1	Canada	barium.shtml	ext. 58581	Carole Ann Lacroix	Collections	botcal@uoguelph.ca
	Herbier Louis-Marie, Universite	Pavillon CE. Marchand		Quebec	Quebec	G1V 046	Canada	www.herbier.ulaval	[1] 418/ 656-7538	Serge Pavette	Curator	serge pavette@berbier ulaval ca
		Gainte-r Gy		Quebec	Quebec		Canada	.04	[1] 410/ 030-7330	berge i ayelle	Curator	Serge.payette@nerbiel.ulaval.ca
		Herbarium Biology										
SLRO	Slippery Rock University	Department		Slippery Rock	Pennsylvania	16057-1326	USA	-	[1] 724/ 738-2489	Jerry Chmielewski	Curator	jerry.chmielewski@sru.edu
SWGC	Sir Wilfred Grenfell College			Corner Brook	Newfoundland		Canada			Henry Mann		hmann@swgc.mun.ca
	Terra Nova National Park			Terra Nova	Newfoundland		Canada			Greg Stroud		Grea Stroud@nc.ac.ca
		Herbarium Department				1	Janaua					
		of Biology, 3359										
TRTE	Erindale College	Mississauga Road, N		Mississauga	Ontario	L5L 1C6	Canada		[1] 905/ 828-3984	Peter Ball	Curator	pball@credit.erin.utoronto.ca

ACRONYM	HERBARIUM	ADDRESS	PO BOX	СІТҮ	PROVINCE	POSTALCODE	COUNTRY	URL	PHONE	CORRESPONDENT	TITLE	EMAIL
								T				
TSM	Museo Civico di Storia Naturale	e Piazza Hortis 4		Trieste		I-34123	Italy		[39] 040/ 6758658	Sergio Dolce	Director	dolces@comune.trieste.it
		Department of Biological										
UAC	University of Calgary	Sciences		Calgary	Alberta	T2N 1N4	Canada		[1] 403/ 220-5262	C. Chinnappa	Curator	ccchinna@acs.ucalgary.ca
UBC	UBC Herbarium, Beaty Biodiversity Museum	3529-6270 University Boulevard		Vancouver	British Columbia	V6T 1Z4	Canada	http://www.beatym useum.ubc.ca/herb arium/index.html	[1] 604/ 822-3344; 822-2133.	Jeannette Whitton	Director and Curator of Vascular Plants	jwhitton@interchange.ubc.ca
		Connell Memorial Herbarium Biology						http://www.unb.ca/			Curator of Vascular	
UNB	University of New Brunswick	Department	P.O. Box 4400	Fredricton	New Brunswick	E3B 5AE	Canada	herbarium/	[1] 506/ 452-6205	Bev Benedict	Plants	bbenedic@unb.ca
US	Smithsonian Institute	Herbarium Department of Botany NMNH, MRC-	P.O. Box 37012	Washington	District of Columbia	20013-7012	USA	http://www.nmnh.si .edu/sysbiology/	[1] 202/ 633-0920.	George Russell	Collections Manager	russellr@si.edu
		Herbarium, Department										
UWO	University of Western Ontario	of Biology		London	Ontario	N6A 5B7	Canada		[1] 519/ 661-2111	Jane Bowles	Curator	jbowles@uwo.ca
		Herbarium, Biology						http://www.science .uwaterloo.ca/biolo	[1] 519/ 888-4567,			
WAT	University of Waterloo	Department		Waterloo	Ontario	N2L 3G1	Canada	gy/	ext. 3751	John Semple	Director	jcsemple@sciborg.uwaterloo.ca

NOTE: All contact information presented here has been extracted from the online Herbaria of the World Index, url: http://sweetgum.nybg.org/ih/index.php for more information please visit the url provided.

DATA SOURCES:

All data housed at Atlantic Canada Conservation Data Centre (ACCDC). Refer to 'CITATION' field for data sources.

CAVEATS:

ACCDC rare taxa occurrence records are offered as a guide recognizing that the ability to find plants and animals will depend upon the season. The ACCDC makes a strong effort to verify the accuracy of all the data it obtains, generates and manages, but it will not be held responsible for inaccuracies in data that it provides.

PLEASE NOTE:

* ACCDC data is restricted for use by the specified data user only; any third party requiring data must make its own request to the ACCDC.

* Specified data users may not publish any information provided by the ACCDC or its partners without prior permission.

- * To ensure the currency of the data, the ACCDC requires Data Users to destroy all copies of data 18 months after the date of receipt.
- * ACCDC data reports are restricted to that data in our Data System at the time of the request.
- * Data accuracy is qualified as to location (Accuracy) and time (Date)
- * ACCDC data reports are not to be constructed as exhaustive inventories of taxa in an area.
- * The non-occupancy of a taxon cannot be inferred by its absence in an ACCDC data report.

* Museum databases, which are the basis for more accessible public databases, such as those of the ACCDC, are works in progress. Essentially, they are finding aids and dynamic data records, constructed primarily to serve scientists engaged in the continuing, active process of plant systematics and taxonomy. Ongoing additions of new collections, and frequent upgrades to the identifications of all plant specimens housed in museum herbaria, may not always be reflected, in real time, by databases such as those of the ACCDC. Specifically, the conservation status of individual species recorded in the ACCDC database may not be absolutely current. It is therefore the responsibility of the data user to contact the relevant museums directly, in order to check for the most current identifications of specimens of individual species in question. The absolute conservation status of any given species is dynamic, and subject to change over short periods of time.

APPENDIX D

Birds Detected in Vicinity to the Project Area in Newfoundland and Labrador

D.1 Breeding Birds Detected on Newfoundland and Labrador's BBS Square Summary 22TCT77

D.2 Species observed within the Project area and submitted to eBird



Appendix D.1: Breeding Birds Detected on Newfoundland and Labrador's BBS Square Summary 22TCT77 (Newfoundland Breeding Bird Atlas, 2020)

Species Reported in the Newfoundland Breeding E	Bird Survey
American Bittern	Pine Grosbeak
American Black Duck	Pine Siskin
American Crow	Purple Finch
American Goldfinch	Red Crossbill
American Pipit	Red-breasted Nuthatch
American Redstart	Rock Pigeon (Feral Pigeon)
American Robin	Ruby-crowned Kinglet
Bald Eagle	Savannah Sparrow
Belted Kingfisher	Song Sparrow
Black Guillemot	Sora
Black-and-white Warbler	Spotted Sandpiper
Black-capped Chickadee	Swamp Sparrow
Black-legged Kittiwake	Tree Swallow
Blackpoll Warbler	White-throated Sparrow
Blue Jay	Wilson's Snipe
Boreal Chickadee	Wilson's Warbler
Cedar Waxwing	Yellow Warbler
Common Grackle	Yellow-bellied Flycatcher
Common Loon	Yellow-rumped Warbler
Common Raven	
Common Tern	
Dark-eyed Junco	
European Starling	
Fox Sparrow	
Golden-crowned Kinglet	
Greater Yellowlegs	
Green-winged Teal	
Herring Gull	
House Sparrow	
Mallard	
Northern Flicker	
Northern Pintail	
Northern Shoveler	
Northern Waterthrush	
Olive-sided Flycatcher	
Osprey	



Appendix D.2: Species observed within the Project area and submitted to eBird. (eBird, 2020)

Species Observed in the Project Area	
American Black Duck	Lesser Black-backed Gull
American Crow	Mallard
American Goldfinch	Merlin
American Redstart	Mew Gull
American Robin	Mourning Dove
Bald Eagle	Nashville Warbler
Baltimore Oriole	Northern Flicker
Belted Kingfisher	Northern Goshawk
Black-and-white Warbler	Northern Harrier
Black-capped Chickadee	Northern Mockingbird
Black-crowned Night-Heron	Northern Pintail
Black-headed Gull	Northern Waterthrush
Blackpoll Warbler	Orange-crowned Warbler
Black-throated Green Warbler	Osprey
Blue Jay	Philadelphia Vireo
Blue-gray Gnatcatcher	Pine Grosbeak
Blue-headed Vireo	Pine Siskin
Bohemian Waxwing	Pine Warbler
Boreal Chickadee	Purple Finch
Brown Creeper	Red-bellied Woodpecker
Canada Goose	Red-breasted Nuthatch
Cedar Waxwing	Red-eyed Vireo
Cerulean Warbler	Redwing
Common Grackle	Ring-billed Gull
Common Merganser	Rock Pigeon
Common Raven	Rose-breasted Grosbeak
Common Yellowthroat	Savannah Sparrow
Dark-eyed Junco	Sharp-shinned Hawk
Dickcissel	Song Sparrow
Downy Woodpecker	Sora
Eastern Kingbird	Spotted Sandpiper
European Starling	Swamp Sparrow
Evening Grosbeak	Tennessee Warbler
Glaucous Gull	Townsend's Solitaire
Golden-crowned Kinglet	Townsend's Warbler
Gray Catbird	Tree Swallow
Great Black-backed Gull	White-throated Sparrow
Great Cormorant	White-winged Crossbill
Great Horned Owl	White-winged Dove
Greater Scaup	Wilson's Warbler
Green-winged Teal	Yellow Warbler
Hermit Thrush	Yellow-bellied Flycatcher
Herring Gull	Yellow-billed Cuckoo
House Sparrow	Yellow-breasted Chat
House Wren	Yellow-crowned Night-Heron
Iceland Gull	Yellow-rumped Warbler
Indigo Bunting	Yellow-throated Vireo
Killdeer	Yellow-throated Warbler

APPENDIX E

Mitigation Measures



During construction (and where upgrades or repairs are scheduled throughout infrastructure lifespan), the City and their contractors will comply with all relevant federal, provincial and municipal acts and regulations such as the *Environmental Protection Act* (SNL 2002: Chapter E-14.2), *Wild Life Act, Occupational Health and Safety Act, Fisheries Act, Migratory Birds Convention Act, Species at Risk Act* and their respective regulations. Most mitigation measures to be implemented during construction will be outlined in a series of project specific plans that will serve as guidelines to ensuring due diligence. Other mitigation measures that will be abided by include BMPs and the following:

- The berms will be constructed as part of the mitigation measures for surface water management and land users. The berms will be constructed to the design criteria for a 1:100 AEP climate change event.
- A site-specific Environmental Protection Plan (EPP) will be prepared and followed. The EPP will include requirements and responsibilities for training and mitigation measures to reduce effects to terrestrial, aquatic and human health such as accidental spills/leaks and release of fuel and mechanical fluids, hazardous materials, dust, and deleterious substances. At a minimum, the following topics will be included:
 - Emergency Response Plan
 - o Emergency Spill Response Plan including locations of spill response equipment
 - o Erosion and Sediment Control Plan
 - Handling and storage of fuel, gasoline and associated products
 - Waste management strategy
 - o Invasive Species Mitigation Plan
 - o Operation and maintenance of machinery
- The Erosion and Sediment Control Plan will be implemented prior to construction and will describe the measures implemented to prevent loss of soil during construction. The plan will include protecting topsoil by stockpiling for reuse; preventing sedimentation of storm sewer or receiving streams; and preventing air pollution by dust and particulate matter. Temporary erosion and pollution control devices such as silt fences will be used to mitigate possible sources of pollutants. The plan at a minimum will address the following:
 - o Site dewatering
 - \circ $\;$ Protecting topsoil by stockpiling for reuse
 - o Preventing sedimentation to receiving streams
 - Preventing air pollution by dust and particulate matter
 - Temporary erosion and pollution control devices such as silt fences will be used to mitigate possible sources of pollutants and their removal at completion of the Project
- In the event of a spill or leak, the operator must immediately notify NLECCM and the Environmental Emergencies 24 Hour Report Line (1-800-563-9089), abate the discharge and restore the affected area to the satisfaction of the NLECCM.
- Any quarried materials required for the proposed Project shall be purchased from a supplier permitted under the *Quarry Materials Act* (1998).

- All soils and water impacted via spills and releases will be disposed of off-site in accordance with applicable environmental legislation.
- All debris and waste materials will be disposed of in accordance with the provisions of the *Environmental Protection Act* and latest regulations, guidelines and policies. Non-hazardous construction and demolition debris will be either recycled or salvaged. Items may include cardboard, metal, concrete, plastic, clean wood, and glass. The disposal of waste materials not reused, resold or recycled will be at an approved waste disposal site.
- On completion of the Project, construction equipment, surplus materials and temporary works will be removed from the site.
- On completion of the Project, any disturbed areas will be restored to the original conditions or better.
- Only new or reused, clean materials will be used for the purposes of the berm construction, backfill, and grading.
- All construction activities will occur during working hours as defined in the permit, and in compliance with local by-laws.
- All heavy machinery should be in good working order and operated in a manner to maximize fuel efficiency, thereby reducing greenhouse gas emissions and effects to air quality, such as emission and noise.
- Fueling and storage of gasoline and associated products (e.g. oils, greases, diesel, hydraulic and transmission fluids), should occur in a designated refueling/storage area at least 30 m from any waterbody and on flat, paved terrain.
- All maintenance of equipment should occur at least 30 m from any waterbody on flat, paved terrain.
- Heavy machinery will not be permitted to enter existing watercourses (i.e., Rennies River).
- All in-water works will be completed within periods of low flow to further reduce the risk to fish and fish habitat. Further information regarding the schedule is provided in Chapter 5.
- Adjacent to watercourses only clean rock fill materials (minimal fines) will be used to reduce the potential of release of sediments, or any other materials considered deleterious, to fish and fish habitat.
- Erosion and sediment control measures shall be implemented to reduce effects to fish and fish habitat. Such measures may include, but are not limited to, isolation measures (e.g., silt fences, and sand bags), minimizing the removal of vegetation and natural debris (e.g., rocks, logs, sand), and shoreline stabilization with appropriate materials (e.g., native vegetation, rip-rap or armour stone).
- Fish passage and flow should be maintained at all times.
- All guidance and mitigation measures issued from DFO will be followed.
- The Project will be designed to minimize disruption to existing natural areas. Removal and disposal of trees, brush, stumps, surface litter, boulders and grubbing will follow applicable legislation, permits and BMPs. Vegetation, such as trees, and shrubs, should be retained when possible.

- All equipment must be devoid of soils, seeds, and residual debris prior to use on-site. Undercarriages, wheels, tracks and blades/buckets should be cleaned (i.e. pressure washed) prior to use on the site.
- The berms will be covered with topsoil, hydroseed and/or sod as well as revegetated with preference to native vegetation, trees and shrubs. A hydroseed mixture will be used in areas directly adjacent to watercourses. Sod will not be placed in locations directly adjacent to watercourse.
- Whenever possible, vegetation clearing will occur outside the breeding bird period (mid-April to mid-August). If this is not avoidable, and without implementation of mitigation measures, there could be a risk of impacting breeding birds and their nests. If vegetation clearing outside the breeding bird nesting period (mid-April to mid-August) is unavoidable, breeding bird /nest surveys will be completed prior to removal of vegetation or disturbance of potential habitat. A trained biologist should complete surveys to confirm the present of breeding birds and their nests. Nests and neighbouring vegetation will be left undisturbed until nesting is complete. If nests containing eggs, or young, of migratory birds are discovered during construction, disruptive activities in the nesting area should cease until nesting is completed. A buffer zone should be established at an appropriate set-back distance surrounding the nest. Appropriate set-back distances should be based on set-backs identified in the literature or in consultation with a provincial or federal wildlife biologist.
- The contractor shall develop a management plan encompassing measures to mitigate effects to migratory birds and incorporate this plan into the EPP. These measures shall include ways to avoid disturbing birds' nests or eggs.
- Mitigation measures to deter migratory birds from nesting in stockpiles during the breeding season shall also be implemented.
- Contractors should implement management practices to reduce the effects to migratory birds as a result of human induced light, such as reducing the number of site illuminating lights in the project area, where possible, and low intensity strobe lights at night.
- Best management practices for wildlife protection during construction will be incorporated into the EPP, such as proper waste management to deter wildlife from entering the Project area.
- Traffic control, where required, will be provided by certified traffic control personnel in accordance with the Traffic Control Manual issued by the NL Transportation and Infrastructure.
- Berm repairs will be completed, including regrading and planting, to maintain berm conditions and aesthetic.
- Geotechnical inspection will be completed every 5 years including review of annual inspections.

APPENDIX F

Public Consultation Documents





Home » Rennie's River Flood Mitigation

Key Dates

17 November 2020

Virtual Public Meeting 7 to 8:30 p.m.

To register for this meeting, click here.

Registration closes at 4:30 p.m. Nov. 17. After that time, please email engage@stjohns.ca directly to express your interest.

Terms and Conditions

Privacy Policy

Moderation Policy

Accessibility

Technical Support

Site Map

Cookie Policy

Cookie Settings

S existing and the second s



Home » Rennie's River Flood Mitigation

FAQs

- What is the scope and status of Phase 1 of this project?
- **?** What is included in Phase 2?
- Why are you proceeding with Phase 2 when Phase 1 has not been completed?
- I live along the river, how will I be impacted by the proposed Phase 2 work?
- What happens after you collect feedback on Phase 2?
- Why are you doing this project?
- What are the pros and cons of proceeding with Phase 2 work?
- How will this project be funded?
- When would this project be completed?

? The Bike Master Plan and its recommended multi-use trail projects are within the scope of this project. How will the city ensure the two projects connect?

O What is the scope and status of Phase 1 of this project?

The most recent progress has been the issuance of a revised Environmental Preview Report Guideline (June 2020) by the Province that will require revisions and updating to the Environmental Preview Report (EPR). Based on these new EPR Guidelines, a revised EPR will be required to continue the Environmental review and approval process for the Long Pond Weir Project.

top of the page

What is included in Phase 2?

After completing various modelling scenarios, it was determined that a two phased approach could be undertaken for the flood mitigation measures in the area downstream of Long Pond based on the timing of construction for the Long Pond Weir. The alternate scenario being presented would see the flood mitigation measures completed upstream of the Portugal Cove Rd bridge, as well as, the berming required along the rear of some Winter Ave properties and the NF Power substation upstream of the Kings Bridge Rd bridge. This approach will remove the properties along Pringle Place, Vaughan Place, Winter Ave, Kings Bridge Rd and The Boulevard from the floodplain; however the Fieldian Grounds, Riverdale Tennis Courts and some of the rear yards of properties along Empire Ave will remain in the floodplain.



top of the page

O Why are you proceeding with Phase 2 when Phase 1 has not been completed?

With funding approved for the construction of the Long Pond Weir in 2014, the City has been working through the provincial Environmental Approval process for the Long Pond Weir Project since that time. The process is still ongoing.

In the meantime, we have determined that we can proceed with the second priority areas prior to Phase 1 being completed.

top of the page

O I live along the river, how will I be impacted by the proposed Phase 2 work?

The impact is dependent on where your property is located.

Berm/retaining wall heights along Winter Ave. and Pringle Place are noted on the sketch below.

Heights noted are above the existing trail elevation or back of sidewalk grade. Some overhanging tree branches to be trimmed to suit new trail elevations.



Berm height along Vaughan Place, shown below.

Height noted is above the existing trail elevation or back of sidewalk grade. Some overhanging tree branches to be trimmed to suit new trail elevations.



top of the page

O What happens after you collect feedback on Phase 2?

Once we have collected all of the feedback, we will be completing all of our documentation including what we heard throughout this process and sending it to the provincial government as a part of the Environmental Assessment registration documentation.

top of the page

O Why are you doing this project?

Issues with overland flooding have been a concern in this area for several years and in the absence of meaningful progress on the weir, we are planning to proceed with the second phase to address some of those concerns.

top of the page

O What are the pros and cons of proceeding with Phase 2 work?

Alternative Project Sequencing (Modified downstream flood mitigation improvements
completed as first priority, before the Long Pond Weir)

Pros	Cons
Provides flood protection for houses & backyards along Vaughan PI, Pringle PI, Winter Ave, Kings Bridge Rd, and The Boulevard. As well as, flood protection for houses along Empire Ave. Construction of berms will not result in removal of	Flood protection not provided to Feildian Grounds, Riverdale Tennis Courts and rear yards of Empire Ave properties.
mature trees.	
Berms do not encroach onto Riverdale Tennis Courts.	
No property acquisition required.	
This approach will allow downstream flood mitigation projects to proceed while waiting for the Long Pond Weir to be approved	
Long Pond Weir could be constructed at a later date with necessary regulatory approvals in place for the Long Pond Weir. Flood protection measures for Feildian Grounds, Riverdale Tennis Courts and rear yards of Empire Ave properties could also proceed at a later date if negative impacts are deemed acceptabe to Council, property stakeholders and regulatory authorities.	

top of the page

O How will this project be funded?

The project is funded under the New Building Canada Fund (\$1.9M).

top of the page

O When would this project be completed?

If approved, the project will be designed during winter 2021 with construction to follow in spring/summer 2021.

top of the page

O The Bike Master Plan and its recommended multi-use trail projects are within the scope of this project. How will the city ensure the two projects connect?

The Kelly's Brook Shared Use Path project will take the flood mitigation work into account as part of the design work and the public consultation work for the multi-use trail. The City will also work to incorporate the multi-use trail project into flood mitigation work if it is found to be needed. There are several different ways the projects could overlap so it is impossible to say exactly how one will influence the other until we are a bit further along with the design.

top of the page

Terms and Conditions

Privacy Policy

Moderation Policy

Accessibility

Technical Support

Site Map

Cookie Policy

Cookie Settings



DECISION/DIRECTION NOTE

Title:	Rennies River Flood Mitigation Alternate Project Phasing Sequence
Date Prepared:	August 24, 2020
Report To:	His Worship the Mayor and Members of Council
Councillor and Role:	Mayor and Council
Ward:	4

Decision/Direction Required:

Council Decision to approve an alternate project phasing sequence for implementation of the Rennies River flood mitigation measures downstream of Long Pond. This will allow flood mitigation to proceed while awaiting Provincial approval of the Long Pond weir.

Discussion – Background and Current Status:

The Rennies River Catchment Stormwater Management Plan (RRCSWMP - April 2014) was issued for implementation of the project recommendations per Council Directive CD# R2014-05-26/5. The list below is an excerpt of the recommended projects in the noted study.



Priority	Description of Location							
1	Location 3: Weir at outlet of Long Pond							
2	Location 1, Option A: Kings Bridge Road to							
	Portugal Cove Road & Upstream of Portugal Cove							
	Road – Berms & Walls only (Recommended Option)							
	Location 1, Option B: Kings Bridge Road to							
	Portugal Cove Road & Upstream of Portugal Cove							
	Road – New Channel and bridge							
	Location 1, Option C: Kings Bridge Road to							
	Portugal Cove Road & Upstream of Portugal Cove							
	Road – Raised parking lot							
2	Location 2: Upstream of Carpasian Road Bridge							
3	Location 4: Clinch Crescent East to Clinch							
	Crescent West							
4	Location 5: Wicklow Street to Thorburn Road							
5	Location 7: O'Leary Avenue Bridge							
6	Location 8: Downstream of Mews Place							

The report recommended that the weir at Long Pond be given first priority and the two problem areas located downstream of Long Pond be given second priority.

With funding approved for the construction of the Long Pond Weir in 2014, the City has been working through the provincial Environmental Approval process for the Long Pond Weir Project since that time. The process is still ongoing. The most recent progress has been the issuance of a revised Environmental Preview Report Guideline (June 2020) by the Province that will require revisions and updating to the Environmental Preview Report. Based on these new EPR Guidelines, a revised EPR will be required to continue the Environmental review and approval process for the Long Pond Weir Project.

In 2018, the City received funding for Phase 2A under the New Building Canada Fund. The scope of work was presented to the COTW meeting on December 19, 2018. One of the concerns raised during that meeting was what would be the affect with proceeding with Phase 2A flood mitigation works prior to the completion of the Long Pond Weir Project. CBCL were subsequently hired to undertake additional storm water modelling to review the impact of the downstream phasing sequence in the absence of the Long Pond Weir being competed.

Revised Modelling Output

The flood mitigation measures presented in the RRCSWMP were based on the premise that the floodwater would be entirely contained within the Rennies River corridor in an effort to protect private properties and rear yards from flooding. To proceed in this manner would require the removal for many large mature trees that provide shade to the river ecosystem, as

well, it could have a negative effect on the enjoyment on some properties rear yards, due to the removal of large private trees and the construction of large earthen berms. See Figure 1 below.

Figure 1: Feildian Grounds, Riverdale Tennis Courts & Empire Ave rear yards protected from flooding



After completing various modelling scenarios, it was determined that a two phased approach could be undertaken for the flood mitigation measures in the area downstream of Long Pond based on the timing of construction for the Long Pond Weir. The alternate scenario being presented would see the flood mitigation measures completed upstream of the Portugal Cove Rd bridge, as well as, the berming required along the rear of some Winter Ave properties and the NF Power substation upstream of the Kings Bridge Rd bridge. This approach will remove the properties along Pringle Place, Vaughan Place, Winter Ave, Kings Bridge Rd and The Boulevard from the floodplain; however the Fieldian Grounds, Riverdale Tennis Courts and some of the rear yards of properties along Empire Ave will remain in the floodplain until such time as the Long Pond Weir receives provincial approval and is subsequently constructed.

Figure 2: Feildian Grounds, Riverdale Tennis Courts & Empire Ave rear yards allowed to flood (Maintain Status Quo)



By allowing the Fieldian Grounds and Riverdale Tennis Courts to continue flooding, this alternate sequencing will substantially reduce the wall and berming heights by comparison of Figures 3 and 4 below. After the Long Pond Weir is approved and constructed, the remaining flood control measures downstream of Long Pond could be undertaken if Council, local area stakeholders and regulatory authorities (ie. DFO) are accepting of the required tree removals and additional berming / retaining walls required. An increase to the wall heights for the flood mitigation measures upstream of Portugal Cove Rd bridge would also be required for this subsequent phase, per Figure 3 below.

Figure 3: Wall / Berms Heights Per Original Project Sequencing (After Long Pond Weir Constructed)



Figure 4: Wall / Berm Heights Per Alternate Project Phase Sequence (Maintain Status Quo – Long Pond Weir Not Constructed)



<u>Current Project Sequence</u> (Long Pond Weir to be constructed, followed then by downstream flood mitigation improvements below Long Pond)

Pros	Cons
Provides flood protection for houses & backyards	Earthern berms encroach onto one of the
along Vaughan Pl, Pringle Pl, Winter Ave, Empire	Riverdale Tennis Courts.
Ave, Kings Bridge Rd, The Boulevard, Feildian	
Grounds and Riverdale Tennis Courts.	
	Mature trees must be removed to
	accommodate berms (loss of fish habitat and
	trail enjoyment).
	Property must be acquired at backyards
	along Empire Ave properties to
	accommodate berming.
	Provincial EA approval has been ongoing
	since 2014. It is unknown when, or if, the
	Long Pond Weir will be approved; thus,
	preventing any downstream flood mitigation
	work from proceeding.

<u>Alternative Project Sequencing (Modified downstream flood mitigation improvements</u> completed as first priority, before the Long Pond Weir)

Pros	Cons
Provides flood protection for houses & backyards	Flood protection not provided to Feildian
along Vaughan Pl, Pringle Pl, Winter Ave, Kings	Grounds, Riverdale Tennis Courts and rear
Bridge Rd, and The Boulevard. As well as, flood	yards of Empire Ave properties.
protection for houses along Empire Ave.	
Construction of berms will not result in removal of	
mature trees.	
Berms do not encroach onto Riverdale Tennis	
Courts.	
No property acquisition required.	
This approach will allow downstream flood	
mitigation projects to proceed while waiting for the	
Long Pond Weir to be approved	
Long Pond Weir could be constructed at a later	
date with necessary regulatory approvals in place	
for the Long Pond Weir. Flood protection	
measures for Feildian Grounds, Riverdale Tennis	
Courts and rear yards of Empire Ave properties	
could also proceed at a later date if negative	
impacts are deemed acceptabe to Council,	
property stakeholders and regulatory authorities.	

Key Considerations/Implications:

1. Budget/Financial Implications:

The project is funded under the New Building Canada Fund (\$1.9M). Additional funding would be required for the subsequent phase of construction after the Long Pond Weir is completed.

- 2. Partners or Other Stakeholders:
 - Residents along Empire Ave, Pringle Place, Vaughn Place and Winter Ave
 - Feildians Athletic Association
 - Riverdale Tennis Club
- 3. Alignment with Strategic Directions/Adopted Plans:

The Rennies River Flood Mitigation Project aligns with the Strategic Goal:

- A Sustainable City
- 4. Legal or Policy Implications:

The Development Regulations generally prohibits development in the floodplain and restricts development in the buffer. Implementation of this project may result in the removal of properties from the identified floodplain or buffer, potentially allowing development in those areas that are removed.

5. Engagement and Communications Considerations:

Stakeholders to be engaged during the planning and construction phase of the project.

- 6. Human Resource Implications: N/A
- 7. Procurement Implications:

Public Procurement Act to be followed for the design and construction stages of the project as per standard procedure.

- 8. Information Technology Implications: N/A
- 9. Other Implications: Environmental Assessment Process

The Department of Municipal Affairs & Environment (MAE) has advised that The Environmental Assessment Regulations, 2003, Section 35 (4b) define this project as an undertaking requiring environmental review pursuant to the Environmental Protection

Act, SNL 2002, cE-14.2. Following through with the Environmental Assessment review process, it will need to be determined by MAE what level of environmental assessment is required. Depending on the Ministers decision, the following are the four options:

- i) The undertaking may be released from further environmental review.
- ii) An Environmental Preview Report (EPR) may be required.
- iii) An Environmental Impact Statement (EIS) may be required.
- iv) The undertaking may be rejected.

This approval process could add months or years to the completion of the proposed flood mitigation works.

Recommendation:

It is recommended, to approve the alternate project phasing sequence for implementation of the Rennies River flood mitigation measures downstream of Long Pond prior to the construction of the Long Pond Weir.

Prepared by/Date:

Approved by/Date:

Scott Winsor, P. Eng. Director of Engineering Jason Sinyard, P. Eng. Deputy City Manager PERS

SW/
CBCL Rennie's River Flood Mitigation ST. J@HN'S





CBCL Using Microsoft Teams

This conversation is about Flood Protection Berms	Make the most of the virtual tools; chat, raise hands, etc.	Ask questions/speak; use chat or raise hands
Respect the time; we have allocated one and a half hours	Respect the space; only one person talking at a time	What else do you need to have a productive conversation?

You are here to participate and provide your feedback as residents within the project area. We are here to collect your feedback in a meaningful way.

CBCL Rules of Engagement

Purpose of the Public Meeting

Background

The Project

- Location / Project Design
- **Project Activities**
- Project Schedule

- Permits and Authorizations
- Environmental Assessment Process
- Other Permits



Purpose of the Public Meeting

• To provide information on the proposed project to the people whose environment may be affected.

• To respond to questions and seek feedback from the local community.

свс Purpose of the Public Meeting

Background

Priority	Description of Location			
1	Location 3: Weir at outlet of Long Pond			
2	Location 1, Option A: Kings Bridge Road to Portugal Cove Road & upstream of Portugal Cove Road – Berms & walls only (Recommended Option)			
	Location 1, Option B: Kings Bridge Road to Portugal Cove Road & upstream of Portugal Cove Road – New channel and bridge			
	Location 1, Option C: Kings Bridge Road to Portugal Cove Road & upstream of Portugal Cove Road – Raised parking lot			
2	Location 2: Upstream of Carpasian Road Bridge			
3	Location 4: Clinch Crescent East to Clinch Crescent West			
4	Location 5: Wicklow Street to Thorburn Road			
5	Location 7: O'Leary Avenue Bridge			
6	Location 8: Downstream of Mews Place			

Rennie's River Catchment Stormwater Management Plan (RRCSMP) completed April 2014.

CBCL Background





CBCL Project Location



CBCL South of Winter Avenue



CBCL Upstream of Portugal Cove Rd Bridge





CBCL Upstream of Portugal Cove Rd Bridge

The Project

Site Preparation

Vegetation clearing and grubbing

Construction of the berm

- Excavation for foundations
- Placement of new materials (pre-cast concrete blocks, concrete cast-inplace wall, rock fill, granular material)
- Grading and shaping of berm
- Stabilization of berm slopes
- Placement of topsoil
- Revegetation of the constructed berm
- Environmental protection, and sediment and erosion control measures

CBCL Project Activities



Project Activities

Operations and Maintenance

- Annual inspection of berm conditions (planting and structural)
- Berm repairs including regrading and planting
- Geotechnical inspection every 5 years







с_{вс} Project Schedule



Legend





Legend







Permits and Authorizations

Minister of Environment, Climate Change and Municipalities

- 7 days to post the receipt of the EADR document following submission
- 45 days to review the EADR
- 10 days to post the decision after 45-day review period

Public

- 35 days following posting of EADR to provide comments to Minister
- EADR will be available on the ECCM Environmental Assessment webpage
- https://www.gov.nl.ca/eccm/env-assessment/projects-list/
- Notices will be posted here: <u>https://www.gov.nl.ca/eccm/env-assessment/public-notices/</u>

The EADR document will also be reviewed by the City's Environment & Sustainability Experts Panel.

CBCL Environmental Assessment Process



Permits and Authorizations

Permit, Approval, or Authorization	Applicable Legalisation	Issuing Body
Approval for the Undertaking	Environmental Protection Act / Environmental Assessment Regulation	Minister of Environment, Climate Change and Municipalities
Development, Building, and Occupancy Permits	City of St. John's Act, RSNL 1990	St. John's City Council
Permit to Alter a Body of Water Schedule J - Miscellaneous Works in a Freshwater Body i.e. Other works not specific to above schedules	Water Resources Act, SNL 2002 and MAE Policy for Development in Wetlands	Department of Environment and Climate Change. Water Resources Management Division
Request for Review	Fisheries Act	Fisheries and Oceans Canada (DFO)

CBCL Approvals, Authorizations and Permits







Project Website https://www.engagestjohns.ca/rennie-s-river-flood-mitigation







What we Heard

Rennie's River Flood Mitigation Nov. 2020



ST. J@HN'S

Context/Scope

The Rennie's River Catchment Stormwater Management Plan (RRCSMP) was completed in 2014. On May 26, 2014, Council Directive CD# R2014-05-26/5 recommended implementation of the recommendations below to address flooding in the area.

Priority	Description of Location			
1	Location 3: Weir at outlet of Long Pond			
2	Location 1, Option A: Kings Bridge Road to			
	Portugal Cove Road & Upstream of Portugal Cove			
	Road - Berms & Walls only (Recommended Option)			
	Location 1, Option B: Kings Bridge Road to			
	Portugal Cove Road & Upstream of Portugal Cove			
	Road – New Channel and bridge			
	Location 1, Option C: Kings Bridge Road to			
	Portugal Cove Road & Upstream of Portugal Cove			
	Road – Raised parking lot			
2	Location 2: Upstream of Carpasian Road Bridge			
3	Location 4: Clinch Crescent East to Clinch			
	Crescent West			
4	Location 5: Wicklow Street to Thorburn Road			
5	Location 7: O'Leary Avenue Bridge			
6	Location 8: Downstream of Mews Place			

While the report recommended that the weir at Long Pond be given priority and the two problem areas located downstream of Long Pond be given second priority, the City has been working through the provincial environmental approval process for the Long Pond Weir Project since that time and the process is still ongoing. The most recent progress has been the issuance of a revised Environmental Preview Report Guideline (June 2020) by the Province that will require revisions and updating to the Environmental Preview Report (EPR). Based on these new EPR guidelines, a revised EPR will be required to continue the environmental review and approval process for the Long Pond Weir Project. In 2018, the City received funding for Phase 2A under the New Building Canada Fund. The scope of work was presented to Council at Committee of the Whole on December 19, 2018. One of the concerns raised during that meeting was the potential effect of proceeding with Phase 2A flood mitigation works prior to the completion of the Long Pond Weir Project. An engineering firm was subsequently hired to undertake additional stormwater modelling to review the impact of the downstream phasing sequence in the absence of the Long Pond Weir being competed. The outcome of that was to complete various modelling scenarios where it was determined that a two-phased approach could be undertaken for the flood mitigation measures in the area downstream of Long Pond based on the timing of construction for the Long Pond Weir.



Environmental Assessment

- Council directed staff to consult with residents in the area prior to the City's submission to the Government of NL for an Environmental Assessment Process for Phase II.
- Once the report is submitted, the Province will also engage on the project.



Portuga Cove

Engage! St. John's

ST. J@HN'S

Kina's

Bridge

Engagement and Communications

- Nearly 5000 postcards mailed to households in the area
- Newsletter to 2700 registered users of engagestjohns.ca
- Posts to regular City communications channels including social media (22,500 views), news release, listservs, website



Rennie's River Flood Mitigation Project Phase Two

A construction project for flood mitigation is being planned along parts of Rennie's River from King's Bridge Road to Carpasian Road. A virtual public meeting is being held in advance of submitting an environmental assessment application to the provincial government for this work.

Attend a virtual information session on Tuesday, Nov. 17 from 7 to 8:30 p.m.

To register visit engagestjohns.ca

If you do not have online access you can call 311 or 754-CITY (2489)



Who Engaged



On engagestjohns.ca



#people who posed questions Virtual Public session 41 people – many of whom live in the immediate area

E-mail – two submissions

Most people who posted questions on engage also attended the virtual meeting.



What we Heard Highlights

- A list of ALL questions/comments captured throughout the engagement process is at the end of this document. Answers to these questions can be found at <u>engagestjohns.ca</u>
- Key concerns/issues from all feedback were as follows:
 - health and beauty of the river
 - project proceeding without the weir project completed
 - environmental assessment process for the Weir and this project, and timelines
 - impact of this project and the shared-use bike plan including widening, removal of trees, potential use of asphalt for shared use path, run off
 - the use and look of berms
 - the water table/surface water, ground water
 - Impact on surrounding properties on Empire Avenue
 - Feildian Grounds and Riverdale area concerns
 - Immediate impact on houses in the area and the desire not to proceed with the project at all by some property owners



What we Heard Highlights con't

Key concerns/issues were as follows:

- Climate change considerations
- Concerns regarding the source of the flooding and upstream issues such as the new hospital
- Bridge capacity to withstand water during heavy rains with berms in place
- Overall costs of the project
- Perspectives of other stakeholders and opportunity to engage them
- Individual concerns with impact of project on their personal property such as fences
- Continued interest and desire to be engaged



What we Heard via Email

Don't think building walls or berms is a viable solution. For one, wouldn't walls and berms simply facilitate the water backing up upstream in extreme rain events? Natural vegetation can be an adequate flood control for most storm events. Flood and water fluctuation are a normal part of river systems – perhaps where we build in the floodplain needs to be reconsidered. It may be too late to relocate homes already in the floodplain, but the proposed hospital upstream is a bad idea that should not go ahead. The section of the river between Kings Bridge and Portugal Cove Road is a narrow trail and quite beautiful. I'm concerned that the construction of walls and berms will affect the shoreline environment and narrow the channel. I see this as a pre-cursor to the proposed bike trails – which I also oppose along this corridor. I'm a and commute by bike, but I don't think the Rennie's River trail will make a good shared-use trail. I urge you to think of more naturalize options for flood control in the Rennie's River. The trails here are a jewel in the city that are enjoyed by many citizens, not just property owners in the area. Walls and berms will destroy the natural beauty and I think there are better solutions to flooding issues.



What we Heard via Email con't

- We have paved or built into every bit of land and wet land that feeds into this river from Kelsey Drive down. We even paved
 Larch Park which used to serve a bit of sponge in the spring runoff time. There is endless construction around the Health
 Sciences: I now shudder when I see the activity up there for yet another building. There is an 8-foot walk of concrete on the river
 just west of Clinch Cres and what was a lovely pond will soon be a concrete swimming pool. The City will never get the flooding
 under control unless it can work with the provincial government to get "the cause" under control. This was foreseeable and the
 cause should be addressed not just the treatment.
- I appreciate that the property owners along the river deserve protection from what is, in essence, a man-made made mess. I would hope, and strongly recommend that the engineers absolutely minimise the use of various forms of concrete in the process of the mitigation. The river is a special asset creating a calm and tranquil space in the middle of the city. Concrete will distract from this asset and turn the river into an urban canal instead. (Burton's Pond is an example. It used to be a pretty little pond. Now it has a 6 ft. concrete wall around 1/3 of it and it has lost all its rustic charm.) Additionally, concrete is nothing but a magnet for graffiti "artists". The concrete section by the bridge by the tennis club is already well covered. This will completely distract from any part of the river in which it will be used. Perhaps some use of large rocks to create the channels instead?
- I see no reason to widen, flatten or straighten the walking trail. There are some wiggly parts for sure, but we can all manage to be polite and make room for those who need a little space or time. Before her death, 15 years ago, we used to take my mother in her wheelchair up the part of the trail by St Pat's Home. If we could do that people in other forms of "self-motored" vehicles and do the same. It is not meant to be a highway. It is meant to be a special pastoral spot in the middle of the city.
- And finally I am very much against the widening of this trail in preparation for being included in the Bike Master plan. I will deal
 with that issue in a note on the bike plan; for now, sufficed to say that the disruption of the widening and the paving of the banks
 will further degrade those banks and lead to longer term problems instead of solving them.



Questions From engagestjohns.ca

- In this process, have you consulted with any geographers, biogeographers, botanists, biologists...? Any scientists at all? What is the impact of this
 project on biodiversity along the river? Have you considered what the river needs in terms of appropriate riparian zones? Is this study taking into
 account the new mental health facility which will have massive impacts on the Rennie's River watershed? How is what you are proposing to do here
 consistent with the city's climate change plan?
- Is the recommended option the "Alternative Option" as listed in the briefing note to council and will this option proceed unless there is a revised recommendation based on these consultations?
- Will the natural beauty of the trail along the river be affected?
- How will the berm construction behind my property at 3 Pringle Place remove my property from the flood plain as stated in City's media release of November 3/20? Does the water table in this area have any impact on the flood plain mapping in my area?
- Will the work completed increase the frequency and/or severity to flooding to the homes on Empire Avenue?
- What is the plan to mitigate flood risk for Feildian Grounds and Riverdale? Why was this not included?
- What is the flooding history in the Riverdale/Feildian Grounds area?
- If the City is so concerned about flooding, then why are they planning on widening and paving the walking trails, as widening involves the removal of significant number of trees and vegetation. Paving decrease the infiltration of runoff. Many km of a 3m wide strip of pavement and significant widening of the trails will have a significant impact of the infiltration and attenuation capacity. Furthermore, the trail greenspace of narrow, 25m wide or less on many sections, so widening will have a significant impact.
- Why didn't the City register the entire project (i.e. Phases 1 and 2) under provisions of the Environmental Assessment Regulations, 2003?
- Will the construction of the berms behind my property a 3 Pringle Place any effect on the on the drainage of water from my property during periods of heavy rain and or snow melting, given the membrane which will be put in place between the rivers edge and the berm wall?
- The proposed berm to be constructed from Portugal Cove Road to approximately the foot of the steps leading to Larch Place Park was to be built
 following the weir dam at Long Pond (Phase 1 of the recommendations). Has the City formally asked the resident property owners, whose properties
 are adjacent to the proposed berms, if they want the berms built, without Phase 1 (the weir dam) being constructed firstly?
- Will there be an equal amount of property security as I have now with the existing 6-foot chain link fence when the berm is built, i.e. will there be a 6foot chain link fence on the new raised trail bed between my property and the edge of the new raised trail bed?



Questions From engagestjohns.ca con't

- I live across the river from Riverdale and the riverbank (city property) adjacent to my property has suffered significant erosion over the past number of years. The city remediated a portion of the riverbank in 2008 but the remainder continues to erode. How will building berms on the Riverdale side of the river impact further erosion along the riverbank adjacent to my property? Is there a plan to remediate the riverbank opposite Riverdale? How and when will the riverbank be remediated? I do not want our mature trees to be removed to accomplish this.
- I walk that trail from Carpasian to Kingsbridge every day. Summer and winter. I can recall walking along the path adjacent to Pringle after Gabriel or maybe lgor. The water barely flowed under the Portugal Cove Road bridge. If I could walk on the path what good would a raised berm do? The water would be up against the bridge. Would the integrity of the bridge withstand that flow of water? What would happen to the bridge and the road? Where would that water go? What would it take with it? Has there been any storm studies undertaken for the river? Measurements should be taken during storms. River height, total rainfall in the area at the time, and water table levels adjacent to the river. Where does the water go? Have cameras in the area. I also agree with him. The river takes away surface runoff during a storm. Portugal Cove Road becomes a river. Your berm will prevent the river from doing that. Steps up to the berm? The water will go around your berm. What is the budget for this project? And the Pringle Place residents don't want this done? Why are you moving ahead with it? Wait for the weir. A waste of taxpayers money and ruining a beautiful trail.
- I would argue that no one puts more footsteps on the path from Carpasian to Kingsbridge over the last 25 years than I. Flooding spots that I have noticed are the boardwalk at the bottom of Fieldian Grounds and a property off Winter Avenue. In this area the footpath has been reconstructed and acts as a berm. I assume at some time during major storms the river crests over that berm. It cannot then get back into the river and stays in the yard until it seeps into the ground. That is the problem with berms. There was limited discussion last night regarding the Vaughn Place berm. I was not aware there is flooding in that area. I had always assumed they had water table issues. Vegetation in the river holds soil in place. Removing it may increase soil movement and related problems. Rennie's River has been recorded as having the highest biomass of German brown trout in the world. There was also an effort to reintroduce salmon to the river. How will habitat be affected by your project. The weir project may have environmental concerns that affect all of these concerns. A weir is only as good as the people who design, build, maintain and operate it. I was a bit concerned last night that from the tone of the City, this project was going ahead as designed. I certainly hope not.
- What is the estimated cost to construct the berm upstream from Portugal Cove Road to the bottom of the Larch Place Park steps?
- What's the opinion of the Grand Concourse Authority on your project?
- In many cities, they are taking rivers OUT of channels and re-naturalizing shorelines. Naturalized shorelines can do a good job of flood control if bioengineered properly. I feel like building berms and walls will destroy the riparian shoreline, be bad for biodiversity and not solve flooding problems. Berms and walls will likely exacerbate flooding in high rainfall events upstream of the new structures.

Questions From Public Session

• The images are deceptive because they do not show the height of the bridge. If you install a 19 m elevation low side to the river and the bridge is at 18 m, how can you put a barrier and not have water flow out over at some point in time?

A SUSTAINABLE CITY

- What has been done with the ground water flow study in the areas?
- Is there risk that the assessment this needs to go through will be held up by the Province?
- With no weir being build and the Waterford hospital being constructed and replacing the marsh land that accommodates the accumulation of water, has this been factored into the design and plan? Should we wait until the Province allows the weir to be built and do the berms after the weirs are built?
- With no weir being build and the Waterford hospital being constructed and replacing the marsh land that accommodates the accumulation of water, has this been factored into the design and plan? Should we wait until the Province allows the weir to be built and do the berms after the weirs are built?
- Will all the vegetation have to be removed from the channel that you walled off to keep Mannings End at a level where the water can flow freely? The images show a lovely area with vegetation. How will the river channel be cleaned out once you have it walled off?
- How would water get through the 4-5 foot wall if needed? What is the nature of the wall and how will it be designed?
- Is there any plan to mediate the riverbank across from the Riverdale Tennis Courts?
- Phase I on the bike plan fits into the Rennie's River Trail, how can money be spent on this in Jan before we know how phase I and II of the bike plan will be implemented?
- How long has the City been waiting for the weir?
- Will the bermage be wide enough for multiuse trails? Will you use the draft design for the bike plan to develop the design?
- Can one assume some of this work will facilitate the contested bike plan and possible make mute some of the arguments against it like environmental, aesthetics before consultation can occur?



Questions From Public Session con't

- What has changed since the 2014 study? Why would we now proceed without the weir that was recommended in Phase I at the time?
- Have you considered head waters?
- Is the proposed infrastructure sufficient to handle projected climate change impacts?
- Did we adjust estimates based on the Province's decision to fill in the wetland by the Health Sciences Centre?
- Where will the width come from for the trail to be expanded for multiuse? The bike plan is recommending 12 feet of space.
- If you are spending money now on weirs and berms, will we have to tear it all up again in a few years for the bike trail?
- How long have we been waiting on results for the weir project?
- What measure are being taken to deal with runoff water from roads and streets and parking lots upstream of Kelsey Drive into Rennie's River?
- Can Pippy Park stall this project further?
- Will the river back up and flow over the land of the homes opposite the berms? At the Carpasian bridge?
- How will we know when the environmental assessment is submitted?
- Did you consider alternatives to putting the weir dam in Pippy Park?



Next Steps

- Share What we Heard with Council and the public
- Finalize the environmental registration documentation to be submitted to both the Provinces Department of Municipal Affairs & Environment and the City's Environment & Sustainability Experts.



To Stay Up to Date Follow the Project/Register on engagestjohns.ca



Rennies River Flood Mitigation Project Phase II Information Session

November 17, 2020

Summary of Questions and Answers

Q. The images are deceptive because they do not show the height of the bridge. If you install a 19 m elevation low side to the river and the bridge is at 18 m, how can you put a barrier and not have water flow out over at some point in time?

A. We have considered the hydrology of the river and are confident in what we are proposing, we understand where the question of elevation is coming from. It may appear the water will go over, but in fact as the water builds up a head and will go underneath the bridge. The water is contained with these measures in place.

Q. What has been done with the ground water flow study in the areas?

A. The hydrology was considered and "we" are confident in what we are proposing. It may appear that the water will go over, but as the water builds up it will go underneath. Water is contained with these measures in place.

Q. Is there risk that the assessment this needs to go through will be held up by the Province?

A. There is always a risk, this will be determined after feedback is received from the first submission and whether it needs to go to the next level of environmental assessment.

Q. With no weir being build and the Waterford hospital being constructed and replacing the marsh land that accommodates the accumulation of water, has this been factored into the design and plan? Should we wait until the Province allows the weir to be built and do the berms after the weirs are built?

A. Additional modelling was completed that reflects where the adult mental health facility is going to be constructed. There is a wet area there that has been backfilled and flood protection berm on both sides of Leary's Brook upstream from Long Pond South of the Health Sciences Centre. All these facts have been taken into account in the design of these current improvements.
Q. How have you done the flood volume underneath the bridge with the amount of water seen in the past such as Igor with a pipe that is 2 inches thick and feeding an 8 inch pipe, only 2 inches can come through as the rest stays in the pipe or goes back? How can this bridge accommodate this flow?

A. The water builds up and it changes how it behaves. We can get more water through the bridge opening if it builds up a head at the bridge.

Q. Will all the vegetation have to be removed from the channel that you walled off to keep Mannings End at a level where the water can flow freely? The images show a lovely area with vegetation. How will the river channel be cleaned out once you have it walled off?

A. Considered this based on good engineering and science. In terms of removing materials, the City has on occasion had to remove materials beneath bridges and culverts. This is a regular and ongoing process completed by the City. In an urban environment it is common that this occurs. We have also taken into account the various items including roughness of the river and vegetation in establishing the hydraulics of the river.

Q. How would water get through the 4-5 foot wall if needed? What is the nature of the wall and how will it be designed?

A. An impermeable liner on the riverside will be tied to the ground and come up behind the back of the wall so water wouldn't get through. Where we have the liner there is that impermeability. Our purpose of the flood protection system is to control surface water levels, not ground water levels. It is in a flood event we want to control water.

Q. Is there any plan to mediate the riverbank across from the Riverdale Tennis Courts?

A. We haven't shown that work in the presentation, it will be included the environmental assessment registration document and plan to continue with an armour stone protection and will have to look at the detailed design and have to extend down 30-40 ft downstream. It is being looked at.

Q. Phase I on the bike plan fits into the Rennies River Trail, how can money be spent on this in Jan before we know how phase I and II of the bike plan will be implemented?

A. The design for the bike trail is ongoing.

Q. How long has the City been waiting for the weir?

The City is not waiting on the province to build the weir, the City is planning on building the weir once we get the environmental approval. The process is still ongoing, and it is hard to put a timeframe on when or if it will ever be released for construction. Construction of the weir, where it doesn't impact the effectiveness of the downstream flood mitigation works because the CBCL has modelled that, these flood mitigation measures that are proposed are constructed sort of alleviates the flooding concerns down in that area even without the weir in place. Even just building the weir and not doing the downstream improvements doesn't solve the problem down there. The downstream walls and berming need to happen to solve the overland flooding.

Q. Will the berm be wide enough for multiuse trails? Will you use the draft design for the bike plan to develop the design?

A. The proposed multi use trail width will be given consideration when designing the berms.

Q. Can one assume some of this work will facilitate the contested bike plan and possible make mute some of the arguments against it like environmental, aesthetics before consultation can occur?

A. The projects are interrelated, we will know more once we get the plan finalized. The bike plan is ongoing. It is difficult to know until we get more into the detailed design and start to make decisions on what we will do with those locations.

Q. What has changed since the 2014 study? Why would we now proceed without the weir that was recommended in Phase I at the time?

A. The City is still moving ahead with the weir, that has not changed. The process is still ongoing. The City has funding for this project. We are still of the opinion that the weir is an integral part. This project is looking to contain flood waters for very short periods of time when we have peak flooding. If there are lengthly technical comments, anyone who has a background and wants to make a technical comment should do so for consideration.

Q. Have you considered head waters?

A. It has been considered and dealt with through hydraulic modelling.

Q. Is the proposed infrastructure sufficient to handle projected climate change impacts?

A. It is a tricky business, but yes we have addressed climate change. A 1:100 Year Design Storm including Climate Change, was utilized for the modelling and design.

Q. Did we adjust estimates based on the Province's decision to fill in the wetland by the Health Sciences Centre?

A. Yes, we had to go back and redo our modelling based on that area being filled in and changed from a wetland to dryland. Some of the figures reported in the 2014 tables are not accurate now as we had to change the modelling. The recommendations are still valid.

Q. Where will the width come from for the trail to be expanded for multiuse? The bike plan is recommending 12 feet of space.

A. The design work hasn't started yet. The section mentioned is not a part of the current Kelly's Brook alignment. Based on work in the bike master plan this is a challenging section to make accessible because of the stairs further upstream near Larch Park. One option is taking the multiuse trail and putting it on the opposite side of the river, not part of the work we are currently doing for the Kelly's Brook Trail. Options will be investigated, but we are still a couple of years out.

Q. If you are spending money now on weirs and berms, will we have to tear it all up again in a few years for the bike trail?

A. During the design process we will figure out what can go there, that may inform the decision on whether the trail goes through that area or if we bring the trail up on the street to Empire Avenue.

Q. How long have we been waiting on results for the weir project?

A. We received comments back from the province mid-summer, looking at revised EPR submission to the province that will kick start the EPR process again.

Q. What measure are being taken to deal with runoff water from roads and streets and parking lots upstream of Kelsey Drive into Rennie's River?

A. With the design of these flood protection measures we have considered the head waters which is Kelsey Drive area and Kenmount Terrace area, north of Kenmount Road has been considered and will be dealt with.

Q. Can Pippy Park stall this project further?

A. Pippy Park is a commission of government and is a large stakeholder and yes they could delay completion of the Long Pond Weir.

Q. Will the river back up and flow over the land of the homes opposite the berms? At the Carpasian bridge.

A. Upstream from the bridge the land is high enough on that side. The yards along the river near Empire Avenue have been considered. The homes are higher than the projected flood levels. The homes would be okay in a peak flood situation, consideration was given to the yards and it was decided to not add berms on that side.

Q. How will we know when the environmental assessment is submitted?

A. We can make an update to the engage page when we make a submission.

Q. Did you consider alternatives to putting the weir dam in Pippy Park?

A. We looked at different options and studied it extensively. The challenge is the need for a large area, we need an existing body of water like Long Pond to add water to the top of that pond. We need a big area to have any significant effect on controlling flood water and reducing the peak in a flood event.

Other note: Residents on 3, 5 and 6 Pringle Place would like to see things left alone until such time that something is done to control the amount of water coming into the river.



Home » Rennie's River Flood Mitigation

Rennie's River Flood Mitigation

f y in 🗹



The consultation has concluded and a what we heard document is in development.

The Rennie's River Catchment Stormwater Management Plan (RRCSMP) was completed in 2014. On May 26, 2014, Council Directive CD# R2014-05-26/5 recommended implementation of the recommendations below to address flooding in the area.

Priority	Description of Location
1	Location 3: Weir at outlet of Long Pond
2	Location 1, Option A: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road - Berms & Walls only (Recommended Option)
	Location 1, Option B: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road – New Channel and bridge
	Location 1, Option C: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road – Raised parking lot
2	Location 2: Upstream of Carpasian Road Bridge
3	Location 4: Clinch Crescent East to Clinch
	Crescent West
4	Location 5: Wicklow Street to Thorburn Road
5	Location 7: O'Leary Avenue Bridge
6	Location 8: Downstream of Mews Place

While the report recommended that the weir at Long Pond be given priority and the two problem areas located downstream of Long Pond be given second priority, the City has been working through the provincial environmental approval process for the Long Pond Weir Project since that time and the process is still ongoing. The most recent progress has been the issuance of a revised Environmental Preview Report Guideline (June 2020) by the Province that will require revisions and updating to the Environmental Preview Report (EPR). Based on these new EPR guidelines, a revised EPR will be required to continue the environmental review and approval process for the Long Pond Weir Project.

In 2018, the City received funding for Phase 2A under the New Building Canada Fund. The scope of work was presented to Council at Committee of the Whole on December 19, 2018. One of the concerns raised during that meeting was the potential effect of proceeding with Phase 2A flood mitigation works prior to the completion of the Long Pond Weir Project. An engineering firm was subsequently hired to undertake additional stormwater modelling to review the impact of the downstream phasing sequence in the absence of the Long Pond Weir being competed. The outcome of that was to complete various modelling scenarios where it was determined that a two-phased approach could be undertaken for the flood mitigation measures in the area downstream of Long Pond based on the timing of construction for the Long Pond Weir.

Review the materials on this page, sign up for the virtual public session or post a question related to the project below. Feedback gathered through this project will be included in the City's submission to the Government of NL.

QUESTIONS

CLOSED: This discussion has concluded.

Review the FAQs. Can't find what you are looking for? Post your question here and someone will get back to you soon.

Climate Impacts (1) Environment Assessment (1) Natural Environment (1) Berming (1)
Pringle Place (2) Water Table (1) Empire Avenue (1) Riverdale (2)
Fieldian Grounds (1)Flooding Riverdale (1)Flooding Feildian (1)Kellys Brook Trail (1)
Trees (2)Runoff (1)Environmental Assessment (1)Berm (1)Berms (2)
Retaining Wall (1)Fence (1)Costs (1)Budget (1)
Search
 Q What is the estimated cost to construct the berm upstream from Portugal Cove Road to the bottom of the Larch Place Park steps? David Winter asked, 11 days ago The flood mitigation works behind Pringle Place must also include the work along Rennie's Mill Rd, as well as, on the upstream side of the bridge parapet at Portugal Cove Rd. The estimate to complete the flood mitigation in this area (which includes costs for engineering, construction and HST) is \$1.5M. #Costs #Budget
Q I would argue that no one puts more footsteps on the path from Carpasian to Kingsbridge over the last 25 years than I. Flooding spots that I have noticed are the boardwalk at the bottom of Fieldian Grounds and a property off Winter Avenue. In this area the footpath has been reconstructed and acts as a berm. I assume at some time during major storms the river crests over that berm. It cannot then get back into the river and stays in the yard until it seeps into the ground. That is the problem with berms. There was limited discussion last night regarding the Vaughn Place berm. I was not aware there is flooding in that area. I had always assumed they had water table issues. Vegetation in the river holds soil in place. Removing it may increase soil movement and related problems. Rennies River has been recorded as having the highest biomass of German brown trout in the world. There was also an effort to reintroduce salmon to the river. How will habitat be affected by your project. The weir project may have environmental concerns that affect all of these concerns. A weir is only as good as the people who design, build, maintain and operate it. I was a bit concerned last night that from the tone of the City, this project was going ahead as designed. I

Fred Hubley asked, 12 days ago

Thank you for your question. During detailed design, special attention will be given to areas where water could become trapped; the design solution will ensure that excessive amounts of water does not build up in isolated areas during significant rainfall events. The proposed berms will be constructed on existing trails; therefore, excavation of river banks will be limited. Any excavation that does occur will be reinstated. For areas where erosion protection is requires, there will be some excavation in the river; however, the erosion protection design will minimize the amount of required excavation. Standard practices, including the use of silt fences, will be employed during construction to protect the Rennie's River.

In many cities, they are taking rivers OUT of channels and renaturalizing shorelines. Naturalized shorelines can do a good job of flood control if bioengineered properly. I feel like building berms and walls will destroy the riparian shoreline, be bad for biodiversity and not solve flooding problems. Berms and walls will likely exacerbate flooding in high rainfall events upstream of the new structures. Walker and biologist asked, 5 days ago

Your comments are duly noted. Thank you for providing your feedback.

 \mathbf{O}

Some of my concerns were addressed at your meeting. Put my hand 📑 🎐 🛅 🌄 up but did not get called. The resident of Pringle Place, Brian I believe, hit on a major issue I have. I walk that trail from Carpasian to Kingsbridge every day. Summer and winter. I can recall walking along the path adjacent to Pringle after Gabriel or maybe Igor. The water barely flowed under the Portugal Cove Road bridge. If I could walk on the path what good would a raised berm do? The water would be up against the bridge. Would the integrity of the bridge withstand that flow of water? What would happen to the bridge and the road? Where would that water go? What would it take with it? Has there been any storm studies undertaken for the river? Measurements should be taken during storms. River height, total rainfall in the area at the time, and water table levels adjacent to the river. Where does the water go? Have cameras in the area. I also agree with him. The river takes away surface runoff during a storm. Portugal Cove Road becomes a river. Your berm will prevent the river from doing that. Steps up to the berm? The water will go around your berm. What is the budget for this project? And the Pringle Place residents don't want this done? Why are you moving ahead with it? Wait for the weir. A waste of taxpayers money and ruining a beautiful trail. Fred Hubley asked, 13 days ago

Concerns raised are duly noted. Not sure why your raise hand did not work effectively in Teams. We can certainly test that out for a future session in advance. The river system has been hydraulically modelled incorporating the proposed flood mitigation measures. The berms will be designed in consideration of water levels that would be experienced during a significant runoff event. For the Portugal Cove Road bridge, it is proposed that the existing safety rail on the upstream side of the bridge be raised by approximately 0.2 m by constructing a concrete wall. The elevation of the top of this new wall will match the elevation of the berms on either side of the river at the bridge. Project funding budget is noted in the FAQs.

What's the opinion of the Grand Concourse Authority on your project?

6 У 🛅 🗹

 \sim

Fred Hubley asked, 10 days ago

()

Council directed staff to engage with area residents prior to the environmental assessment submission to the province. Any other stakeholders, including the Grand Concourse, would get an opportunity to comment through the Province's process.

I live across the river from Riverdale and the riverbank (city property) for adjacent to my property has suffered significant erosion over the past number of years. The city remediated a portion of the riverbank in 2008 but the remainder continues erode. How will building berms on the Riverdale side of the river impact further erosion along the riverbank adjacent to my property? Is there a plan to remediate the riverbank opposite Riverdale? How and when will the riverbank be remediated? I do not want our mature trees to be removed to accomplish this. Riverleigh asked, 13 days ago

As part of the current flood protection work, the City is planning to provide erosion protection for this section of river bank. It is likely that amour stone, similar to the stone currently in place along this river bank, will be placed along the unprotected section. The intention is not to remove mature trees.

#Berms #Riverdale #Trees

Q Will there be an equal amount of property security as I have now with the existing 6 foot chain link fence when the berm is built, ie will there be a 6 foot chain link fence on the new raised trail bed between my property and the edge of the new raised trail bed? - posted on behalf of David Winter 15 days ago

At the rear of 3 Pringle Place there will be a concrete retaining wall structure along the trail alignment. Canadian Building code requires a minimum 1,050mm high handrail / fence along the top of the retaining wall adjacent to the elevated walking trail. The detailed design for the handrail / fence have not been started. Homeowners will be consulted on their preference of the fence height adjacent to their property. The concrete retaining wall design can accommodate a 1,800mm high fence at the top of the wall. Adding a 1,800mm high fence to the top of this retaining wall will increase the overall structure height (retaining wall 1,350mm plus fence 1,800mm) to 3,150mm at the rear of 3 Pringle Place.

#Retaining Wall #Fence

()

f y 🖬 🗹

approximately the foot of the steps leading to Larch Place Park was to be built following the weir dam at Long Pond (Phase 1 of the recommendations) .Has

The proposed berm to be constructed from Portugal Cove Road to

the City formally asked the resident property owners, whose properties are adjacent to the proposed berms , if they want the berms built , without Phase 1 (the weir dam) being constructed firstly?

David Winter asked, 17 days ago

As noted in the August 24, 2020 Decision Note, one of the concerns raised during the December 19, 2018, Committee of the Whole meeting was what would be the affect with proceeding with Phase 2A flood mitigation works prior to the completion of the Long Pond Weir Project. (This issue was raised through Council via email from area residents.) CBCL were subsequently hired to undertake additional storm water modelling to review the impact of the downstream phasing sequence in the absence of the Long Pond Weir being competed. Completion of the Long Pond Weir alone will not offer flood protection to accommodate the 1:100 AEP Climate Change design storm. The recent modelling completed by CBCL, as the alternative project phasing sequence, allows for the Phase 2 works to be completed in advance of completion of the Long Pond Weir and provide the necessary 1:100 AEP Climate Change flood mitigation to properties at Pringle Place, Winter Ave, Vaughan Place, Kings Bridge Road and The Boulevard.

#Berms

Q

Why didn't the City register the entire project (i.e. Phases 1 and 2) under provisions of the Environmental Assessment Regulations, 2003? mwawrzkow asked, 24 days ago

The Rennie's River Flood Mitigation effort is being carried out over several years. As funding becomes available to address one of the priority areas, the particular area becomes a project. An environmental assessment will be carried out for each project in accordance with the Province's requirements.

#Environmental Assessment

If the City is so concerned about flooding, then why are they planning on widening and paving the walking trails, as widening involves the removal of significant number of trees and vegetation. Paving decrease the infiltration of runoff. Many km of a 3m wide strip of pavement and significant widening of the trails will have a significant impact of the infiltration and attenuation capacity. Furthermore, the trail greenspace of narrow, 25m wide or less on many sections, so widening will have a significant impact. Runner biker asked, 25 days ago

While this page is dedicated to the Rennie's River Flood Mitigation Project – Phase 2, there is a separate engagement page for the Kelly's Brook Shared Use Path Project. https://www.engagestjohns.ca/kelly-s-brook-trail-catalyst-project-1-bike-master-plan





Nonetheless, there are no plans to remove a significant number of trees. There is, in fact, a tree protection plan required as part of the detailed design work for the Kelly's Brook Shared Use Path Project. The surface material selected for this multi-use trail will be informed by public feedback and a technical evaluation of the costs, impacts, and benefits of different options. Runoff from a pavement surface will be considered as part of this evaluation.

#Kellys Brook Trail #Trees #Runoff



Lifecycle Public engagement Feedback collected and being prepared for what we heard document

Provincial Environmental Assessment Process

FAQs

What is the scope and status of Phase 1 of this project?

What is included in Phase 2?

Why are you proceeding with Phase 2 when Phase 1 has not been completed?

I live along the river, how will I be impacted by the proposed Phase 2 work?

What happens after you collect feedback on Phase 2?

Why are you doing this project?

What are the pros and cons of proceeding with Phase 2 work?

How will this project be funded?

When would this project be completed?

The Bike Master Plan and its recommended multi-use trail projects are within the scope of this project. How will the city ensure the two projects connect?

Documents

Rennie's River EA Presentation Nov 17 2020.pdf (5.31 MB) (pdf)

Decision Note to Council with Maps (872 KB) (pdf)

Important Links

Rennies River Catchment Stormwater Management Plan

Who's Listening

Councillor Ian Froude

Council lead - Public Works & Sustainability

Phone 576-8217

Email ifroude@stjohns.ca

Scott Winsor, P. Eng.

Director, Engineering

Department of Planning, Engineering & Regluatory Services

Email swinsor@stjohns.ca

Key Dates

Virtual Public Meeting 7 to 8:30 p.m. **17 November 2020**

Terms and Conditions

Moderation Policy

Accessibility

Technical Support

Site Map

Cookie Policy



Home » Rennie's River Flood Mitigation

Rennie's River Flood Mitigation

f y in 🗹



The consultation has concluded and a what we heard document is in development.

The Rennie's River Catchment Stormwater Management Plan (RRCSMP) was completed in 2014. On May 26, 2014, Council Directive CD# R2014-05-26/5 recommended implementation of the recommendations below to address flooding in the area.

Priority	Description of Location
1	Location 3: Weir at outlet of Long Pond
2	Location 1, Option A: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road - Berms & Walls only (Recommended Option)
	Location 1, Option B: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road – New Channel and bridge
	Location 1, Option C: Kings Bridge Road to
	Portugal Cove Road & Upstream of Portugal Cove
	Road – Raised parking lot
2	Location 2: Upstream of Carpasian Road Bridge
3	Location 4: Clinch Crescent East to Clinch
	Crescent West
4	Location 5: Wicklow Street to Thorburn Road
5	Location 7: O'Leary Avenue Bridge
6	Location 8: Downstream of Mews Place

While the report recommended that the weir at Long Pond be given priority and the two problem areas located downstream of Long Pond be given second priority, the City has been working through the provincial environmental approval process for the Long Pond Weir Project since that time and the process is still ongoing. The most recent progress has been the issuance of a revised Environmental Preview Report Guideline (June 2020) by the Province that will require revisions and updating to the Environmental Preview Report (EPR). Based on these new EPR guidelines, a revised EPR will be required to continue the environmental review and approval process for the Long Pond Weir Project.

In 2018, the City received funding for Phase 2A under the New Building Canada Fund. The scope of work was presented to Council at Committee of the Whole on December 19, 2018. One of the concerns raised during that meeting was the potential effect of proceeding with Phase 2A flood mitigation works prior to the completion of the Long Pond Weir Project. An engineering firm was subsequently hired to undertake additional stormwater modelling to review the impact of the downstream phasing sequence in the absence of the Long Pond Weir being competed. The outcome of that was to complete various modelling scenarios where it was determined that a two-phased approach could be undertaken for the flood mitigation measures in the area downstream of Long Pond based on the timing of construction for the Long Pond Weir.

Review the materials on this page, sign up for the virtual public session or post a question related to the project below. Feedback gathered through this project will be included in the City's submission to the Government of NL.

QUESTIONS

CLOSED: This discussion has concluded.

Review the FAQs. Can't find what you are looking for? Post your question here and someone will get back to you soon.

Climate Impacts (1) Environment Assessment (1) Natural Environment (1) Berming (1)				
Pringle Place (2) Water Table (1) Empire Avenue (1) Riverdale (2)				
Fieldian Grounds (1)Flooding Riverdale (1)Flooding Feildian (1)Kellys Brook Trail (1)				
Trees (2)Runoff (1)Environmental Assessment (1)Berm (1)Berms (2)				
Retaining Wall (1)Fence (1)Costs (1)Budget (1)				
Search Q				
 Will the construction of the berms behind my property a 3 Pringle Place any effect on the on the drainage of water from my property during periods of heavy rain and or snow melting, given the membrane which will be put in place between the rivers edge and the berm wall? David Winter asked, 20 days ago A review of available elevation data indicates that there are existing low points in the rear yard of 3 Pringle Place that are lower than the elevation of the existing trail. Therefore, during a heavy rain event, it appears that water would be trapped in the yard until in seeps into the ground. The rear yard and trail elevations will be checked during detailed design. #Pringle Place 				
Q What is the plan to mitigate flood risk for Feildian Grounds and Riverdale? Why was this not included? Brett Williams asked, 27 days ago Flood mitigation measures (berming) adjacent to Feildian Grounds and Empire Ave properties will have an ecological impact to the river system by the removal of large mature trees in the area. In addition, the Riverdale Tennis Club would be impacted by the flood mitigation measure (retaining walls) causing the loss of some of the playing surface on the eastern end of the property.				



It is possible that the flood mitigation measures could be completed in the future if property owners, residents, Council and regulatory authorities, ie. Department of Environment and DFO, are agreeable to allowing these impacts. As well, the flood mitigation structure (Weir) at Long Pond would need to be constructed prior to completing this work.

#Riverdale #Fieldian Grounds



What is the flooding history in the Riverdale/Feildian Grounds area? Jim Vivian asked, 26 days ago



The City does not keep flood history records specific to private properties. However, you may be able to access some archival photos or newspaper clippings from past flood events from City Archives. Attached for information are some photos of the area taken on September 21, 2010 during Hurricane Igor.



Feildian Grounds - Igor



Riverdale - Igor



Pringle Place - Igor

0

#Flooding Riverdale #Flooding Feildian

In this process, have you consulted with any geographers,

f y 🗈 🗹

biogeographers, botanists, biologists...? Any scientists at all? What is the impact of this project on biodiversity along the river? Have you considered what the river needs in terms of appropriate riparian zones? Is this study taking into account the new mental health facility which will have massive impacts on the Rennie's River watershed? How is what you are proposing to do here consistent with the city's climate change plan?

bojanfurst asked, 27 days ago

The City is presently in the process of preparing and submitting an Environmental Assessment Registration Document (EARD) to the Newfoundland and Labrador Department of Environment, Climate Change, and Municipalities. As part of the EARD, an assessment of effects to vegetation, wildlife and flood reduction is being completed. The assessment includes predictive flood models based on topography and predicted water flow for 1:100 annual exceedance probability (AEP) with climate change. The potential flood protection berms have been identified at locations along Rennie's River to provide protection to areas, homes, and infrastructure within the floodplain. The sizes of the structures have been designed to balance minimizing areas of effects within riparian areas of the river, while attempting to maximize areas of flood protection. The flood protection berms will be integrated into the public trail system. Three types of berm are being considered. Where earthen berms are proposed they will be reseeded with non-invasive vegetation to provide stability to the slopes. When limited space is available between the riverbank and other adjacent infrastructure, cast-in-place concrete wall or segmental concrete block wall will be considered to minimize effects to adjacent properties and reduce overall space required for the berm. Further, the impacts of the new Adult Mental Health and Addictions Facility (NAMHAF) site have been accounted for in the development of proposed flood protection measures.

The flood mitigation infrastructure on Rennie's River is being designed to a 1:100 AEP storm incorporating the Climate Change projections for the City of St. John's. This means that even with the projected impacts of climate change in mind, the probability of flooding would be about 1% in any given year. The Climate Change plan is conducting a high level risk assessment (HLRA) to various hazards with internal and external stakeholders including various infrastructure systems in our community. This HLRA will help identify areas where similar risks to the ones being addressed in Rennie's River exist currently or could exist in the future and identify an approach to begin addressing them. This may lead to studies to better understand the hazards or recommendations for specific projects that are already well understood. To become engaged or to share your experience on the climate plan please visit https://www.engagestjohns.ca/planning-for-sustainable-future/maps/maphazards-you-have-seenexperienced.

#Climate Impacts #Environment Assessment



How will the berm construction behind my property at 3 Pringle Place remove my property from the flood plain as stated in City's media release of November 3/20? Does the water table in this area have any impact on the flood plain mapping in my area? David Winter asked, 27 days ago

The proposed berm located at the rear of 3 Pringle Place will reduce the likelihood of flooding from Rennie's River on this property. The sketches below show the existing 1:100 AEP Climate Change Floodplain mapping for the Existing and Future conditions.



Existing



Future

0

For your second question: No, the flood plain mapping does not take the water table into account. Flood plain mapping shows the limits of over land flooding from a surface water body such as a brook or river. For properties constructed adjacent to a river or other bodies of water, groundwater is in inherent issue based on location. Protection of private property from groundwater issues is not within the City's purview and is not a part of the scope for this project.

#Pringle Place #Water Table

Is the recommended option the "Alternative Option" as listed in the briefing note to council and will this option proceed unless there is a revised recommendation based on these consultations? JonDuke asked, 27 days ago

The scope of the project is what was recommended as the alternative sequencing per the August 24, 2020 Decision Note to Council. The City will consider the feedback received through the consultation process prior to making the Environmental Assessment submission to the Province. Furthermore, the "What We Heard" feedback from the Virtual Public Meeting will be compiled and included with our documentation to the Province. At anytime during the process, Council could decide to not proceed with the project based on the engagement or other factors.

in

fi 🎔 in 🔽

Will the work completed increase the frequency and/or severity to flooding to the homes on Empire Avenue? mconway asked, 27 days ago

No, the proposed work will not increase the frequency or severity of flooding along Empire Avenue.

#Empire Avenue



At present I have a 6 ft. Chain Link (placed at my cost) security

The earthen berming and retaining walls will elevate the river trail and give trail users some better views of the river ecosystem. The earthen berming will maintain the existing trail alignment and will have naturalized side slopes that will blend naturally into the existing environment.

#Natural Environment #Berming



fence at the rear of my property on 3 Pringle Place as separation from the existing Rennies River Trail and will it be removed?. Can you provide to me an artist view of what I will look at from my property if the 1.3m berm is constructed and will there be an appropriate security fence provided for my property? David Winter asked, 20 days ago

It is not likely that the fence will have to be removed in order to accommodate the construction of the wall (berm). If it becomes apparent during the detailed design stage of the project that the fence may need to be removed, the property owner will be consulted before plans are finalized.

2

The look of the wall will resemble that which is shown on the main page of the Engage web-site.

1

#Berm

0

Lifecycle	
\bigcirc	Public engagement
0	Feedback collected and being prepared for what we heard document
0	Provincial Environmental Assessment Process

FAQs

What is the scope and status of Phase 1 of this project?

What is included in Phase 2?

Why are you proceeding with Phase 2 when Phase 1 has not been completed?

I live along the river, how will I be impacted by the proposed Phase 2 work?

What happens after you collect feedback on Phase 2?

Why are you doing this project?

What are the pros and cons of proceeding with Phase 2 work?

How will this project be funded?

When would this project be completed?

The Bike Master Plan and its recommended multi-use trail projects are within the scope of this project. How will the city ensure the two projects connect?

Documents

Rennie's River EA Presentation Nov 17 2020.pdf (5.31 MB) (pdf)

Decision Note to Council with Maps (872 KB) (pdf)

Important Links

Rennies River Catchment Stormwater Management Plan

Who's Listening

Councillor Ian Froude

Council lead - Public Works & Sustainability

Phone 576-8217

Email ifroude@stjohns.ca



Scott Winsor, P. Eng.

Director, Engineering

Department of Planning, Engineering & Regluatory Services



Email swinsor@stjohns.ca

Key Dates

Virtual Public Meeting 7 to 8:30 p.m. **17 November 2020**

Terms and Conditions

Privacy Policy

Moderation Policy

Accessibility

Technical Support

Site Map

Cookie Policy



ECONAVENUUME AVENUE

LONG FUND FOAD

Concessored

STAL BO

LAANES ROAT

GREUT ARROND,

GRWBERRY VINREM ROAD

VAR TEWAY STOLES

NEWICON READ

A A C R

Solutions today | Tomorrow 🕟 mind

