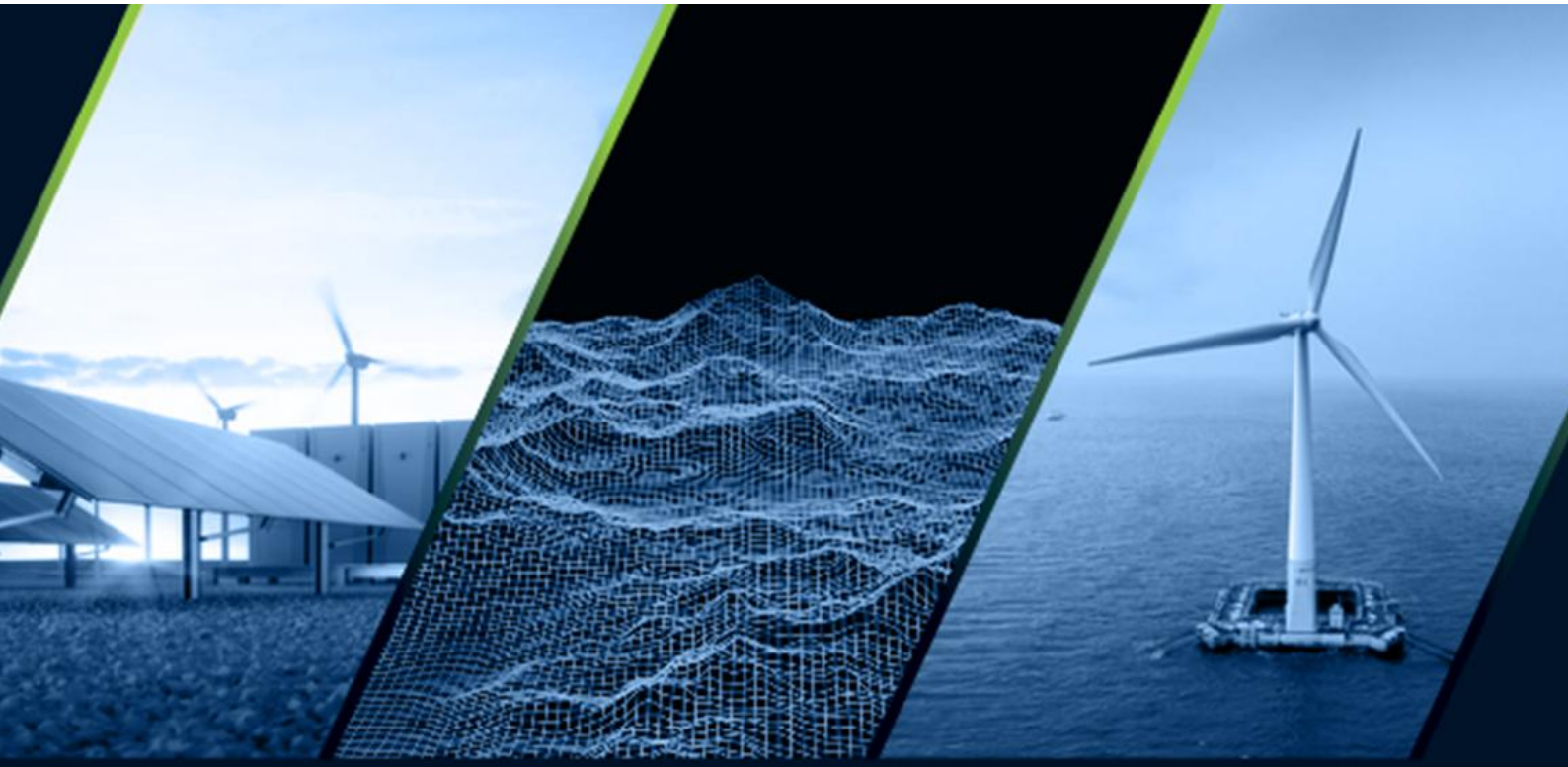
# APPENDIX G.1
## Shadow Flicker Assessment

Prepared by: Offshore Wind Consultants Limited

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

The **Renewable Energy** Consultants.



# EVREC
# Shadow Flicker Assessment

| | | |
|---|---|---|
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# Document Notes

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## Information

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| | | | | | |

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# 1 Introduction

OWC has been appointed by Exploits Valley Renewable Energy Corporation (EVREC) (the Client) to conduct a shadow flicker assessment for the operational phase of the EVREC Power-to-X (PtX) Project located in Newfoundland and Labrador, Canada (the Project). This assessment is supplied as a part of the Environmental Assessment (EA) for the Project.

## 1.1 Project overview

The Project is in the development stage and includes an onshore wind farm, located in Newfoundland, in the area northwest of Botwood, spanning four separate sites: Botwood, Twin Lakes, Seabrights Lake and Leading Tickles.

The Project consists of up to 534x Goldwind GWH182-8.0 MW Wind Turbine Generators (WTGs), with a target installed capacity of approximately 4.2 GW and 135 m hub height.

The Project area and WTG positions for each of the four sites are shown in Appendix A. WTG Coordinates are provided in Appendix B.

# 2 Assumptions and Methodology

## 2.1 Policy and Guidelines

The Government of Newfoundland and Labrador has published *Guidance for Registration of Onshore Wind Energy Generation and Green Hydrogen Production Projects* to provide advice for Environmental Assessments (EAs) in the province. However, the guidance does not specify compliance criteria regarding shadow flicker assessment, so additional guidance has been sought out.

The industry standards for shadow flicker assessment have been adopted, which are taken from German guidelines published by the Federal-State Working Group for Immission Control (LAI)[1].

## 2.2 Receptor identification

The receptors to be considered for this assessment were provided to OWC by Landmark Surveys and Engineering Ltd. The receptors were classified into four categories:

- **Residential Occupation** – receptors which were understood to comprise of 'permanent' residential occupation.
- **Remote Occupation (Crown Title / Expected Crown Title)** – receptors that are considered to be legal occupation, however not permanent of full-time residential occupation, typically seasonal use.
- **Remote Occupation (No crown title found)** – receptors that are noted to be unlicenced temporary occupations and unoccupied under the crown lands licencing process.

A map of receptors relative to the site area are shown in Appendix C.

It is noted that for the 'Remote Occupation (No crown title found)' receptors, results are separated from the main analysis results.

## 2.3 Shadow flicker assessment methodology

Shadow flicker modelling was conducted via EMD WindPRO[2] v4.0.547, using the SHADOW module. The software implements shadow flicker calculations according to the German standards[1], as given in 2.1. For each receptor, the time period in which shadow flicker could be experienced, is calculated as a number of hours per year or minutes per day.

### 2.3.1 Worst case analysis

The assessment has initially been undertaken considering an 'astronomical worst case' scenario. This considers the following:

- The WTG is always operating (i.e. wind speeds are always between cut-in and cut-out)
- There are clear skies for all hours between sunrise and sunset (i.e. no consideration of local climatic conditions including cloud cover, precipitation, fog, etc)



[1] "Hinweisezur Ermittlung und Beurteilung der optischen Immissionen von Windenergieanlagen" (2020) *LAI*

[2] https://www.emd-international.com/windpro/

- The WTG rotor is always perpendicular to the receptor, providing the maximum opportunity for shadow to occur
- There are no objects surrounding the receptor which may block the view from the receptor to the WTG

For the analysis, the following modelling parameters have been adopted:

- Receptor dimensions of 1m x 1m
- 'Greenhouse' receptors have been considered, assuming shadow could be experienced from any direction (i.e. no consideration for actual window orientation has been made)
- The angle of the sun over the horizon must be at least 3 degrees
- The blade of the WTG must be covering at least 20% of the sun to cast a sufficient shadow
- High resolution topographic data has been included based on LiDAR flyover surveys – this data has been processed and provided to OWC by Landmark Surveys and Engineering Ltd

### 2.3.2 Realistic case analysis

In addition to the worst case analysis, OWC has undertaken a probabilistic analysis considering a number of adjustments which are likely to bring the calculated shadow flicker impacts closer to expectations.

- **Sunshine probabilities:** given the climatic conditions at the Project, shadow flicker is likely to be avoid due to could cover, precipitation or fog. Therefore, a 'realistic' calculation has been undertaken which considers monthly sunshine probabilities. OWC has sourced statistics from St Johns, located approximately 260 km southeast of the Project. No other data was freely available closer to the Project location, however it is considered that the two locations are likely to experience similar climatic conditions. The 'average daily sunshine hours' for each month of the year that have been assumed in this analysis are presented in Table 2-1 below. These are then compared to the calculated maximum hours from sunrise to sunset, and the shadow flicker exposure adjusted accordingly.
- **Wind data:** during periods of very low or high wind, the WTGs will not be turning. In addition, the wind direction frequency at the Project will result in the WTGs being oriented towards certain directions more frequently than others. OWC has therefore included wind data into the analysis which consists of a wind speed and direction frequency table for each month of the year.
- **Canopy / vegetation shading:** the Project has areas of considerable forestry, woodland and elevated ground cover which is likely to provide considerable shading to a number of the receptors in relation to shadow flicker. In consideration of this, OWC included vegetation shading in the realistic case analysis. Additional data was provided by Landmark Surveys and Engineering Ltd which included high resolution canopy height details surrounding the receptors – this information was also extracted from the LiDAR flyover survey. A clearing around each receptor was ensured which provides slightly conservative estimations of likely shadow flicker exposure.

**Table 2-1: Average daily sunshine hours per month**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.39 | 3.16 | 3.33 | 3.84 | 5.23 | 6.23 | 7.65 | 6.13 | 4.66 | 3.46 | 2.47 | 1.97 |

It is noted however there are still a number of conservative assumptions and limitations to this analysis.

- All receptors are based on a 'greenhouse mode' which assumes that shadows from WTGs in any direction from the receptor could impact the property. In reality, shadows from directions where there is a line of sight from the window to the WTG will impact the receptor.

#### *2.3.2.1 Wind data*

The wind data utilised for the realistic case modelling was a Vortex LES[3] dataset, obtained from a previous assessment conducted by OWC for EVREC. The data used is at a height of 140 m, at a location within the Botwood site. The wind rose is given in Figure 2-1:

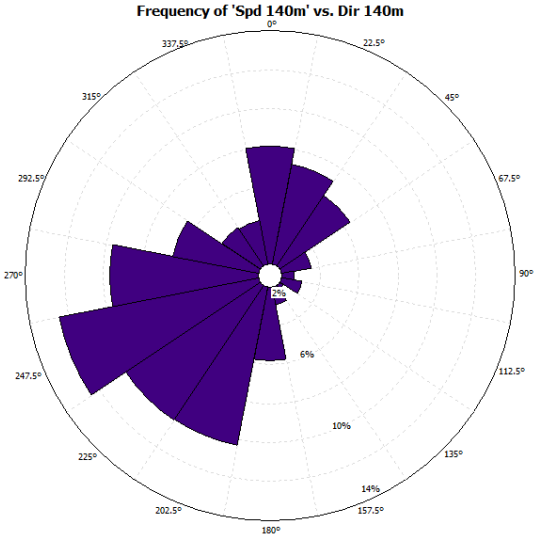



**Figure 2-1: Wind rose for realistic case wind data**

### 2.3.3 Shadow flicker thresholds

Shadow flicker thresholds are typically defined by the guidelines[1], with limits for the worst case scenario. It is noted that these are not specifically applicable to Newfoundland and therefore the limitations should be for guidance only and not considered as strict limits. The thresholds are given for worst case shadow flicker hours over a period of a year, and for the maximum minutes of shadow flicker in any day. Table 2-2 below sets out these thresholds.



[3] https://vortexfdc.com/windsite/wind-turbulent-time-series/

**Table 2-2: Shadow flicker thresholds**

| Threshold – total hours/year | Threshold – maximum mins/day |
|---|---|
| 30 | 30 |

## 2.4 Shadow flicker at night

Shadow flicker is considered to be experienced during daylight hours only. Whilst in theory it could be possible to experience shadow flicker from wind turbines at night due to moonlight, it is considered both extremely rare and negligible.

The intensity of moonlight is vastly dimmer than sunlight which means that any shadows that could be cast are far fainter and in the majority of cases they are not intense enough to create a noticeable flicker effect. Furthermore, the moon would need to be a near-full moon, the sky must be clear and the WTG must be located directly between the moon and the receptor. Furthermore, any observer at the receptor location would need to be inside a building with artificial lighting switched off. This is unlikely unless the observer is asleep, which would result in no impact being experienced.

On this basis, OWC does not consider nighttime shadow flicker to be of a concern and it is not investigated further in this report.

# 3 Shadow Flicker Assessment

The full results for each receptor are provided in Appendix D. Table 3-1 below summarises the results of the assessment, and the number of receptors where shadow flicker potentially exceeds the thresholds. The results are separated into Residential Occupation receptors, Remote Occupation receptors, and receptors with No Crown Title.

Appendix E contains shadow flicker raster maps for Botwood, Twin Lakes, Seabrights Lake and Leading Tickles, showing the results for the worst-case shadow flicker hours/year, and worst-case maximum shadow flicker minutes/day.

**Table 3-1: Summary of shadow flicker results**

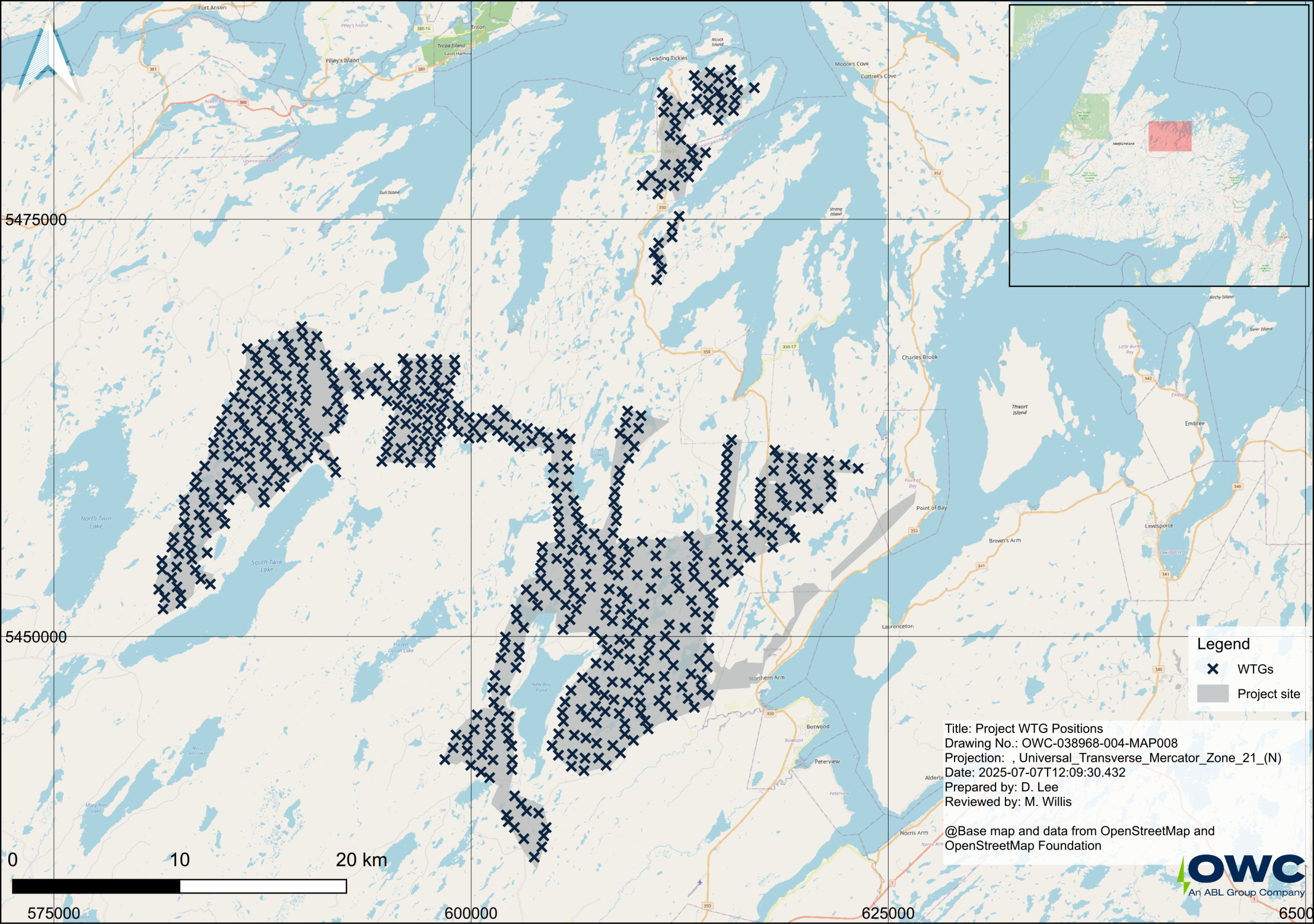
| Threshold | Number of receptors exceeding the thresholds | | |
|---|---|---|---|
| | Residential | Remote | No Crown Title |
| **Hours/year – worst case** | 13 | 242 | 26 |
| **Hours/year – realistic case** | 4 | 66 | 14 |
| **Minutes/day – worst case** | 31 | 241 | 24 |

## 3.1 Mitigation strategies

The results show that a proportion of the receptors may be exposed to shadow flicker above the generally accepted thresholds.

- An initial update to the analysis should be undertaken to consider the location, orientation and size of windows at the receptor locations are modelled accurately.
- Other mitigation can include monitoring for shadow flicker at affected receptors. Given that a number of the remote receptors are not understood to be permanent residences, it is likely that shadow flicker impacts will be heavily reduced. Should complaints be received, additional mitigation measures at the property can be introduced.
- Should the above more detailed modelling indicate that potential concerns still exist, or if mitigation measures at the receptors are not possible, the implementation of shadow flicker curtailment of the WTGs would be recommended. The WTGs should be capable of dynamic shadow flicker curtailment operation, including monitoring of light levels. Minimal impact to the energy yield of the project is expected through the implementation of full shadow flicker curtailment which would bring shadow flicker exposure at all Residential and Remote receptors to levels below the recommended thresholds.

# Appendix A WTG Positions


5475000
5450000
0
10
20 km
575000
600000
625000
6500
Legend
WTGs
Project site
Title: Project WTG Positions
Drawing No.: OWC-038968-004-MAP008
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-07T12:09:30.432
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

# Appendix B WTG Coordinates

| WTG No. | Easting (m) | Northing (m) | WTG No. | Easting (m) | Northing (m) | WTG No. | Easting (m) | Northing (m) |
|---|---|---|---|---|---|---|---|---|
| 1 | 582374 | 5452981 | 179 | 588929.0 | 5465636.0 | 357 | 618649.0 | 5458361.0 |
| 2 | 582492 | 5454970 | 180 | 588938.0 | 5464850.0 | 358 | 618520.0 | 5458893.0 |
| 3 | 583196 | 5455188 | 181 | 589247.0 | 5464387.0 | 359 | 619215.0 | 5460055.0 |
| 4 | 590759 | 5467991 | 182 | 588072.0 | 5463622.0 | 360 | 619287.0 | 5460725.0 |
| 5 | 589540 | 5460182 | 183 | 588711.0 | 5463074.0 | 361 | 620439.0 | 5460713.0 |
| 6 | 590150 | 5462188 | 184 | 589987.0 | 5462815.0 | 362 | 621415.0 | 5460529.0 |
| 7 | 591679 | 5465795 | 185 | 588728.0 | 5461440.0 | 363 | 621442.0 | 5459678.0 |
| 8 | 590114 | 5464795 | 186 | 589768.0 | 5461545.0 | 364 | 621556.0 | 5459130.0 |
| 9 | 590089 | 5464147 | 187 | 590203.0 | 5460712.0 | 365 | 621578.0 | 5458377.0 |
| 10 | 611613 | 5445819 | 188 | 586262.0 | 5465039.0 | 366 | 620784.0 | 5457672.0 |
| 11 | 612046 | 5445285 | 189 | 591749.0 | 5460463.0 | 367 | 619762.0 | 5457776.0 |
| 12 | 610610 | 5444474 | 190 | 591892.0 | 5459853.0 | 368 | 620125.0 | 5458553.0 |
| 13 | 609403 | 5446075 | 191 | 591206.0 | 5460892.0 | 369 | 619997.0 | 5459125.0 |
| 14 | 603782 | 5436787 | 192 | 590636.0 | 5461338.0 | 370 | 620258.0 | 5460052.0 |
| 15 | 604234 | 5437397 | 193 | 590813.0 | 5461974.0 | 371 | 622407.0 | 5460301.0 |
| 16 | 604349 | 5438065 | 194 | 588235.0 | 5464249.0 | 372 | 623195.0 | 5460077.0 |
| 17 | 604497 | 5438562 | 195 | 589875.0 | 5465452.0 | 373 | 613389.0 | 5455434.0 |
| 18 | 602598 | 5438563 | 196 | 589054.0 | 5467522.0 | 374 | 613567.0 | 5454846.0 |
| 19 | 604044 | 5439423 | 197 | 589396.0 | 5466473.0 | 375 | 613028.0 | 5456008.0 |
| 20 | 602223 | 5438914 | 198 | 589263.0 | 5467011.0 | 376 | 611363.0 | 5455625.0 |
| 21 | 602116 | 5439314 | 199 | 588749.0 | 5468009.0 | 377 | 610266.0 | 5455692.0 |
| 22 | 598925 | 5443338 | 200 | 589848.0 | 5468575.0 | 378 | 611069.0 | 5454840.0 |
| 23 | 599775 | 5443820 | 201 | 591252.0 | 5466845.0 | 379 | 611120.0 | 5453803.0 |
| 24 | 602039 | 5446772 | 202 | 592135.0 | 5463015.0 | 380 | 612290.0 | 5453475.0 |
| 25 | 601797 | 5448736 | 203 | 591784.0 | 5465176.0 | 381 | 612470.0 | 5452898.0 |
| 26 | 602016 | 5449362 | 204 | 592318.0 | 5463618.0 | 382 | 613315.0 | 5454175.0 |
| 27 | 592727 | 5466103 | 205 | 591938.0 | 5464148.0 | 383 | 609156.0 | 5455585.0 |
| 28 | 595924 | 5466655 | 206 | 591816.0 | 5462480.0 | 384 | 608506.0 | 5456216.0 |
| 29 | 594475 | 5466075 | 207 | 582617.0 | 5451989.0 | 385 | 608690.0 | 5456938.0 |
| 30 | 593046 | 5465689 | 208 | 582358.0 | 5454174.0 | 386 | 608732.0 | 5457533.0 |
| 31 | 593170 | 5465003 | 209 | 583068.0 | 5455726.0 | 387 | 608551.0 | 5458081.0 |
| 32 | 597002 | 5466627 | 210 | 584130.0 | 5456218.0 | 388 | 608620.0 | 5458685.0 |
| 33 | 596182 | 5466225 | 211 | 585394.0 | 5459793.0 | 389 | 608828.0 | 5459361.0 |
| 34 | 594886 | 5465632 | 212 | 586067.0 | 5460479.0 | 390 | 608908.0 | 5459954.0 |
| 35 | 594026 | 5465165 | 213 | 584573.0 | 5461623.0 | 391 | 609448.0 | 5460694.0 |
| 36 | 593272 | 5464521 | 214 | 585050.0 | 5462907.0 | 392 | 609782.0 | 5461397.0 |
| 37 | 597945 | 5466603 | 215 | 585376.0 | 5463609.0 | 393 | 609388.0 | 5461826.0 |
| 38 | 597073 | 5466071 | 216 | 586442.0 | 5465720.0 | 394 | 608919.0 | 5462183.0 |
| 39 | 596071 | 5465652 | 217 | 587721.0 | 5465281.0 | 395 | 609257.0 | 5462830.0 |
| 40 | 594313 | 5464723 | 218 | 587561.0 | 5467501.0 | 396 | 609382.0 | 5463517.0 |
| 41 | 599007 | 5466577 | 219 | 588381.0 | 5466042.0 | 397 | 610038.0 | 5462487.0 |
| 42 | 597948 | 5465976 | 220 | 589949.0 | 5466092.0 | 398 | 610186.0 | 5463237.0 |
| 43 | 596966 | 5465387 | 221 | 590367.0 | 5466866.0 | 399 | 605862.0 | 5460019.0 |
| 44 | 596044 | 5465079 | 222 | 585702.0 | 5462129.0 | 400 | 604932.0 | 5460131.0 |
| 45 | 595332 | 5465042 | 223 | 588982.0 | 5460946.0 | 401 | 604932.0 | 5459230.0 |
| 46 | 599039 | 5465984 | 224 | 589209.0 | 5460490.0 | 402 | 605712.0 | 5458988.0 |
| 47 | 597821 | 5465367 | 225 | 589150.0 | 5462058.0 | 403 | 605133.0 | 5458282.0 |
| 48 | 595831 | 5464543 | 226 | 588982.0 | 5462594.0 | 404 | 606146.0 | 5458154.0 |
| 49 | 594963 | 5464119 | 227 | 588999.0 | 5463734.0 | 405 | 606293.0 | 5457498.0 |
| 50 | 598087 | 5464902 | 228 | 589718.0 | 5463374.0 | 406 | 609631.0 | 5451335.0 |
| 51 | 597224 | 5464706 | 229 | 591391.0 | 5463492.0 | 407 | 610300.0 | 5450833.0 |
| 52 | 596452 | 5464233 | 230 | 585058.0 | 5457316.0 | 408 | 610735.0 | 5449791.0 |
| 53 | 595565 | 5463857 | 231 | 603330.0 | 5439552.0 | 409 | 610644.0 | 5449184.0 |
| 54 | 598633 | 5464559 | 232 | 603162.0 | 5437887.0 | 410 | 610360.0 | 5448553.0 |
| 55 | 597762 | 5464362 | 233 | 602441.0 | 5442037.0 | 411 | 610671.0 | 5447504.0 |
| 56 | 597007 | 5463942 | 234 | 602472.0 | 5442621.0 | 412 | 611567.0 | 5447623.0 |
| 57 | 596166 | 5463594 | 235 | 602437.0 | 5443446.0 | 413 | 611657.0 | 5446798.0 |
| 58 | 598378 | 5463955 | 236 | 602240.0 | 5443915.0 | 414 | 611249.0 | 5446167.0 |
| 59 | 597608 | 5463680 | 237 | 602113.0 | 5444517.0 | 415 | 613378.0 | 5445763.0 |
| 60 | 596767 | 5463332 | 238 | 602247.0 | 5445206.0 | 416 | 613005.0 | 5446298.0 |
| 61 | 595367 | 5462966 | 239 | 601672.0 | 5445553.0 | 417 | 612637.0 | 5446984.0 |
| 62 | 599220 | 5463828 | 240 | 601362.0 | 5446072.0 | 418 | 613183.0 | 5447763.0 |
| 63 | 598209 | 5463417 | 241 | 601305.0 | 5446950.0 | 419 | 613797.0 | 5447415.0 |
| 64 | 597406 | 5463002 | 242 | 601428.0 | 5447676.0 | 420 | 613803.0 | 5446816.0 |
| 65 | 596082 | 5462747 | 243 | 602059.0 | 5449980.0 | 421 | 614222.0 | 5446494.0 |
| 66 | 595177 | 5462302 | 244 | 602861.0 | 5449343.0 | 422 | 614148.0 | 5448178.0 |
| 67 | 598880 | 5462762 | 245 | 602902.0 | 5448789.0 | 423 | 613688.0 | 5448678.0 |
| 68 | 598150 | 5462828 | 246 | 602688.0 | 5448147.0 | 424 | 614241.0 | 5449305.0 |
| 69 | 597392 | 5462318 | 247 | 603153.0 | 5450535.0 | 425 | 614690.0 | 5453712.0 |
| 70 | 597539 | 5460424 | 248 | 602742.0 | 5451053.0 | 426 | 614105.0 | 5450439.0 |
| 71 | 595011 | 5461691 | 249 | 602688.0 | 5451629.0 | 427 | 612826.0 | 5450532.0 |
| 72 | 599893 | 5463137 | 250 | 603979.0 | 5451860.0 | 428 | 611878.0 | 5450720.0 |
| 73 | 598172 | 5462290 | 251 | 603717.0 | 5452389.0 | 429 | 612187.0 | 5449500.0 |
| 74 | 597205 | 5461701 | 252 | 603303.0 | 5452816.0 | 430 | 611597.0 | 5448892.0 |
| 75 | 595796 | 5461286 | 253 | 604174.0 | 5453490.0 | 431 | 612118.0 | 5448285.0 |
| 76 | 594903 | 5461083 | 254 | 604166.0 | 5454114.0 | 432 | 607321.0 | 5447298.0 |
| 77 | 601577 | 5463579 | 255 | 604254.0 | 5454738.0 | 433 | 607430.0 | 5446784.0 |
| 78 | 600666 | 5463071 | 256 | 604282.0 | 5455374.0 | 434 | 606593.0 | 5445654.0 |
| 79 | 599249 | 5463333 | 257 | 605136.0 | 5454676.0 | 435 | 608035.0 | 5445507.0 |
| 80 | 597953 | 5461669 | 258 | 605920.0 | 5453740.0 | 436 | 607513.0 | 5444830.0 |
| 81 | 596775 | 5461102 | 259 | 605853.0 | 5453111.0 | 437 | 606900.0 | 5445196.0 |
| 82 | 595638 | 5460701 | 260 | 606156.0 | 5452606.0 | 438 | 606185.0 | 5444097.0 |
| 83 | 594648 | 5460498 | 261 | 606574.0 | 5452255.0 | 439 | 606879.0 | 5443929.0 |
| 84 | 599877 | 5461892 | 262 | 606308.0 | 5451647.0 | 440 | 607513.0 | 5443614.0 |
| 85 | 601113 | 5462703 | 263 | 605930.0 | 5451022.0 | 441 | 608486.0 | 5443480.0 |
| 86 | 600125 | 5462490 | 264 | 605511.0 | 5450432.0 | 442 | 608951.0 | 5443026.0 |
| 87 | 599224 | 5462278 | 265 | 605658.0 | 5451903.0 | 443 | 608095.0 | 5442288.0 |
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| 89 | 596370 | 5460444 | 267 | 604548.0 | 5453051.0 | 445 | 606827.0 | 5442723.0 |
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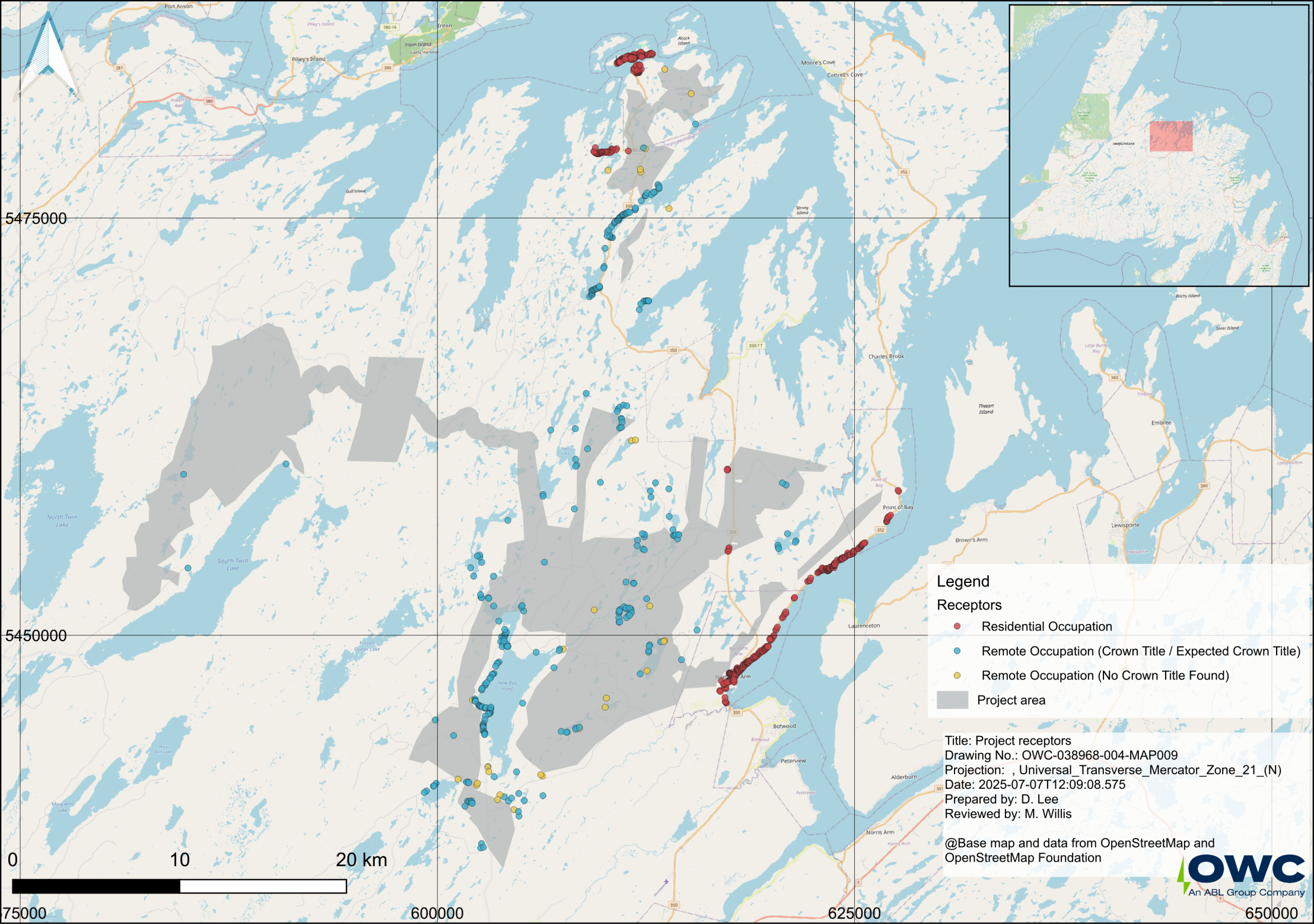
| 91 | 602696 | 5462698 | 269 | 607195.0 | 5454629.0 | 447 | 606008.0 | 5442231.0 |
| 92 | 604100 | 5462275 | 270 | 606808.0 | 5455164.0 | 448 | 606762.0 | 5441970.0 |
| 93 | 603376 | 5462476 | 271 | 606072.0 | 5455204.0 | 449 | 605233.0 | 5442893.0 |
| 94 | 604579 | 5461930 | 272 | 605331.0 | 5455578.0 | 450 | 604852.0 | 5443464.0 |
| 95 | 600620 | 5461942 | 273 | 605301.0 | 5456150.0 | 451 | 605248.0 | 5444175.0 |
| 96 | 602907 | 5461391 | 274 | 605254.0 | 5456872.0 | 452 | 605533.0 | 5444925.0 |
| 97 | 605939 | 5461850 | 275 | 606427.0 | 5456968.0 | 453 | 605464.0 | 5445460.0 |
| 98 | 602538 | 5461757 | 276 | 606653.0 | 5456455.0 | 454 | 605632.0 | 5446091.0 |
| 99 | 601574 | 5462344 | 277 | 607373.0 | 5456158.0 | 455 | 605986.0 | 5446778.0 |
| 100 | 601904 | 5461978 | 278 | 607894.0 | 5455521.0 | 456 | 606664.0 | 5447543.0 |
| 101 | 605455 | 5462146 | 279 | 608225.0 | 5455124.0 | 457 | 600363.0 | 5445318.0 |
| 102 | 603647 | 5461729 | 280 | 609440.0 | 5455081.0 | 458 | 600188.0 | 5444436.0 |
| 103 | 604675 | 5461293 | 281 | 609230.0 | 5454436.0 | 459 | 599769.0 | 5443168.0 |
| 104 | 596489 | 5461785 | 282 | 608804.0 | 5453690.0 | 460 | 599981.0 | 5442291.0 |
| 105 | 596715 | 5462505 | 283 | 608279.0 | 5452851.0 | 461 | 600592.0 | 5441890.0 |
| 106 | 598748 | 5465367 | 284 | 607158.0 | 5452981.0 | 462 | 601110.0 | 5441546.0 |
| 107 | 592022 | 5464700 | 285 | 608099.0 | 5452000.0 | 463 | 601311.0 | 5442615.0 |
| 108 | 581647 | 5452350 | 286 | 608067.0 | 5451299.0 | 464 | 600655.0 | 5442932.0 |
| 109 | 582800 | 5458199 | 287 | 608467.0 | 5450945.0 | 465 | 599094.0 | 5444108.0 |
| 110 | 582054 | 5453543 | 288 | 609371.0 | 5450757.0 | 466 | 598428.0 | 5442634.0 |
| 111 | 581283 | 5452835 | 289 | 608905.0 | 5449830.0 | 467 | 602607.0 | 5440457.0 |
| 112 | 581543 | 5451657 | 290 | 609483.0 | 5449570.0 | 468 | 603010.0 | 5440002.0 |
| 113 | 583797 | 5453446 | 291 | 608817.0 | 5448969.0 | 469 | 601144.0 | 5444855.0 |
| 114 | 583479 | 5453993 | 292 | 609517.0 | 5448641.0 | 470 | 601170.0 | 5444154.0 |
| 115 | 583274 | 5454635 | 293 | 610062.0 | 5447906.0 | 471 | 605806.0 | 5454414.0 |
| 116 | 582065 | 5455358 | 294 | 609263.0 | 5447220.0 | 472 | 608225.0 | 5454027.0 |
| 117 | 582200 | 5455949 | 295 | 610045.0 | 5446792.0 | 473 | 605217.0 | 5457518.0 |
| 118 | 589911 | 5468002 | 296 | 610150.0 | 5446026.0 | 474 | 606347.0 | 5455806.0 |
| 119 | 582806 | 5456849 | 297 | 610166.0 | 5445415.0 | 475 | 608373.0 | 5454616.0 |
| 120 | 582839 | 5457536 | 298 | 610432.0 | 5444969.0 | 476 | 608946.0 | 5451633.0 |
| 121 | 584000 | 5456849 | 299 | 609731.0 | 5443783.0 | 477 | 609890.0 | 5450337.0 |
| 122 | 584000 | 5458649 | 300 | 609210.0 | 5444152.0 | 478 | 607982.0 | 5446498.0 |
| 123 | 583435 | 5458969 | 301 | 609210.0 | 5444781.0 | 479 | 607459.0 | 5445831.0 |
| 124 | 583554 | 5459558 | 302 | 608873.0 | 5445389.0 | 480 | 613935.0 | 5453018.0 |
| 125 | 584042 | 5460223 | 303 | 608562.0 | 5446225.0 | 481 | 615132.0 | 5453275.0 |
| 126 | 584582 | 5460908 | 304 | 608460.0 | 5447286.0 | 482 | 615329.0 | 5455224.0 |
| 127 | 584000 | 5458049 | 305 | 608256.0 | 5448254.0 | 483 | 600997.0 | 5443486.0 |
| 128 | 584900 | 5462249 | 306 | 607485.0 | 5448404.0 | 484 | 619416.0 | 5459450.0 |
| 129 | 585429 | 5461503 | 307 | 608146.0 | 5449218.0 | 485 | 611635.0 | 5450033.0 |
| 130 | 586400 | 5463952 | 308 | 607858.0 | 5449820.0 | 486 | 611119.0 | 5471384.0 |
| 131 | 586100 | 5463149 | 309 | 607359.0 | 5450315.0 | 487 | 611421.0 | 5472033.0 |
| 132 | 586400 | 5462699 | 310 | 609338.0 | 5452261.0 | 488 | 611216.0 | 5472554.0 |
| 133 | 585070 | 5458560 | 311 | 609048.0 | 5452704.0 | 489 | 610965.0 | 5473003.0 |
| 134 | 586625 | 5462180 | 312 | 609958.0 | 5453688.0 | 490 | 611235.0 | 5473588.0 |
| 135 | 587073 | 5461732 | 313 | 610782.0 | 5452897.0 | 491 | 612470.0 | 5475186.0 |
| 136 | 585973 | 5459420 | 314 | 611738.0 | 5452214.0 | 492 | 611190.0 | 5476531.0 |
| 137 | 585501 | 5460805 | 315 | 610357.0 | 5451960.0 | 493 | 611386.0 | 5477127.0 |
| 138 | 586888 | 5459500 | 316 | 613439.0 | 5451471.0 | 494 | 610794.0 | 5477617.0 |
| 139 | 586220 | 5458890 | 317 | 614216.0 | 5451216.0 | 495 | 610251.0 | 5477047.0 |
| 140 | 586736 | 5461031 | 318 | 614506.0 | 5452021.0 | 496 | 612159.0 | 5477016.0 |
| 141 | 586744 | 5460195 | 319 | 614336.0 | 5452586.0 | 497 | 612595.0 | 5478317.0 |
| 142 | 584979 | 5459090 | 320 | 613203.0 | 5452167.0 | 498 | 613535.0 | 5478225.0 |
| 143 | 586204 | 5461399 | 321 | 613376.0 | 5453581.0 | 499 | 614048.0 | 5479002.0 |
| 144 | 587637 | 5460793 | 322 | 614563.0 | 5454448.0 | 500 | 613201.0 | 5479202.0 |
| 145 | 588059 | 5460370 | 323 | 615598.0 | 5454354.0 | 501 | 612573.0 | 5479773.0 |
| 146 | 588330 | 5459947 | 324 | 612243.0 | 5454204.0 | 502 | 611925.0 | 5480013.0 |
| 147 | 588800 | 5459549 | 325 | 616013.0 | 5453957.0 | 503 | 613063.0 | 5481328.0 |
| 148 | 588544 | 5458995 | 326 | 616727.0 | 5454749.0 | 504 | 611544.0 | 5481430.0 |
| 149 | 587557 | 5458627 | 327 | 616266.0 | 5455181.0 | 505 | 611767.0 | 5482095.0 |
| 150 | 587620 | 5458053 | 328 | 616265.0 | 5455887.0 | 506 | 611463.0 | 5482601.0 |
| 151 | 585500 | 5458199 | 329 | 615081.0 | 5455954.0 | 507 | 613572.0 | 5483012.0 |
| 152 | 584571 | 5457764 | 330 | 615917.0 | 5456667.0 | 508 | 613528.0 | 5482217.0 |
| 153 | 587796 | 5459333 | 331 | 614956.0 | 5456448.0 | 509 | 612675.0 | 5481731.0 |
| 154 | 585244 | 5456775 | 332 | 615065.0 | 5457146.0 | 510 | 614090.0 | 5481571.0 |
| 155 | 583700 | 5457299 | 333 | 614971.0 | 5457777.0 | 511 | 615538.0 | 5483955.0 |
| 156 | 583100 | 5456399 | 334 | 615070.0 | 5458355.0 | 512 | 614812.0 | 5483452.0 |
| 157 | 584184 | 5455028 | 335 | 615150.0 | 5458928.0 | 513 | 613376.0 | 5483623.0 |
| 158 | 584378 | 5453150 | 336 | 615242.0 | 5459505.0 | 514 | 615595.0 | 5483212.0 |
| 159 | 582601 | 5452510 | 337 | 615312.0 | 5460661.0 | 515 | 615046.0 | 5482211.0 |
| 160 | 581485 | 5454027 | 338 | 615301.0 | 5460099.0 | 516 | 615725.0 | 5481521.0 |
| 161 | 581476 | 5454563 | 339 | 615378.0 | 5461233.0 | 517 | 616971.0 | 5482886.0 |
| 162 | 587716 | 5461352 | 340 | 615606.0 | 5461792.0 | 518 | 611637.0 | 5478278.0 |
| 163 | 588042 | 5461983 | 341 | 618200.0 | 5461171.0 | 519 | 612044.0 | 5473949.0 |
| 164 | 587971 | 5462510 | 342 | 618407.0 | 5460715.0 | 520 | 612048.0 | 5474557.0 |
| 165 | 587483 | 5462907 | 343 | 618125.0 | 5459947.0 | 521 | 614208.0 | 5482844.0 |
| 166 | 587119 | 5463546 | 344 | 617362.0 | 5459246.0 | 522 | 614329.0 | 5483810.0 |
| 167 | 586897 | 5464658 | 345 | 617320.0 | 5458574.0 | 523 | 615965.0 | 5482753.0 |
| 168 | 591311 | 5466284 | 346 | 617308.0 | 5457932.0 | 524 | 612255.0 | 5480588.0 |
| 169 | 587298 | 5465640 | 347 | 617413.0 | 5457384.0 | 525 | 613039.0 | 5477546.0 |
| 170 | 588080 | 5464863 | 348 | 616973.0 | 5456671.0 | 526 | 612428.0 | 5477792.0 |
| 171 | 588235 | 5466589 | 349 | 617315.0 | 5456265.0 | 527 | 613306.0 | 5478701.0 |
| 172 | 588101 | 5467045 | 350 | 618031.0 | 5456077.0 | 528 | 614237.0 | 5482129.0 |
| 173 | 590339 | 5467399 | 351 | 618078.0 | 5455357.0 | 529 | 614809.0 | 5482659.0 |
| 174 | 586584 | 5467250 | 352 | 619396.0 | 5455939.0 | 530 | 612198.0 | 5481090.0 |
| 175 | 587077 | 5466857 | 353 | 619128.0 | 5456425.0 | 531 | 614807.0 | 5480952.0 |
| 176 | 587197 | 5466393 | 354 | 618600.0 | 5456822.0 | 532 | 614989.0 | 5481679.0 |
| 177 | 585806 | 5464349 | 355 | 618121.0 | 5457167.0 | 533 | 615812.0 | 5482134.0 |
| 178 | 587378 | 5464215 | 356 | 618897.0 | 5457853.0 | 534 | 605749.0 | 5460840.0 |

# Appendix C Receptor Positions

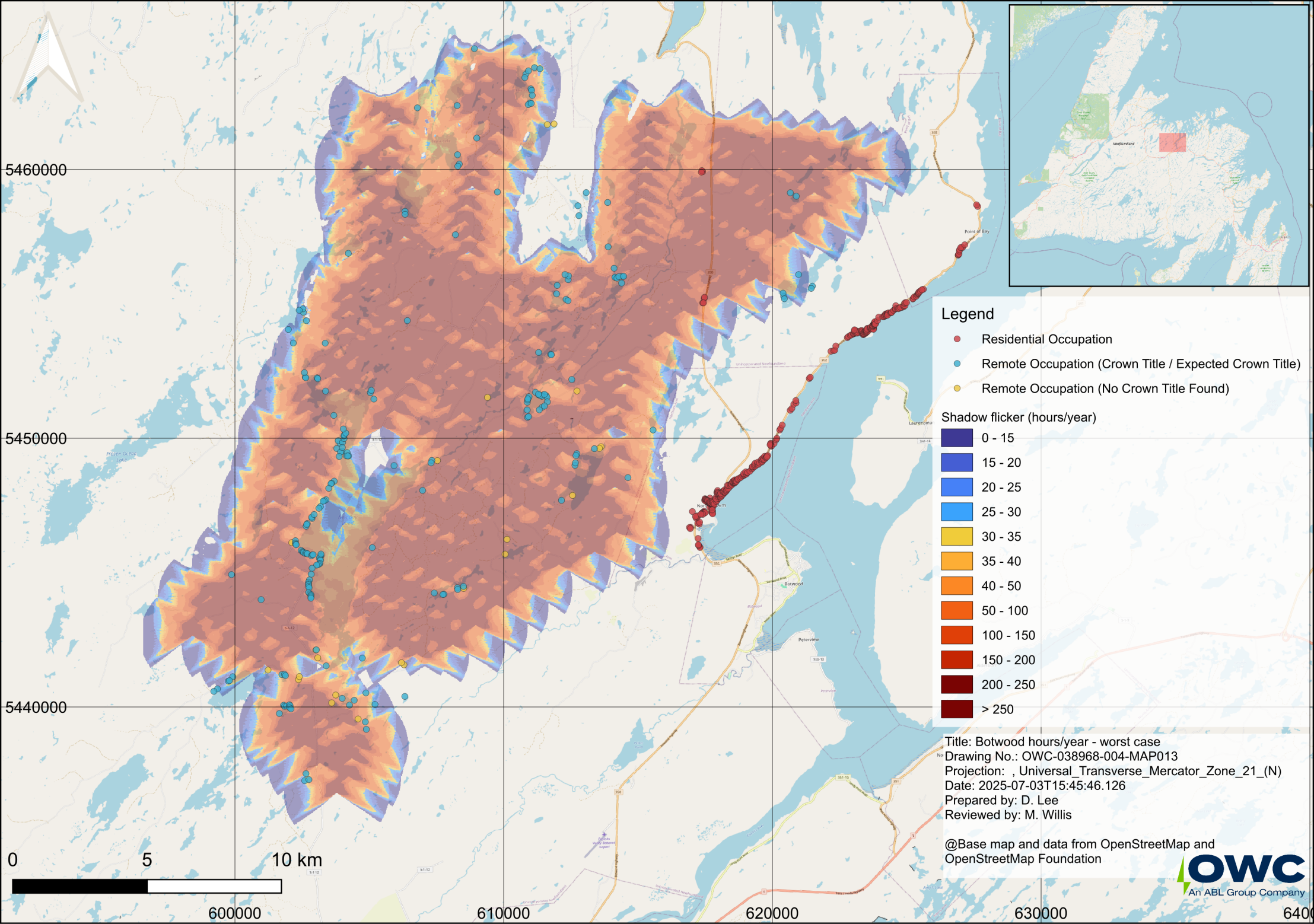

5475000
5450000
75000
600000
625000
650000
0
10
20 km
Legend
Receptors
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Project area
Title: Project receptors
Drawing No.: OWC-038968-004-MAP009
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-07T12:09:08.575
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

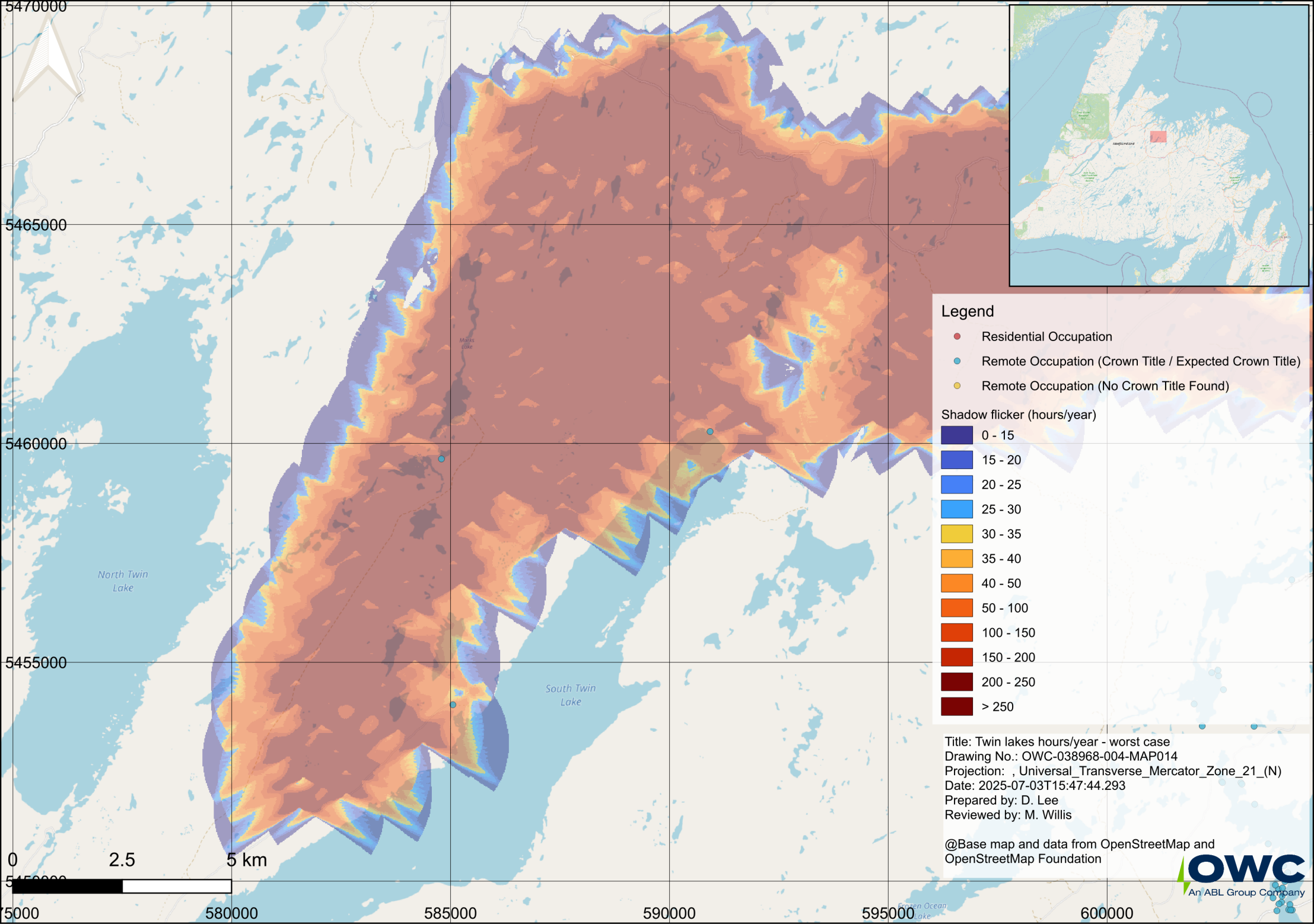
# Appendix D Full Results

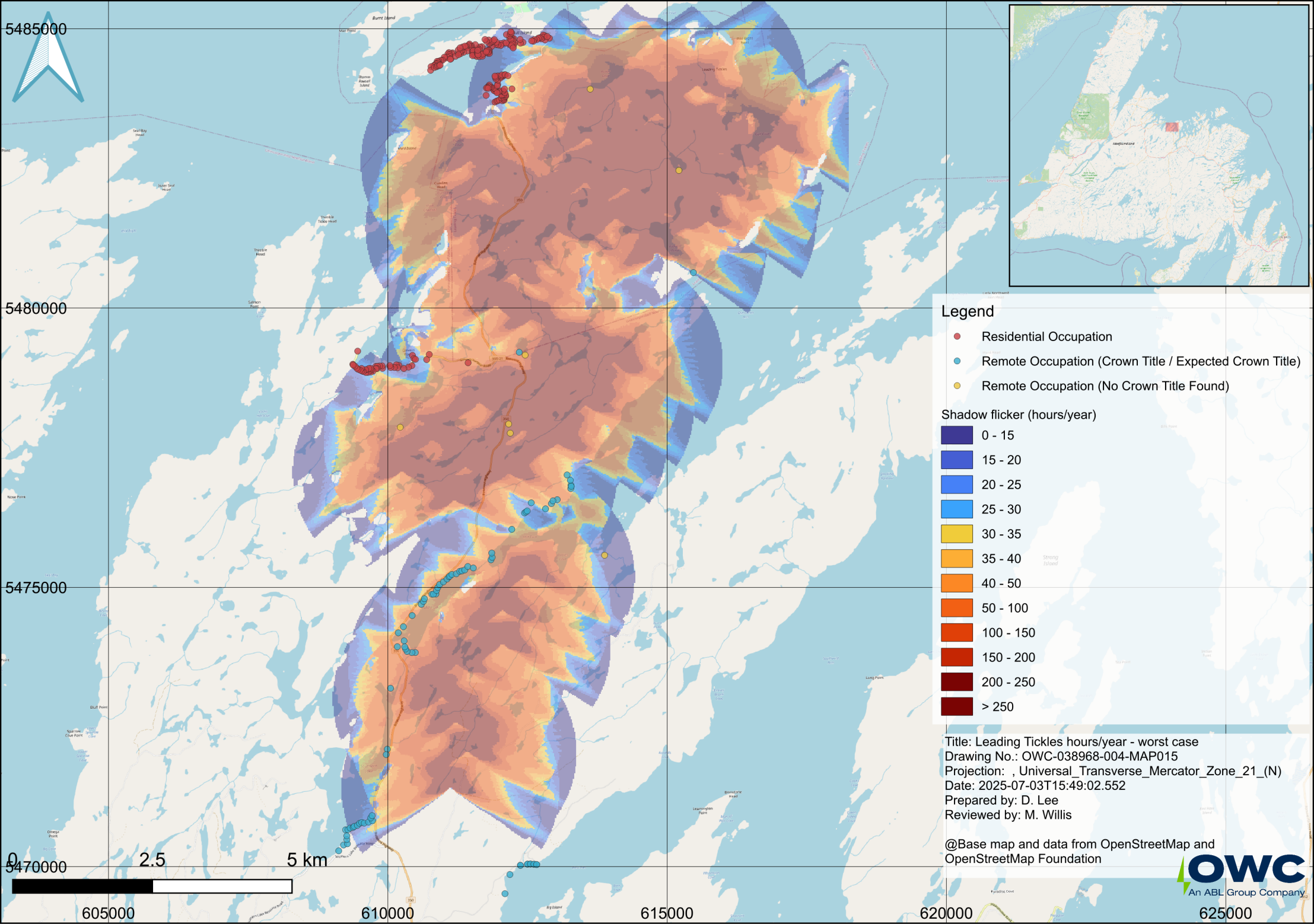
| | Location (NAD83 UTM N Zone 21) | | | Shadow flicker hours per year | | Shadow flicker minutes per day | |
|---|---|---|---|---|---|---|---|
| Receptor ID | Easting | Northing | Receptor type | Demand | Worst case | Realistic case | Demand | Worst case |
| 1 | 611918 | 5483680 | Residential | 30.0 | 13.7 | 2.5 | 30.0 | 29.0 |
| 2 | 611948 | 5483706 | Residential | 30.0 | 24.3 | 4.4 | 30.0 | 29.0 |
| 3 | 611970 | 5483712 | Residential | 30.0 | 25.0 | 4.5 | 30.0 | 30.0 |
| 4 | 611997 | 5483725 | Residential | 30.0 | 25.7 | 4.6 | 30.0 | 30.0 |
| 5 | 612053 | 5483711 | Residential | 30.0 | 28.1 | 5.1 | 30.0 | 32.0 |
| 6 | 612081 | 5483722 | Residential | 30.0 | 28.9 | 5.2 | 30.0 | 32.0 |
| 7 | 612082 | 5483740 | Residential | 30.0 | 28.7 | 5.2 | 30.0 | 32.0 |
| 8 | 612031 | 5483766 | Residential | 30.0 | 26.8 | 4.8 | 30.0 | 31.0 |
| 9 | 612046 | 5483794 | Residential | 30.0 | 27.1 | 4.8 | 30.0 | 31.0 |
| 10 | 612086 | 5483763 | Residential | 30.0 | 29.0 | 5.2 | 30.0 | 32.0 |
| 11 | 612099 | 5483785 | Residential | 30.0 | 29.3 | 5.2 | 30.0 | 32.0 |
| 12 | 612111 | 5483796 | Residential | 30.0 | 29.6 | 5.2 | 30.0 | 33.0 |
| 13 | 612108 | 5483818 | Residential | 30.0 | 29.5 | 5.2 | 30.0 | 32.0 |
| 14 | 612077 | 5483824 | Residential | 30.0 | 28.4 | 5.0 | 30.0 | 32.0 |
| 15 | 612042 | 5483818 | Residential | 30.0 | 26.9 | 4.8 | 30.0 | 31.0 |
| 16 | 612080 | 5483864 | Residential | 30.0 | 28.4 | 4.9 | 30.0 | 32.0 |
| 17 | 612094 | 5483856 | Residential | 30.0 | 28.9 | 5.0 | 30.0 | 32.0 |
| 18 | 612063 | 5483889 | Residential | 30.0 | 27.6 | 4.7 | 30.0 | 31.0 |
| 19 | 612005 | 5483889 | Residential | 30.0 | 25.4 | 4.4 | 30.0 | 30.0 |
| 20 | 611983 | 5483873 | Residential | 30.0 | 24.8 | 4.3 | 30.0 | 30.0 |
| 21 | 611946 | 5483874 | Residential | 30.0 | 23.6 | 4.1 | 30.0 | 29.0 |
| 22 | 611920 | 5483886 | Residential | 30.0 | 22.9 | 4.0 | 30.0 | 28.0 |
| 23 | 611901 | 5483893 | Residential | 30.0 | 22.4 | 3.9 | 30.0 | 28.0 |
| 24 | 611880 | 5483925 | Residential | 30.0 | 21.7 | 3.7 | 30.0 | 28.0 |
| 25 | 611909 | 5483935 | Residential | 30.0 | 22.6 | 3.8 | 30.0 | 28.0 |
| 26 | 612222 | 5483923 | Residential | 30.0 | 34.8 | 5.7 | 30.0 | 35.0 |
| 27 | 612088 | 5483922 | Residential | 30.0 | 28.5 | 4.8 | 30.0 | 32.0 |
| 28 | 611759 | 5483807 | Residential | 30.0 | 10.8 | 2.0 | 30.0 | 26.0 |
| 29 | 611967 | 5484005 | Residential | 30.0 | 24.1 | 3.9 | 30.0 | 28.0 |
| 30 | 611959 | 5483983 | Residential | 30.0 | 23.9 | 3.9 | 30.0 | 28.0 |
| 31 | 611858 | 5483953 | Residential | 30.0 | 12.0 | 2.0 | 30.0 | 27.0 |
| 32 | 611840 | 5483959 | Residential | 30.0 | 11.6 | 2.0 | 30.0 | 27.0 |
| 33 | 611818 | 5483993 | Residential | 30.0 | 11.3 | 1.9 | 30.0 | 26.0 |
| 34 | 611818 | 5483959 | Residential | 30.0 | 11.3 | 1.9 | 30.0 | 26.0 |
| 35 | 611799 | 5483969 | Residential | 30.0 | 11.1 | 1.9 | 30.0 | 26.0 |
| 36 | 611781 | 5483950 | Residential | 30.0 | 10.8 | 1.9 | 30.0 | 26.0 |
| 37 | 611765 | 5483939 | Residential | 30.0 | 10.7 | 1.8 | 30.0 | 26.0 |
| 38 | 611794 | 5483936 | Residential | 30.0 | 11.0 | 1.9 | 30.0 | 26.0 |
| 39 | 611975 | 5484081 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 40 | 612018 | 5484122 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 41 | 612064 | 5484153 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 42 | 612043 | 5484152 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 43 | 612016 | 5484142 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 44 | 611984 | 5484154 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 45 | 611966 | 5484155 | Residential | 30.0 | 13.2 | 2.2 | 30.0 | 28.0 |
| 46 | 612090 | 5484177 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 47 | 612043 | 5484174 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 48 | 611934 | 5484102 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 49 | 611925 | 5484132 | Residential | 30.0 | 12.5 | 2.1 | 30.0 | 28.0 |
| 50 | 611918 | 5484153 | Residential | 30.0 | 12.4 | 2.0 | 30.0 | 27.0 |
| 51 | 612103 | 5484178 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 52 | 612150 | 5484159 | Residential | 30.0 | 17.2 | 2.9 | 30.0 | 32.0 |
| 53 | 612892 | 5484832 | Residential | 30.0 | 13.7 | 2.1 | 30.0 | 25.0 |
| 54 | 612814 | 5484800 | Residential | 30.0 | 13.7 | 2.1 | 30.0 | 24.0 |
| 55 | 612806 | 5484879 | Residential | 30.0 | 12.8 | 2.0 | 30.0 | 24.0 |
| 56 | 612783 | 5484886 | Residential | 30.0 | 12.5 | 1.9 | 30.0 | 24.0 |
| 57 | 612787 | 5484850 | Residential | 30.0 | 12.3 | 1.9 | 30.0 | 24.0 |
| 58 | 612748 | 5484820 | Residential | 30.0 | 11.5 | 1.8 | 30.0 | 23.0 |
| 179 | 612213 | 5484696 | Residential | 30.0 | 24.4 | 3.5 | 30.0 | 28.0 |
| 180 | 612244 | 5484657 | Residential | 30.0 | 24.2 | 3.5 | 30.0 | 29.0 |
| 181 | 611607 | 5484552 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 182 | 611617 | 5484534 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 183 | 611762 | 5484588 | Residential | 30.0 | 10.5 | 1.7 | 30.0 | 23.0 |
| 184 | 611609 | 5484616 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 185 | 611266 | 5484535 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 186 | 622180 | 5453239 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 187 | 622282 | 5453263 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 188 | 622323 | 5453281 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 189 | 622361 | 5454435 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 190 | 622790 | 5453747 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 191 | 622830 | 5453785 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 192 | 622904 | 5453832 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 193 | 622947 | 5453851 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 194 | 623018 | 5453886 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 195 | 623039 | 5453899 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 196 | 623075 | 5453911 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 197 | 623074 | 5454024 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 198 | 623074 | 5454024 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 199 | 623145 | 5453991 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 200 | 623109 | 5453965 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 201 | 623048 | 5453999 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 202 | 617933 | 5447983 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 203 | 617962 | 5448057 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 204 | 617963 | 5447998 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 205 | 617493 | 5447753 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 206 | 617480 | 5447696 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 207 | 617676 | 5447778 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 208 | 617894 | 5447790 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 209 | 617666 | 5447437 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 210 | 617459 | 5447285 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 211 | 617445 | 5447251 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 212 | 617415 | 5447244 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 213 | 617398 | 5447229 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 214 | 617384 | 5447216 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 215 | 617363 | 5447197 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 216 | 617022 | 5447276 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 217 | 616956 | 5446690 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 218 | 616915 | 5446682 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 219 | 616944 | 5446639 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 220 | 617471 | 5447216 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 221 | 617498 | 5447230 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 222 | 617411 | 5447170 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 223 | 617734 | 5447248 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 224 | 617771 | 5447308 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 225 | 617770 | 5447281 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 226 | 617759 | 5447364 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 227 | 617759 | 5447394 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 228 | 617766 | 5447417 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 229 | 617730 | 5447438 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 230 | 617774 | 5447434 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 231 | 617796 | 5447472 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 232 | 617818 | 5447510 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 233 | 617765 | 5447523 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 234 | 617724 | 5447546 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 235 | 617704 | 5447561 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 236 | 617682 | 5447573 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 237 | 617665 | 5447583 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 238 | 617644 | 5447590 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 359 | 620061 | 5449805 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 360 | 620141 | 5449946 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 361 | 620166 | 5450001 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 362 | 619942 | 5449817 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 363 | 619926 | 5449790 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 364 | 619916 | 5449756 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 365 | 620274 | 5450310 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 366 | 620310 | 5450372 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 367 | 620367 | 5450493 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 368 | 620664 | 5451045 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 369 | 620726 | 5451111 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 370 | 620796 | 5451270 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 371 | 620880 | 5451316 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 372 | 620872 | 5451408 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 373 | 621374 | 5452226 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 374 | 621410 | 5452271 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 375 | 623112 | 5453920 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 376 | 623139 | 5453920 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 377 | 623171 | 5453918 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 378 | 623193 | 5453949 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 379 | 623056 | 5454038 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 380 | 623263 | 5453985 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 381 | 623302 | 5454006 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 382 | 623329 | 5453968 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 383 | 623333 | 5454009 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 384 | 623347 | 5453970 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 385 | 623401 | 5453953 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 386 | 623366 | 5453884 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 387 | 623380 | 5453858 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 388 | 623398 | 5453866 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 389 | 623413 | 5453882 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 390 | 623415 | 5453901 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 391 | 623458 | 5453902 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 392 | 623428 | 5453954 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 393 | 623460 | 5453970 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 394 | 623478 | 5453985 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 395 | 623489 | 5453930 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 396 | 623507 | 5453947 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 397 | 623519 | 5453959 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 398 | 623554 | 5453990 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 399 | 623504 | 5454000 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 400 | 623502 | 5454035 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 401 | 623536 | 5454094 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 402 | 623535 | 5454065 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 403 | 623636 | 5454093 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 404 | 623643 | 5454115 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 405 | 623677 | 5454101 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 406 | 623662 | 5454135 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 407 | 623720 | 5454123 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 408 | 623741 | 5454091 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 409 | 623769 | 5454094 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 410 | 623765 | 5454118 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 411 | 623704 | 5454066 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 412 | 623734 | 5454070 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 413 | 623765 | 5454057 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 414 | 623733 | 5454155 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 415 | 623744 | 5454181 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 416 | 623762 | 5454203 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 417 | 623759 | 5454221 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 418 | 623741 | 5454220 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 59 | 612722 | 5484839 | Residential | 30.0 | 11.2 | 1.7 | 30.0 | 23.0 |
| 60 | 612694 | 5484833 | Residential | 30.0 | 10.8 | 1.7 | 30.0 | 23.0 |
| 61 | 612665 | 5484806 | Residential | 30.0 | 15.2 | 2.4 | 30.0 | 23.0 |
| 62 | 612620 | 5484805 | Residential | 30.0 | 8.4 | 1.2 | 30.0 | 22.0 |
| 63 | 612605 | 5484778 | Residential | 30.0 | 12.9 | 1.8 | 30.0 | 26.0 |
| 64 | 612576 | 5484783 | Residential | 30.0 | 14.2 | 2.0 | 30.0 | 27.0 |
| 65 | 612419 | 5484756 | Residential | 30.0 | 25.4 | 3.6 | 30.0 | 31.0 |
| 66 | 612375 | 5484742 | Residential | 30.0 | 28.7 | 4.0 | 30.0 | 31.0 |
| 67 | 612368 | 5484809 | Residential | 30.0 | 22.1 | 3.1 | 30.0 | 29.0 |
| 68 | 612272 | 5484753 | Residential | 30.0 | 30.3 | 4.2 | 30.0 | 29.0 |
| 69 | 612245 | 5484681 | Residential | 30.0 | 26.9 | 3.9 | 30.0 | 29.0 |
| 70 | 612257 | 5484721 | Residential | 30.0 | 30.8 | 4.3 | 30.0 | 29.0 |
| 71 | 612170 | 5484727 | Residential | 30.0 | 23.3 | 3.4 | 30.0 | 27.0 |
| 72 | 612257 | 5484824 | Residential | 30.0 | 25.7 | 3.6 | 30.0 | 28.0 |
| 73 | 612227 | 5484830 | Residential | 30.0 | 26.0 | 3.6 | 30.0 | 27.0 |
| 74 | 612206 | 5484827 | Residential | 30.0 | 26.6 | 3.7 | 30.0 | 27.0 |
| 75 | 612181 | 5484827 | Residential | 30.0 | 26.9 | 3.7 | 30.0 | 27.0 |
| 76 | 612239 | 5484784 | Residential | 30.0 | 28.8 | 4.0 | 30.0 | 28.0 |
| 77 | 612204 | 5484796 | Residential | 30.0 | 28.3 | 3.9 | 30.0 | 27.0 |
| 78 | 612177 | 5484872 | Residential | 30.0 | 24.2 | 3.3 | 30.0 | 26.0 |
| 79 | 612123 | 5484896 | Residential | 30.0 | 23.5 | 3.2 | 30.0 | 26.0 |
| 80 | 612196 | 5484909 | Residential | 30.0 | 20.8 | 2.9 | 30.0 | 27.0 |
| 81 | 612214 | 5484926 | Residential | 30.0 | 18.3 | 2.5 | 30.0 | 26.0 |
| 82 | 612076 | 5484747 | Residential | 30.0 | 18.6 | 2.7 | 30.0 | 26.0 |
| 83 | 612020 | 5484736 | Residential | 30.0 | 16.5 | 2.5 | 30.0 | 25.0 |
| 84 | 612118 | 5484746 | Residential | 30.0 | 20.8 | 3.0 | 30.0 | 27.0 |
| 85 | 612022 | 5484701 | Residential | 30.0 | 15.7 | 2.4 | 30.0 | 26.0 |
| 86 | 611973 | 5484711 | Residential | 30.0 | 14.7 | 2.2 | 30.0 | 25.0 |
| 87 | 611934 | 5484721 | Residential | 30.0 | 14.0 | 2.1 | 30.0 | 25.0 |
| 88 | 611942 | 5484760 | Residential | 30.0 | 14.9 | 2.2 | 30.0 | 24.0 |
| 89 | 611862 | 5484686 | Residential | 30.0 | 12.2 | 1.9 | 30.0 | 24.0 |
| 90 | 611823 | 5484736 | Residential | 30.0 | 12.1 | 1.9 | 30.0 | 23.0 |
| 91 | 611848 | 5484756 | Residential | 30.0 | 12.6 | 1.9 | 30.0 | 23.0 |
| 92 | 611868 | 5484771 | Residential | 30.0 | 13.3 | 2.0 | 30.0 | 23.0 |
| 93 | 611889 | 5484784 | Residential | 30.0 | 13.9 | 2.1 | 30.0 | 24.0 |
| 94 | 611905 | 5484806 | Residential | 30.0 | 14.9 | 2.2 | 30.0 | 24.0 |
| 95 | 611806 | 5484799 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 96 | 611766 | 5484776 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 97 | 611740 | 5484808 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 98 | 611685 | 5484679 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 99 | 611645 | 5484674 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 100 | 611608 | 5484653 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 101 | 611565 | 5484716 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 102 | 611495 | 5484698 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 103 | 611462 | 5484727 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 104 | 611483 | 5484684 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 105 | 611462 | 5484676 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 106 | 611439 | 5484660 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 107 | 611443 | 5484707 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 108 | 611407 | 5484683 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 109 | 611393 | 5484665 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 110 | 611422 | 5484602 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 111 | 611357 | 5484579 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 112 | 611321 | 5484598 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 113 | 611340 | 5484674 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 114 | 611380 | 5484690 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 115 | 611158 | 5484569 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 116 | 611147 | 5484550 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 117 | 611093 | 5484573 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 118 | 611076 | 5484550 | Residential | 30.0 | 29.4 | 0.0 | 30.0 | 0.0 |
| 239 | 617623 | 5447605 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 240 | 617600 | 5447613 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 241 | 617582 | 5447631 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 242 | 617564 | 5447643 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 243 | 617542 | 5447655 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 244 | 617526 | 5447667 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 245 | 617505 | 5447678 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 246 | 617509 | 5447731 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 247 | 617527 | 5447720 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 248 | 617548 | 5447710 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 249 | 617570 | 5447695 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 250 | 617592 | 5447685 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 251 | 617608 | 5447673 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 252 | 617648 | 5447650 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 253 | 617678 | 5447630 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 254 | 617696 | 5447620 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 255 | 617753 | 5447585 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 256 | 617746 | 5447648 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 257 | 617776 | 5447675 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 258 | 617800 | 5447655 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 259 | 617784 | 5447619 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 260 | 617813 | 5447607 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 261 | 617840 | 5447556 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 262 | 617914 | 5447651 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 263 | 617947 | 5447696 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 264 | 618002 | 5447763 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 265 | 618013 | 5447782 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 266 | 617900 | 5447750 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 267 | 617975 | 5447834 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 268 | 617999 | 5447866 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 269 | 618019 | 5447880 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 270 | 617977 | 5447925 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 271 | 617959 | 5447948 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 272 | 617989 | 5447970 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 273 | 618016 | 5447939 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 274 | 618043 | 5447909 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 275 | 618058 | 5447925 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 276 | 617769 | 5447219 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 277 | 617773 | 5447208 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 278 | 617777 | 5447192 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 279 | 617462 | 5455203 | Residential | 30.0 | 202.0 | 45.1 | 30.0 | 68.0 |
| 280 | 617473 | 5455248 | Residential | 30.0 | 191.2 | 41.3 | 30.0 | 69.0 |
| 281 | 618081 | 5447818 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 282 | 618112 | 5447859 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 283 | 618125 | 5447890 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 284 | 618180 | 5447929 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 285 | 618082 | 5447955 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 286 | 618225 | 5447980 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 287 | 618158 | 5448022 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 288 | 618170 | 5448034 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 289 | 618195 | 5448051 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 290 | 618229 | 5448088 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 291 | 618241 | 5447997 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 292 | 618282 | 5448034 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 293 | 618286 | 5448068 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 294 | 618319 | 5448091 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 295 | 618380 | 5448156 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 296 | 618349 | 5448131 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 297 | 618326 | 5448250 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 298 | 618373 | 5448251 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 419 | 623736 | 5454199 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 420 | 623767 | 5454228 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 421 | 623784 | 5454252 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 422 | 623787 | 5454274 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 423 | 623802 | 5454293 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 424 | 623803 | 5454320 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 425 | 623814 | 5454341 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 426 | 623836 | 5454263 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 427 | 623814 | 5454243 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 428 | 623828 | 5454254 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 429 | 623912 | 5454379 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 430 | 623957 | 5454509 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 431 | 624197 | 5454604 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 432 | 624141 | 5454524 | Residential | 30.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 539 | 609600 | 5478899 | Residential | 30.0 | 25.9 | 3.6 | 30.0 | 26.0 | 599 | 602595 | 5437260 | Remote | 30.0 | 29.4 | 5.8 | 30.0 | 33.0 | 659 | 603491 | 5448139 | Remote | 30.0 | 64.3 | 13.2 | 30.0 | 52.0 |
| 540 | 609560 | 5478864 | Residential | 30.0 | 25.8 | 3.6 | 30.0 | 26.0 | 600 | 608285 | 5460553 | Remote | 30.0 | 98.6 | 20.1 | 30.0 | 49.0 | 660 | 603388 | 5447717 | Remote | 30.0 | 15.9 | 3.1 | 30.0 | 27.0 |
| 541 | 609534 | 5478877 | Residential | 30.0 | 24.9 | 3.5 | 30.0 | 25.0 | 601 | 6144464 | 5456031 | Remote | 30.0 | 175.8 | 32.1 | 30.0 | 94.0 | 661 | 603325 | 5447679 | Remote | 30.0 | 24.6 | 4.8 | 30.0 | 28.0 |
| 542 | 609529 | 5478920 | Residential | 30.0 | 24.7 | 3.4 | 30.0 | 25.0 | 602 | 603790 | 5449620 | Remote | 30.0 | 111.3 | 22.5 | 30.0 | 62.0 | 662 | 603280 | 5447659 | Remote | 30.0 | 26.4 | 5.1 | 30.0 | 29.0 |
| 543 | 609505 | 5478889 | Residential | 30.0 | 24.2 | 3.4 | 30.0 | 25.0 | 603 | 602646 | 5446729 | Remote | 30.0 | 148.6 | 31.3 | 30.0 | 86.0 | 663 | 603181 | 5447462 | Remote | 30.0 | 37.8 | 7.5 | 30.0 | 32.0 |
| 544 | 609466 | 5478904 | Residential | 30.0 | 23.4 | 3.3 | 30.0 | 25.0 | 604 | 602253 | 5446190 | Remote | 30.0 | 111.2 | 21.1 | 30.0 | 52.0 | 664 | 603124 | 5447397 | Remote | 30.0 | 41.5 | 8.3 | 30.0 | 34.0 |
| 545 | 609443 | 5478925 | Residential | 30.0 | 22.9 | 3.2 | 30.0 | 24.0 | 605 | 602250 | 5446100 | Remote | 30.0 | 124.1 | 24.1 | 30.0 | 55.0 | 665 | 602858 | 5447067 | Remote | 30.0 | 94.2 | 19.4 | 30.0 | 49.0 |
| 546 | 609412 | 5478960 | Residential | 30.0 | 22.2 | 3.1 | 30.0 | 24.0 | 606 | 602264 | 5446066 | Remote | 30.0 | 125.0 | 24.6 | 30.0 | 55.0 | 666 | 601653 | 5439759 | Remote | 30.0 | 153.1 | 25.0 | 30.0 | 68.0 |
| 547 | 609373 | 5478995 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 | 607 | 602277 | 5446041 | Remote | 30.0 | 125.8 | 24.9 | 30.0 | 55.0 | 667 | 602753 | 5437299 | Remote | 30.0 | 41.3 | 8.2 | 30.0 | 38.0 |
| 548 | 609381 | 5478979 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 | 608 | 602466 | 5445827 | Remote | 30.0 | 156.9 | 29.9 | 30.0 | 66.0 | 668 | 603396 | 5441534 | Remote | 30.0 | 55.7 | 11.8 | 30.0 | 42.0 |
| 549 | 609460 | 5479229 | Residential | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 | 609 | 602509 | 5445783 | Remote | 30.0 | 172.2 | 32.9 | 30.0 | 71.0 | 669 | 612281 | 5456093 | Remote | 30.0 | 137.1 | 24.6 | 30.0 | 62.0 |
| 550 | 612691 | 5449357 | Remote | 30.0 | 221.9 | 44.4 | 30.0 | 83.0 | 610 | 602541 | 5445767 | Remote | 30.0 | 176.1 | 33.9 | 30.0 | 70.0 | 670 | 613888 | 5457127 | Remote | 30.0 | 115.5 | 22.4 | 30.0 | 59.0 |
| 551 | 607743 | 5444187 | Remote | 30.0 | 213.2 | 37.7 | 30.0 | 112.0 | 611 | 602564 | 5445748 | Remote | 30.0 | 182.2 | 35.3 | 30.0 | 74.0 | 671 | 602947 | 5447166 | Remote | 30.0 | 69.9 | 14.2 | 30.0 | 42.0 |
| 552 | 608280 | 5444441 | Remote | 30.0 | 209.2 | 44.0 | 30.0 | 80.0 | 612 | 602617 | 5445717 | Remote | 30.0 | 185.7 | 36.3 | 30.0 | 78.0 | 672 | 601987 | 5454049 | Remote | 30.0 | 24.5 | 3.4 | 30.0 | 25.0 |
| 553 | 608292 | 5444375 | Remote | 30.0 | 196.5 | 41.7 | 30.0 | 78.0 | 613 | 602663 | 5445725 | Remote | 30.0 | 173.3 | 33.8 | 30.0 | 77.0 | 673 | 599797 | 5440984 | Remote | 30.0 | 26.4 | 7.0 | 30.0 | 31.0 |
| 554 | 608506 | 5444490 | Remote | 30.0 | 277.7 | 61.6 | 30.0 | 128.0 | 614 | 602697 | 5445702 | Remote | 30.0 | 168.2 | 33.0 | 30.0 | 79.0 | 674 | 604150 | 5449351 | Remote | 30.0 | 49.0 | 9.6 | 30.0 | 33.0 |
| 555 | 605039 | 5451699 | Remote | 30.0 | 216.7 | 48.8 | 30.0 | 97.0 | 615 | 602847 | 5445629 | Remote | 30.0 | 117.7 | 23.8 | 30.0 | 79.0 | 675 | 604177 | 5449466 | Remote | 30.0 | 32.1 | 6.5 | 30.0 | 32.0 |
| 556 | 605076 | 5451787 | Remote | 30.0 | 259.9 | 56.8 | 30.0 | 108.0 | 616 | 602878 | 5445664 | Remote | 30.0 | 107.5 | 21.6 | 30.0 | 75.0 | 676 | 603996 | 5449659 | Remote | 30.0 | 73.3 | 16.5 | 30.0 | 36.0 |
| 557 | 606414 | 5454381 | Remote | 30.0 | 394.7 | 81.0 | 30.0 | 152.0 | 617 | 602909 | 5445668 | Remote | 30.0 | 103.5 | 20.8 | 30.0 | 72.0 | 677 | 604229 | 5449343 | Remote | 30.0 | 30.5 | 6.0 | 30.0 | 31.0 |
| 558 | 611015 | 5463005 | Remote | 30.0 | 118.0 | 24.8 | 30.0 | 55.0 | 618 | 603203 | 5445635 | Remote | 30.0 | 78.4 | 15.0 | 30.0 | 40.0 | 678 | 604194 | 5449343 | Remote | 30.0 | 45.3 | 8.8 | 30.0 | 32.0 |
| 559 | 611042 | 5462946 | Remote | 30.0 | 110.0 | 23.4 | 30.0 | 49.0 | 619 | 603178 | 5445600 | Remote | 30.0 | 83.0 | 15.8 | 30.0 | 42.0 | 679 | 605920 | 5448896 | Remote | 30.0 | 10.6 | 1.8 | 30.0 | 26.0 |
| 560 | 611064 | 5462761 | Remote | 30.0 | 97.7 | 19.9 | 30.0 | 42.0 | 620 | 603152 | 5445569 | Remote | 30.0 | 87.5 | 16.6 | 30.0 | 43.0 | 680 | 604741 | 5441822 | Remote | 30.0 | 24.0 | 5.7 | 30.0 | 33.0 |
| 561 | 610915 | 5462419 | Remote | 30.0 | 92.3 | 18.0 | 30.0 | 68.0 | 621 | 603145 | 5445530 | Remote | 30.0 | 90.7 | 17.2 | 30.0 | 44.0 | 681 | 606323 | 5440395 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 562 | 611025 | 5462463 | Remote | 30.0 | 69.8 | 13.5 | 30.0 | 54.0 | 622 | 603178 | 5445489 | Remote | 30.0 | 86.0 | 16.4 | 30.0 | 43.0 | 682 | 602892 | 5448829 | Remote | 30.0 | 106.7 | 21.4 | 30.0 | 92.0 |
| 563 | 610788 | 5463424 | Remote | 30.0 | 127.8 | 24.7 | 30.0 | 68.0 | 623 | 603182 | 5445460 | Remote | 30.0 | 82.1 | 15.8 | 30.0 | 43.0 | 683 | 602668 | 5446794 | Remote | 30.0 | 119.5 | 24.3 | 30.0 | 92.0 |
| 564 | 606331 | 5458336 | Remote | 30.0 | 394.8 | 85.4 | 30.0 | 163.0 | 624 | 603164 | 5445344 | Remote | 30.0 | 84.2 | 16.7 | 30.0 | 45.0 | 684 | 612800 | 5458285 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 565 | 611971 | 5455376 | Remote | 30.0 | 164.9 | 33.7 | 30.0 | 68.0 | 625 | 603134 | 5445322 | Remote | 30.0 | 90.2 | 18.0 | 30.0 | 46.0 | 685 | 612764 | 5458655 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 566 | 611753 | 5453127 | Remote | 30.0 | 158.6 | 31.9 | 30.0 | 96.0 | 626 | 603091 | 5445294 | Remote | 30.0 | 100.9 | 20.3 | 30.0 | 49.0 | 686 | 613072 | 5459145 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 567 | 611774 | 5453110 | Remote | 30.0 | 139.2 | 26.1 | 30.0 | 96.0 | 627 | 603041 | 5445283 | Remote | 30.0 | 124.5 | 25.1 | 30.0 | 52.0 | 687 | 613871 | 5458776 | Remote | 30.0 | 103.7 | 20.6 | 30.0 | 33.0 |
| 568 | 611352 | 5451595 | Remote | 30.0 | 142.3 | 27.8 | 30.0 | 61.0 | 628 | 602870 | 5445166 | Remote | 30.0 | 184.4 | 38.3 | 30.0 | 94.0 | 688 | 585053 | 5454032 | Remote | 30.0 | 69.1 | 13.3 | 30.0 | 39.0 |
| 569 | 611299 | 5451640 | Remote | 30.0 | 135.1 | 26.2 | 30.0 | 62.0 | 629 | 602839 | 5444941 | Remote | 30.0 | 158.3 | 34.1 | 30.0 | 81.0 | 689 | 590929 | 5460274 | Remote | 30.0 | 130.2 | 28.2 | 30.0 | 51.0 |
| 570 | 611519 | 5451634 | Remote | 30.0 | 106.7 | 20.7 | 30.0 | 53.0 | 630 | 602773 | 5444730 | Remote | 30.0 | 117.2 | 22.5 | 30.0 | 59.0 | 690 | 584791 | 5459647 | Remote | 30.0 | 308.1 | 63.0 | 30.0 | 108.0 |
| 571 | 611626 | 5451353 | Remote | 30.0 | 169.8 | 32.7 | 30.0 | 65.0 | 631 | 602736 | 5444645 | Remote | 30.0 | 149.8 | 28.9 | 30.0 | 74.0 | 691 | 620398 | 5455402 | Remote | 30.0 | 14.7 | 3.3 | 30.0 | 28.0 |
| 572 | 610894 | 5451426 | Remote | 30.0 | 137.5 | 27.2 | 30.0 | 87.0 | 632 | 602741 | 5444586 | Remote | 30.0 | 169.8 | 33.0 | 30.0 | 83.0 | 692 | 620445 | 5455193 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 573 | 611327 | 5451059 | Remote | 30.0 | 128.7 | 23.1 | 30.0 | 117.0 | 633 | 602736 | 5444551 | Remote | 30.0 | 183.4 | 36.0 | 30.0 | 88.0 | 693 | 609120 | 5470284 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 574 | 614218 | 5455962 | Remote | 30.0 | 132.0 | 26.5 | 30.0 | 80.0 | 634 | 602744 | 5444497 | Remote | 30.0 | 200.3 | 40.1 | 30.0 | 91.0 | 694 | 609208 | 5470389 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 575 | 614291 | 5456021 | Remote | 30.0 | 141.8 | 27.8 | 30.0 | 82.0 | 635 | 602759 | 5444442 | Remote | 30.0 | 214.5 | 44.2 | 30.0 | 91.0 | 695 | 609277 | 5470411 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 576 | 614389 | 5455778 | Remote | 30.0 | 230.7 | 49.4 | 30.0 | 84.0 | 636 | 602745 | 5444263 | Remote | 30.0 | 191.7 | 40.9 | 30.0 | 89.0 | 696 | 609267 | 5470486 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 577 | 601810 | 5440067 | Remote | 30.0 | 126.7 | 28.2 | 30.0 | 51.0 | 637 | 602793 | 5444211 | Remote | 30.0 | 186.6 | 38.8 | 30.0 | 81.0 | 697 | 609266 | 5470553 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 578 | 601850 | 5440028 | Remote | 30.0 | 124.3 | 26.6 | 30.0 | 54.0 | 638 | 602829 | 5444178 | Remote | 30.0 | 179.6 | 36.8 | 30.0 | 63.0 | 698 | 609244 | 5470661 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 579 | 601927 | 5440039 | Remote | 30.0 | 111.6 | 23.6 | 30.0 | 50.0 | 639 | 602827 | 5444138 | Remote | 30.0 | 183.4 | 36.9 | 30.0 | 65.0 | 699 | 609286 | 5470663 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 580 | 602030 | 5440084 | Remote | 30.0 | 90.1 | 20.2 | 30.0 | 50.0 | 640 | 602828 | 5444095 | Remote | 30.0 | 186.0 | 36.6 | 30.0 | 74.0 | 700 | 609325 | 5470693 | Remote | 30.0 | 12.3 | 3.1 | 30.0 | 23.0 |
| 581 | 602053 | 5440046 | Remote | 30.0 | 75.1 | 14.6 | 30.0 | 44.0 | 641 | 602828 | 5444053 | Remote | 30.0 | 200.5 | 39.4 | 30.0 | 84.0 | 701 | 609380 | 5470705 | Remote | 30.0 | 13.4 | 3.4 | 30.0 | 24.0 |
| 582 | 602044 | 5439971 | Remote | 30.0 | 88.5 | 15.5 | 30.0 | 60.0 | 642 | 604852 | 5439448 | Remote | 30.0 | 66.8 | 13.3 | 30.0 | 71.0 | 702 | 609398 | 5470722 | Remote | 30.0 | 13.6 | 3.4 | 30.0 | 24.0 |
| 583 | 602086 | 5439935 | Remote | 30.0 | 101.9 | 18.1 | 30.0 | 65.0 | 643 | 602868 | 5447019 | Remote | 30.0 | 92.6 | 19.0 | 30.0 | 57.0 | 703 | 609456 | 5470741 | Remote | 30.0 | 14.8 | 3.8 | 30.0 | 25.0 |
| 584 | 603679 | 5450853 | Remote | 30.0 | 136.1 | 28.0 | 30.0 | 82.0 | 644 | 603201 | 5445693 | Remote | 30.0 | 73.9 | 14.3 | 30.0 | 40.0 | 704 | 609494 | 5470777 | Remote | 30.0 | 15.3 | 3.8 | 30.0 | 25.0 |
| 585 | 601746 | 5441209 | Remote | 30.0 | 92.1 | 17.4 | 30.0 | 64.0 | 645 | 608912 | 5464501 | Remote | 30.0 | 48.2 | 6.9 | 30.0 | 60.0 | 705 | 609532 | 5470793 | Remote | 30.0 | 16.2 | 4.1 | 30.0 | 26.0 |
| 586 | 601845 | 5441216 | Remote | 30.0 | 121.8 | 23.7 | 30.0 | 70.0 | 646 | 602585 | 5452445 | Remote | 30.0 | 92.8 | 22.2 | 30.0 | 71.0 | 706 | 609578 | 5470781 | Remote | 30.0 | 18.1 | 4.6 | 30.0 | 27.0 |
| 587 | 601879 | 5441170 | Remote | 30.0 | 111.2 | 20.8 | 30.0 | 64.0 | 647 | 603984 | 5449521 | Remote | 30.0 | 82.9 | 17.5 | 30.0 | 37.0 | 707 | 609654 | 5470799 | Remote | 30.0 | 20.9 | 5.4 | 30.0 | 28.0 |
| 588 | 603058 | 5452252 | Remote | 30.0 | 247.2 | 54.1 | 30.0 | 82.0 | 648 | 603927 | 5449482 | Remote | 30.0 | 101.7 | 21.2 | 30.0 | 50.0 | 708 | 609725 | 5470824 | Remote | 30.0 | 24.1 | 6.3 | 30.0 | 30.0 |
| 589 | 603081 | 5452219 | Remote | 30.0 | 261.3 | 57.3 | 30.0 | 89.0 | 649 | 604007 | 5449846 | Remote | 30.0 | 70.9 | 14.8 | 30.0 | 34.0 | 709 | 609694 | 5470874 | Remote | 30.0 | 20.3 | 5.1 | 30.0 | 29.0 |
| 590 | 603371 | 5451758 | Remote | 30.0 | 249.0 | 53.1 | 30.0 | 86.0 | 650 | 604062 | 5449994 | Remote | 30.0 | 83.4 | 17.5 | 30.0 | 35.0 | 710 | 609719 | 5470914 | Remote | 30.0 | 20.4 | 5.0 | 30.0 | 30.0 |
| 591 | 611518 | 5451202 | Remote | 30.0 | 205.0 | 36.6 | 30.0 | 86.0 | 651 | 604054 | 5450091 | Remote | 30.0 | 100.5 | 21.4 | 30.0 | 45.0 | 711 | 609990 | 5472104 | Remote | 30.0 | 50.3 | 11.0 | 30.0 | 34.0 |
| 592 | 610900 | 5451466 | Remote | 30.0 | 143.0 | 28.0 | 30.0 | 85.0 | 652 | 604067 | 5450127 | Remote | 30.0 | 106.2 | 22.6 | 30.0 | 45.0 | 712 | 609971 | 5472008 | Remote | 30.0 | 59.3 | 14.0 | 30.0 | 33.0 |
| 593 | 614110 | 5456330 | Remote | 30.0 | 166.6 | 30.9 | 30.0 | 66.0 | 653 | 604124 | 5450195 | Remote | 30.0 | 116.0 | 24.5 | 30.0 | 45.0 | 713 | 610048 | 5473195 | Remote | 30.0 | 104.5 | 19.7 | 30.0 | 44.0 |
| 594 | 608206 | 5457578 | Remote | 30.0 | 215.0 | 39.5 | 30.0 | 76.0 | 654 | 604034 | 5450349 | Remote | 30.0 | 113.9 | 23.5 | 30.0 | 48.0 | 714 | 610492 | 5473834 | Remote | 30.0 | 122.5 | 22.3 | 30.0 | 52.0 |
| 595 | 607328 | 5449178 | Remote | 30.0 | 132.7 | 24.2 | 30.0 | 58.0 | 655 | 603879 | 5449326 | Remote | 30.0 | 96.8 | 19.1 | 30.0 | 41.0 | 715 | 610431 | 5473834 | Remote | 30.0 | 118.8 | 21.2 | 30.0 | 49.0 |
| 596 | 607298 | 5449087 | Remote | 30.0 | 153.8 | 28.9 | 30.0 | 64.0 | 656 | 603694 | 5448407 | Remote | 30.0 | 96.7 | 20.6 | 30.0 | 65.0 | 716 | 610345 | 5473854 | Remote | 30.0 | 106.8 | 18.5 | 30.0 | 44.0 |
| 597 | 602636 | 5452253 | Remote | 30.0 | 91.8 | 16.5 | 30.0 | 61.0 | 657 | 603595 | 5448331 | Remote | 30.0 | 46.8 | 9.2 | 30.0 | 45.0 | 717 | 610318 | 5473898 | Remote | 30.0 | 96.6 | 16.6 | 30.0 | 42.0 |
| 598 | 602644 | 5437523 | Remote | 30.0 | 49.9 | 10.8 | 30.0 | 39.0 | 658 | 603575 | 5448311 | Remote | 30.0 | 46.2 | 9.0 | 30.0 | 46.0 | 718 | 610303 | 5473936 | Remote | 30.0 | 89.5 | 15.3 | 30.0 | 42.0 |
| 719 | 610292 | 5474044 | Remote | 30.0 | 71.8 | 12.4 | 30.0 | 40.0 | 779 | 611299 | 5451620 | Remote | 30.0 | 135.4 | 26.1 | 30.0 | 64.0 | 839 | 600973 | 5443997 | Remote | 30.0 | 229.2 | 45.3 | 30.0 | 86.0 |
| 720 | 610170 | 5473938 | Remote | 30.0 | 71.5 | 11.1 | 30.0 | 37.0 | 780 | 611472 | 5451618 | Remote | 30.0 | 117.9 | 23.2 | 30.0 | 46.0 | 840 | 607777 | 5444197 | Remote | 30.0 | 209.7 | 37.2 | 30.0 | 114.0 |
| 721 | 610188 | 5474188 | Remote | 30.0 | 50.1 | 8.7 | 30.0 | 35.0 | 781 | 611581 | 5451586 | Remote | 30.0 | 104.2 | 20.2 | 30.0 | 56.0 | 841 | 612374 | 5470025 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 722 | 610279 | 5474296 | Remote | 30.0 | 46.0 | 7.9 | 30.0 | 37.0 | 782 | 611611 | 5451528 | Remote | 30.0 | 125.9 | 24.5 | 30.0 | 56.0 | 842 | 612500 | 5470047 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 723 | 610435 | 5474497 | Remote | 30.0 | 65.6 | 10.2 | 30.0 | 37.0 | 783 | 611430 | 5451154 | Remote | 30.0 | 147.0 | 24.8 | 30.0 | 109.0 | 843 | 612553 | 5470049 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 724 | 610599 | 5474697 | Remote | 30.0 | 42.4 | 7.6 | 30.0 | 29.0 | 784 | 610875 | 5451056 | Remote | 30.0 | 180.8 | 34.1 | 30.0 | 118.0 | 844 | 612615 | 5470045 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 725 | 610638 | 5474750 | Remote | 30.0 | 37.0 | 6.8 | 30.0 | 30.0 | 785 | 610888 | 5450781 | Remote | 30.0 | 312.5 | 62.5 | 30.0 | 96.0 | 845 | 612664 | 5470039 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 726 | 610655 | 5474798 | Remote | 30.0 | 37.7 | 6.7 | 30.0 | 30.0 | 786 | 610918 | 5451502 | Remote | 30.0 | 148.7 | 28.7 | 30.0 | 84.0 | 846 | 612374 | 5470025 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 727 | 610788 | 5474877 | Remote | 30.0 | 47.6 | 8.1 | 30.0 | 32.0 | 787 | 610943 | 5451550 | Remote | 30.0 | 150.6 | 28.1 | 30.0 | 80.0 | 847 | 612500 | 5470047 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 728 | 610861 | 5474882 | Remote | 30.0 | 54.4 | 9.1 | 30.0 | 34.0 | 788 | 610877 | 5451343 | Remote | 30.0 | 132.5 | 26.4 | 30.0 | 91.0 | 848 | 612553 | 5470049 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 729 | 610816 | 5474880 | Remote | 30.0 | 49.9 | 8.4 | 30.0 | 33.0 | 789 | 606982 | 5448062 | Remote | 30.0 | 220.8 | 41.9 | 30.0 | 140.0 | 849 | 612615 | 5470045 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 730 | 610872 | 5474946 | Remote | 30.0 | 60.8 | 9.9 | 30.0 | 34.0 | 790 | 612535 | 5452189 | Remote | 30.0 | 207.9 | 42.6 | 30.0 | 125.0 | 850 | 612664 | 5470039 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 731 | 610894 | 5474998 | Remote | 30.0 | 63.4 | 10.1 | 30.0 | 34.0 | 791 | 611185 | 5451716 | Remote | 30.0 | 152.2 | 29.9 | 30.0 | 52.0 | 851 | 613624 | 5449687 | No Crown Title | 30.0 | 72.0 | 12.4 | 30.0 | 58.0 |
| 732 | 610927 | 5475051 | Remote | 30.0 | 61.6 | 9.9 | 30.0 | 35.0 | 792 | 612401 | 5455904 | Remote | 30.0 | 191.3 | 38.7 | 30.0 | 66.0 | 852 | 608513 | 5444414 | No Crown Title | 30.0 | 237.3 | 52.1 | 30.0 | 113.0 |
| 733 | 610995 | 5475099 | Remote | 30.0 | 59.5 | 9.8 | 30.0 | 36.0 | 793 | 608348 | 5460204 | Remote | 30.0 | 159.2 | 30.8 | 30.0 | 63.0 | 853 | 602364 | 5441021 | No Crown Title | 30.0 | 116.0 | 20.9 | 30.0 | 71.0 |
| 734 | 611060 | 5475151 | Remote | 30.0 | 54.2 | 9.1 | 30.0 | 37.0 | 794 | 604263 | 5440071 | Remote | 30.0 | 116.3 | 22.1 | 30.0 | 61.0 | 854 | 602397 | 5441134 | No Crown Title | 30.0 | 51.7 | 9.5 | 30.0 | 44.0 |
| 735 | 611094 | 5475189 | Remote | 30.0 | 49.5 | 8.4 | 30.0 | 38.0 | 795 | 599872 | 5444930 | Remote | 30.0 | 215.6 | 36.3 | 30.0 | 119.0 | 855 | 603749 | 5440448 | No Crown Title | 30.0 | 75.3 | 15.1 | 30.0 | 49.0 |
| 736 | 611110 | 5475203 | Remote | 30.0 | 47.6 | 8.1 | 30.0 | 38.0 | 796 | 611423 | 5451566 | Remote | 30.0 | 132.1 | 25.8 | 30.0 | 41.0 | 856 | 604583 | 5439556 | No Crown Title | 30.0 | 122.1 | 24.3 | 30.0 | 104.0 |
| 737 | 611147 | 5475232 | Remote | 30.0 | 47.9 | 8.1 | 30.0 | 39.0 | 797 | 614412 | 5456027 | Remote | 30.0 | 158.8 | 29.1 | 30.0 | 90.0 | 857 | 606292 | 5441571 | No Crown Title | 30.0 | 10.5 | 2.6 | 30.0 | 23.0 |
| 738 | 611226 | 5475244 | Remote | 30.0 | 56.3 | 9.3 | 30.0 | 41.0 | 798 | 612415 | 5456045 | Remote | 30.0 | 158.2 | 29.0 | 30.0 | 67.0 | 858 | 610054 | 5445689 | No Crown Title | 30.0 | 469.0 | 86.0 | 30.0 | 160.0 |
| 739 | 611289 | 5475288 | Remote | 30.0 | 72.7 | 11.3 | 30.0 | 42.0 | 799 | 614159 | 5455986 | Remote | 30.0 | 154.4 | 32.9 | 30.0 | 77.0 | 859 | 609396 | 5451522 | No Crown Title | 30.0 | 582.1 | 113.0 | 30.0 | 150.0 |
| 740 | 611327 | 5475296 | Remote | 30.0 | 78.7 | 12.2 | 30.0 | 43.0 | 800 | 608999 | 5461173 | Remote | 30.0 | 170.9 | 31.9 | 30.0 | 65.0 | 860 | 610124 | 5446241 | No Crown Title | 30.0 | 628.5 | 121.4 | 30.0 | 239.0 |
| 741 | 611377 | 5475312 | Remote | 30.0 | 82.9 | 12.9 | 30.0 | 44.0 | 801 | 603358 | 5453540 | Remote | 30.0 | 61.8 | 11.5 | 30.0 | 51.0 | 861 | 612729 | 5451761 | No Crown Title | 30.0 | 190.0 | 37.4 | 30.0 | 66.0 |
| 742 | 611431 | 5475374 | Remote | 30.0 | 76.8 | 12.0 | 30.0 | 44.0 | 802 | 603029 | 5442129 | Remote | 30.0 | 93.2 | 18.6 | 30.0 | 69.0 | 862 | 611621 | 5461675 | No Crown Title | 30.0 | 31.4 | 6.9 | 30.0 | 26.0 |
| 743 | 611530 | 5475348 | Remote | 30.0 | 84.1 | 13.5 | 30.0 | 48.0 | 803 | 604438 | 5440251 | Remote | 30.0 | 66.7 | 12.8 | 30.0 | 63.0 | 863 | 611875 | 5461700 | No Crown Title | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| 744 | 611847 | 5475494 | Remote | 30.0 | 58.7 | 10.0 | 30.0 | 59.0 | 804 | 605110 | 5445932 | Remote | 30.0 | 294.6 | 59.6 | 30.0 | 79.0 | 864 | 603600 | 5440154 | No Crown Title | 30.0 | 276.0 | 52.0 | 30.0 | 126.0 |
| 745 | 611868 | 5475539 | Remote | 30.0 | 60.5 | 10.3 | 30.0 | 59.0 | 805 | 610972 | 5462476 | Remote | 30.0 | 82.4 | 16.0 | 30.0 | 57.0 | 865 | 606197 | 5441649 | No Crown Title | 30.0 | 47.3 | 13.2 | 30.0 | 56.0 |
| 746 | 611860 | 5475616 | Remote | 30.0 | 59.3 | 9.9 | 30.0 | 56.0 | 806 | 610923 | 5463676 | Remote | 30.0 | 71.2 | 14.4 | 30.0 | 61.0 | 866 | 603014 | 5442122 | No Crown Title | 30.0 | 98.1 | 19.7 | 30.0 | 70.0 |
| 747 | 612220 | 5476040 | Remote | 30.0 | 31.9 | 6.6 | 30.0 | 35.0 | 807 | 611147 | 5463796 | Remote | 30.0 | 49.2 | 9.7 | 30.0 | 38.0 | 867 | 601232 | 5441375 | No Crown Title | 30.0 | 36.1 | 8.9 | 30.0 | 27.0 |
| 748 | 612447 | 5476332 | Remote | 30.0 | 22.9 | 4.6 | 30.0 | 34.0 | 808 | 611350 | 5463755 | Remote | 30.0 | 41.7 | 7.9 | 30.0 | 33.0 | 868 | 603082 | 5441833 | No Crown Title | 30.0 | 122.7 | 26.6 | 30.0 | 81.0 |
| 749 | 612473 | 5476351 | Remote | 30.0 | 21.3 | 4.3 | 30.0 | 33.0 | 809 | 608270 | 5462384 | Remote | 30.0 | 150.7 | 30.7 | 30.0 | 67.0 | 869 | 602114 | 5446118 | No Crown Title | 30.0 | 155.7 | 30.2 | 30.0 | 62.0 |
| 750 | 612495 | 5476369 | Remote | 30.0 | 20.0 | 4.0 | 30.0 | 32.0 | 810 | 609768 | 5459165 | Remote | 30.0 | 84.4 | 16.9 | 30.0 | 45.0 | 870 | 607534 | 5449170 | No Crown Title | 30.0 | 196.7 | 40.2 | 30.0 | 70.0 |
| 751 | 612567 | 5476514 | Remote | 30.0 | 31.4 | 6.6 | 30.0 | 31.0 | 811 | 606329 | 5458448 | Remote | 30.0 | 324.1 | 67.2 | 30.0 | 133.0 | 871 | 613565 | 5449628 | No Crown Title | 30.0 | 65.7 | 11.5 | 30.0 | 55.0 |
| 752 | 612097 | 5469518 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 | 812 | 608294 | 5460125 | Remote | 30.0 | 162.7 | 30.4 | 30.0 | 61.0 | 872 | 612566 | 5447876 | No Crown Title | 30.0 | 184.5 | 32.9 | 30.0 | 106.0 |
| 753 | 612185 | 5469860 | Remote | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 | 813 | 604219 | 5456884 | Remote | 30.0 | 48.4 | 11.2 | 30.0 | 40.0 | 873 | 615210 | 5482464 | No Crown Title | 30.0 | 555.1 | 119.3 | 30.0 | 201.0 |
| 754 | 615471 | 5480636 | Remote | 30.0 | 20.4 | 4.5 | 30.0 | 38.0 | 814 | 603916 | 5449813 | Remote | 30.0 | 82.5 | 16.8 | 30.0 | 37.0 | 874 | 612459 | 5479159 | No Crown Title | 30.0 | 169.8 | 30.3 | 30.0 | 69.0 |
| 755 | 612352 | 5479209 | Remote | 30.0 | 135.4 | 23.7 | 30.0 | 61.0 | 815 | 605212 | 5440096 | Remote | 30.0 | 19.0 | 3.9 | 30.0 | 32.0 | 875 | 610222 | 5477867 | No Crown Title | 30.0 | 124.9 | 22.5 | 30.0 | 62.0 |
| 756 | 612929 | 5476500 | Remote | 30.0 | 39.8 | 8.6 | 30.0 | 27.0 | 816 | 604889 | 5439170 | Remote | 30.0 | 163.7 | 32.8 | 30.0 | 63.0 | 876 | 613881 | 5475575 | No Crown Title | 30.0 | 13.6 | 2.5 | 30.0 | 29.0 |
| 757 | 613033 | 5476571 | Remote | 30.0 | 52.8 | 11.4 | 30.0 | 39.0 | 817 | 603991 | 5440324 | Remote | 30.0 | 99.1 | 18.7 | 30.0 | 45.0 | 877 | 612192 | 5477761 | No Crown Title | 30.0 | 478.9 | 107.6 | 30.0 | 177.0 |
| 758 | 613275 | 5476770 | Remote | 30.0 | 33.8 | 6.9 | 30.0 | 38.0 | 818 | 599920 | 5441128 | Remote | 30.0 | 28.4 | 7.0 | 30.0 | 35.0 | 878 | 612164 | 5477925 | No Crown Title | 30.0 | 390.7 | 71.9 | 30.0 | 157.0 |
| 759 | 613279 | 5476831 | Remote | 30.0 | 30.2 | 6.1 | 30.0 | 38.0 | 819 | 605169 | 5451460 | Remote | 30.0 | 117.3 | 24.8 | 30.0 | 57.0 | 879 | 613623 | 5483920 | No Crown Title | 30.0 | 265.7 | 53.5 | 30.0 | 141.0 |
| 760 | 613209 | 5477013 | Remote | 30.0 | 32.6 | 6.5 | 30.0 | 50.0 | 820 | 603844 | 5449913 | Remote | 30.0 | 77.8 | 15.5 | 30.0 | 38.0 | | | | | | | | | |
| 761 | 613267 | 5476919 | Remote | 30.0 | 28.8 | 5.8 | 30.0 | 42.0 | 821 | 610926 | 5450808 | Remote | 30.0 | 273.5 | 52.9 | 30.0 | 85.0 | | | | | | | | | |
| 762 | 613283 | 5476808 | Remote | 30.0 | 30.8 | 6.3 | 30.0 | 37.0 | 822 | 602616 | 5452275 | Remote | 30.0 | 80.8 | 14.4 | 30.0 | 56.0 | | | | | | | | | |
| 763 | 612823 | 5476407 | Remote | 30.0 | 33.9 | 7.3 | 30.0 | 28.0 | 823 | 604875 | 5440525 | Remote | 30.0 | 36.3 | 6.7 | 30.0 | 30.0 | | | | | | | | | |
| 764 | 612956 | 5476550 | Remote | 30.0 | 31.7 | 6.7 | 30.0 | 27.0 | 824 | 602173 | 5453546 | Remote | 30.0 | 31.1 | 4.9 | 30.0 | 32.0 | | | | | | | | | |
| 765 | 612152 | 5447693 | Remote | 30.0 | 229.1 | 43.3 | 30.0 | 110.0 | 825 | 602658 | 5454376 | Remote | 30.0 | 37.7 | 7.1 | 30.0 | 28.0 | | | | | | | | | |
| 766 | 614625 | 5448538 | Remote | 30.0 | 130.6 | 26.2 | 30.0 | 81.0 | 826 | 602546 | 5454692 | Remote | 30.0 | 34.9 | 7.3 | 30.0 | 25.0 | | | | |

# Appendix E Shadow flicker maps – worst case


5460000
5450000
5440000
600000
610000
620000
630000
640
0
5
10 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Botwood
Peterview
Point of Bay
Title: Botwood hours/year - worst case
Drawing No.: OWC-038968-004-MAP013
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T15:45:46.126
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company


5470000
5465000
5460000
5455000
North Twin Lake
South Twin Lake
Marks Lake
0
2.5
5 km
580000
585000
590000
595000
600000
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Twin lakes hours/year - worst case
Drawing No.: OWC-038968-004-MAP014
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T15:47:44.293
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company


5485000
5480000
5475000
5470000
605000
610000
615000
620000
625000
0
2.5
5 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Leading Tickles hours/year - worst case
Drawing No.: OWC-038968-004-MAP015
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T15:49:02.552
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
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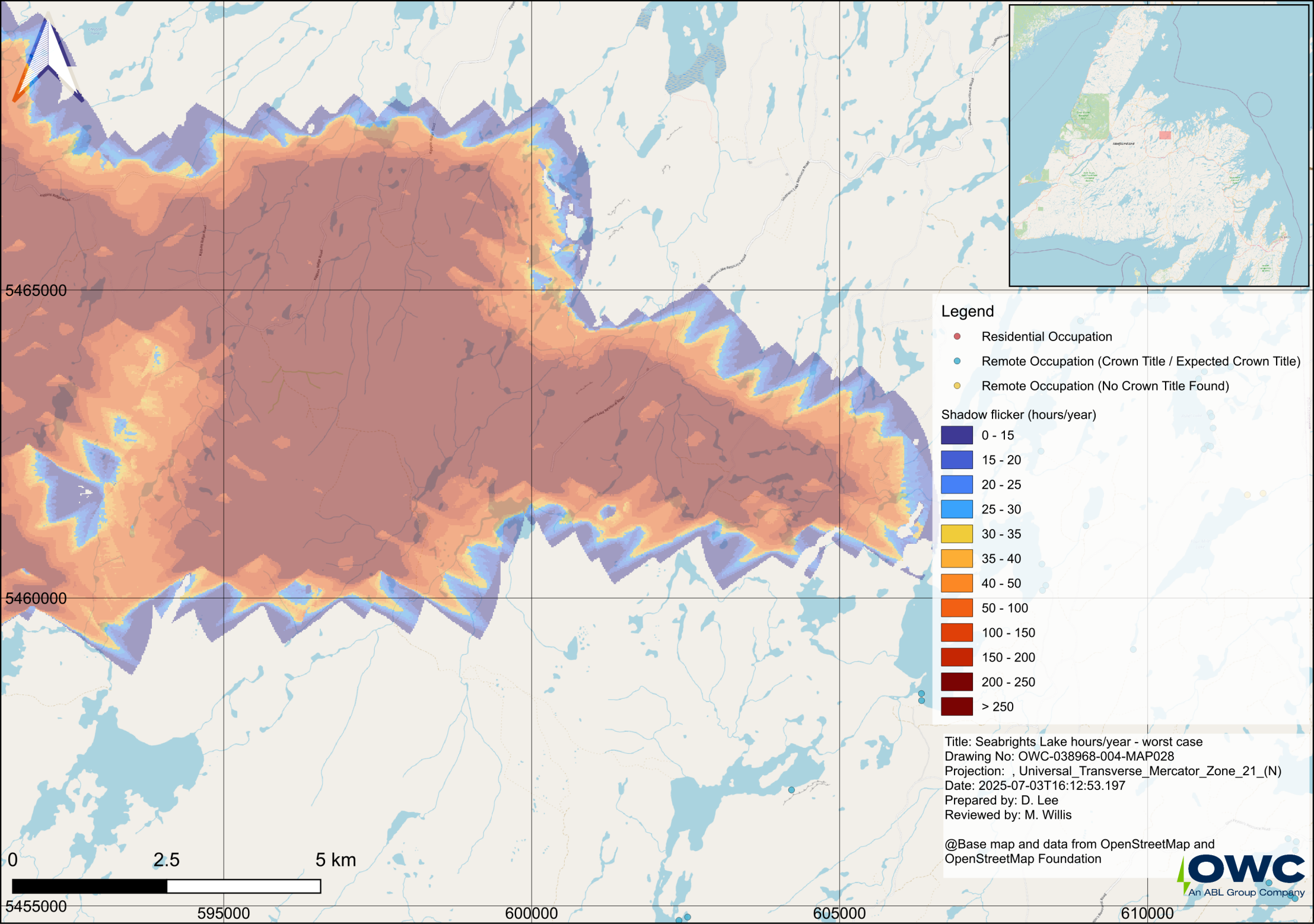
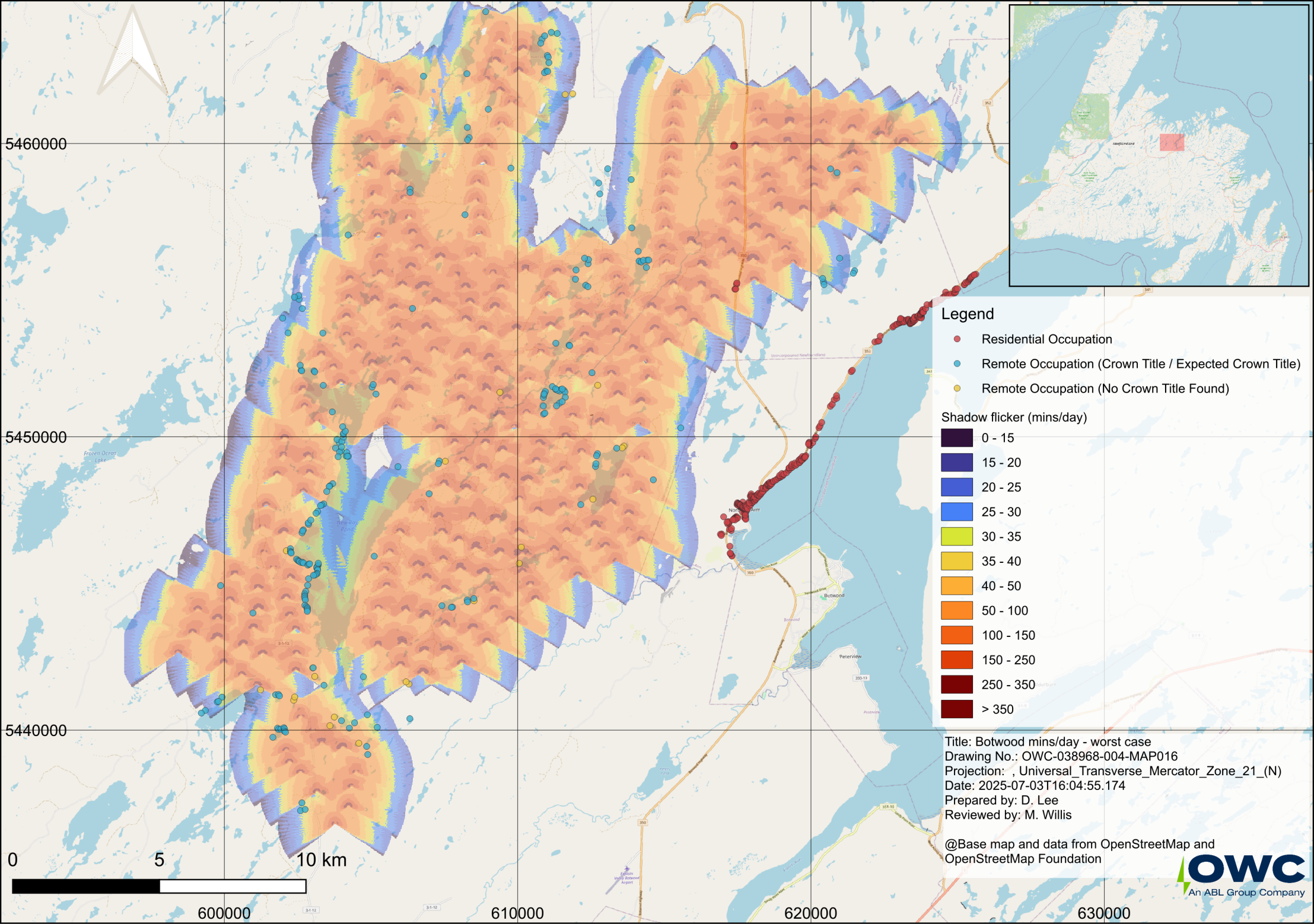
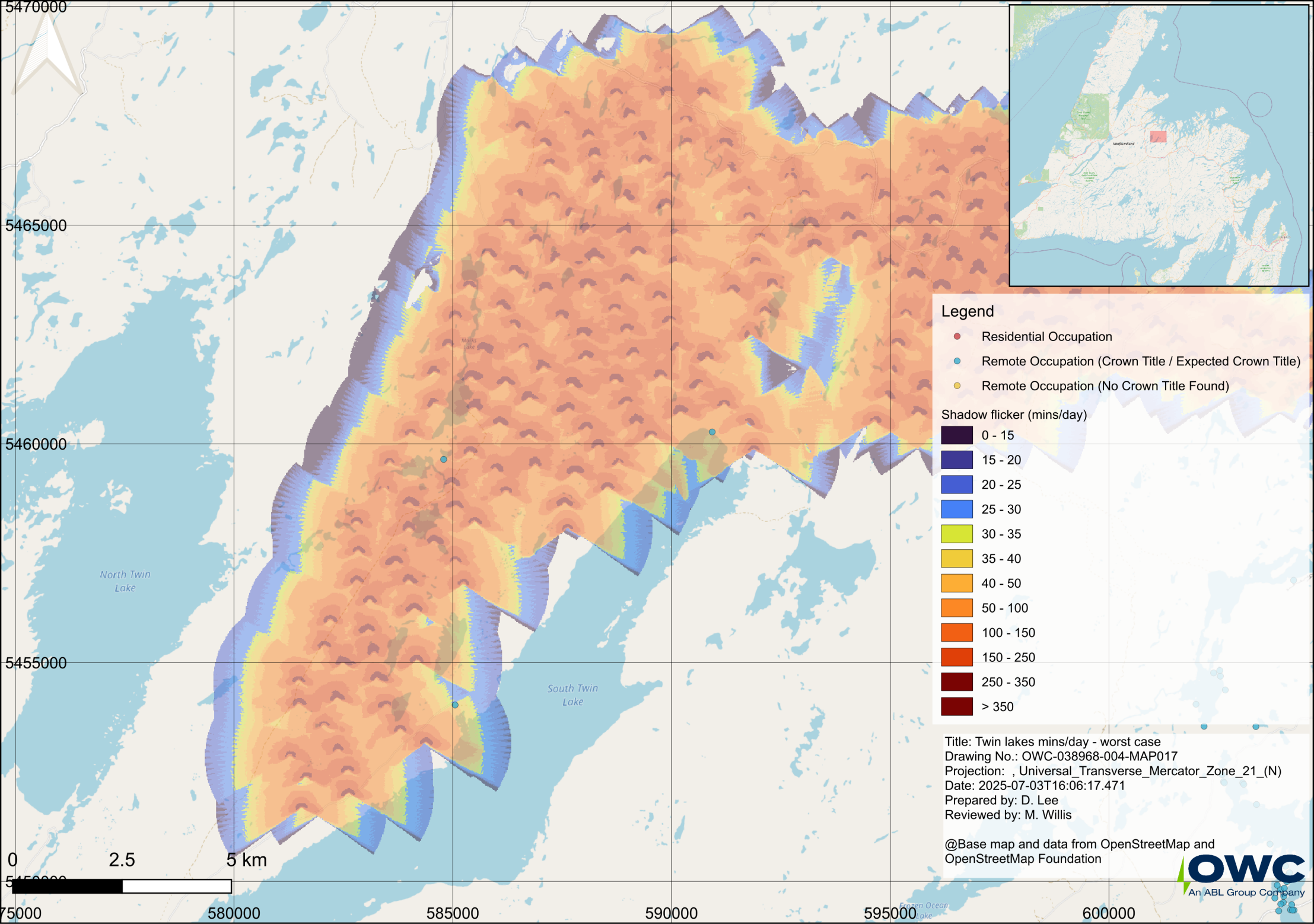
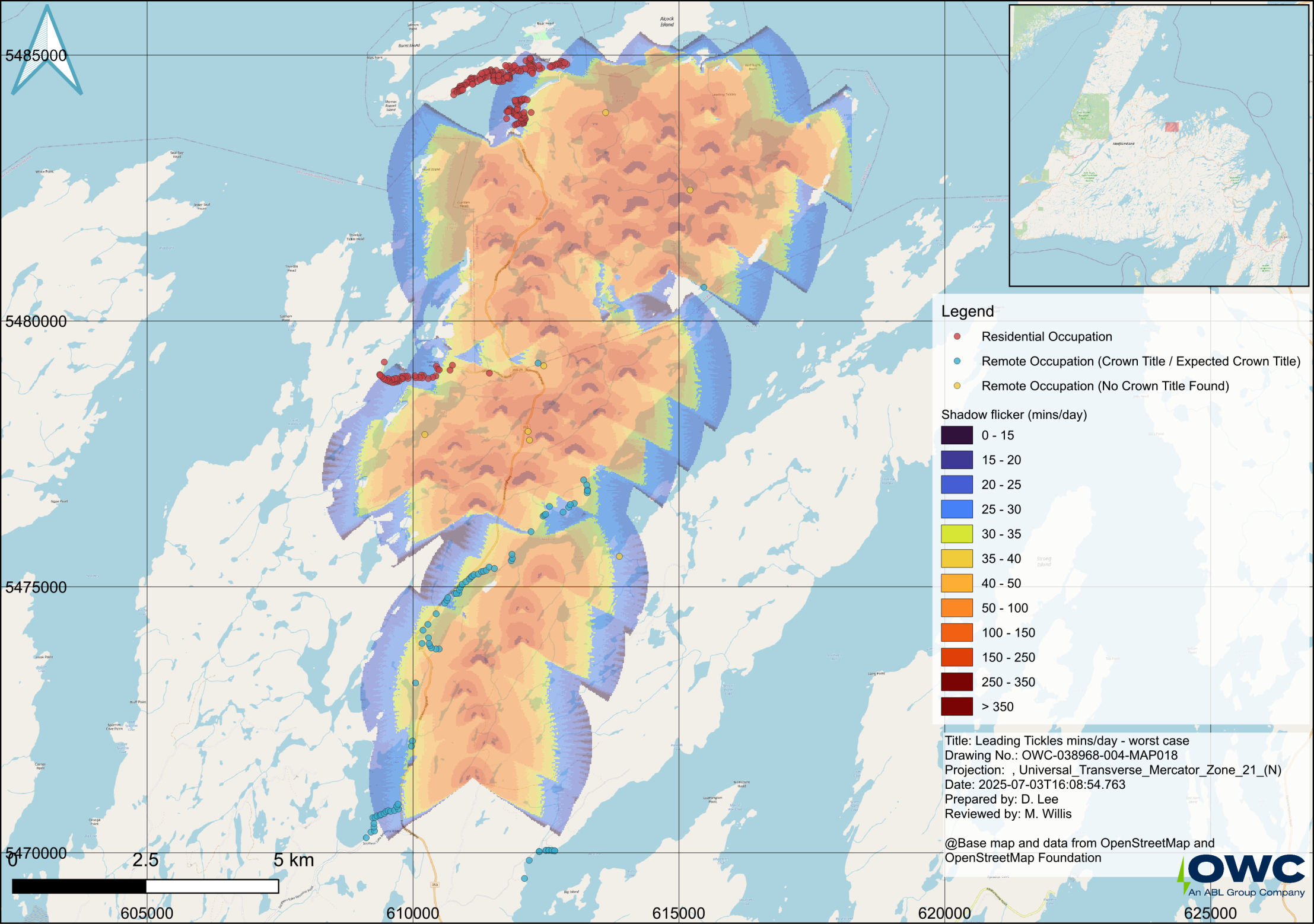
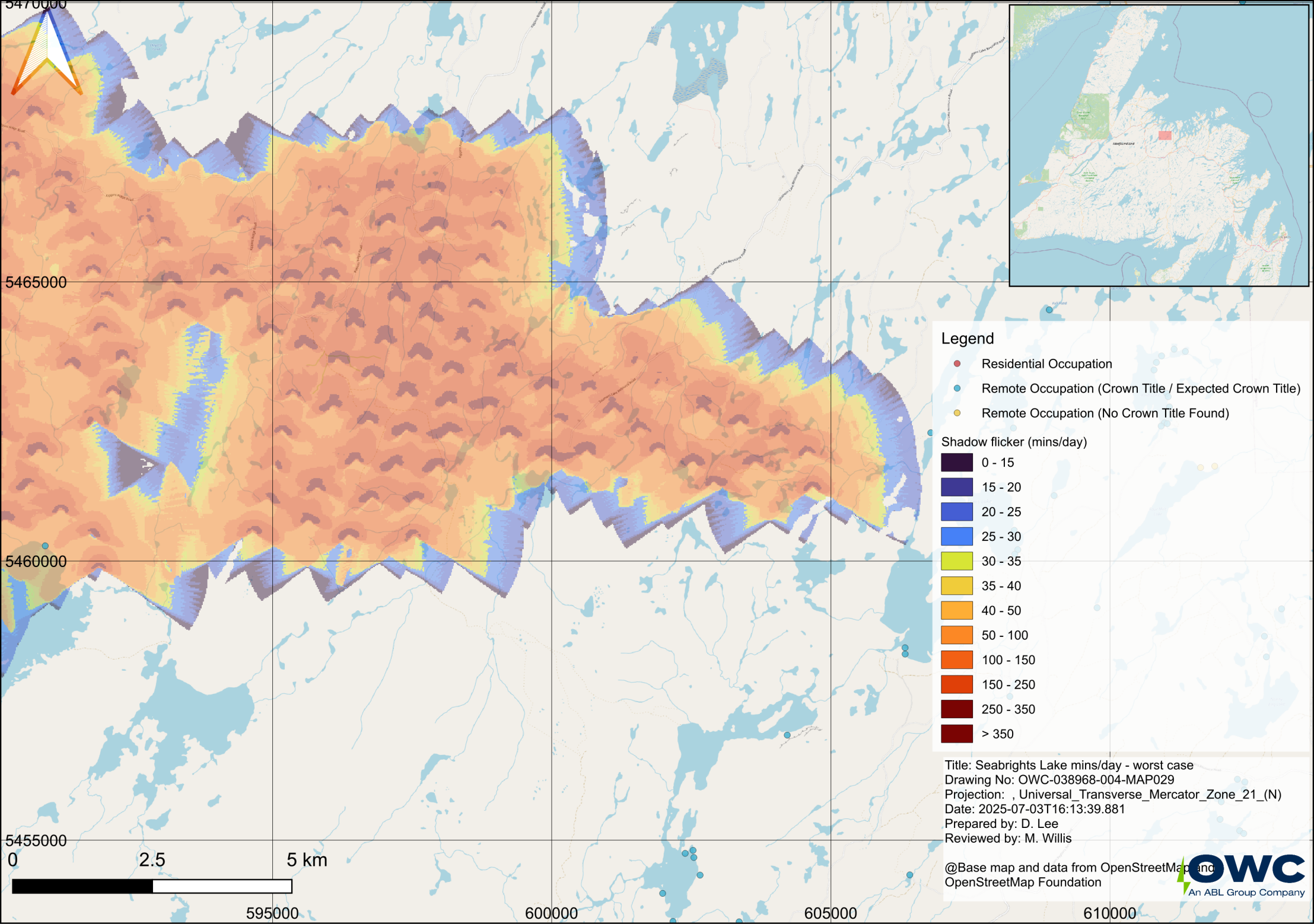

5465000
5460000
5455000
595000
600000
605000
610000
0
2.5
5 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Seabrights Lake hours/year - worst case
Drawing No: OWC-038968-004-MAP028
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:12:53.197
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

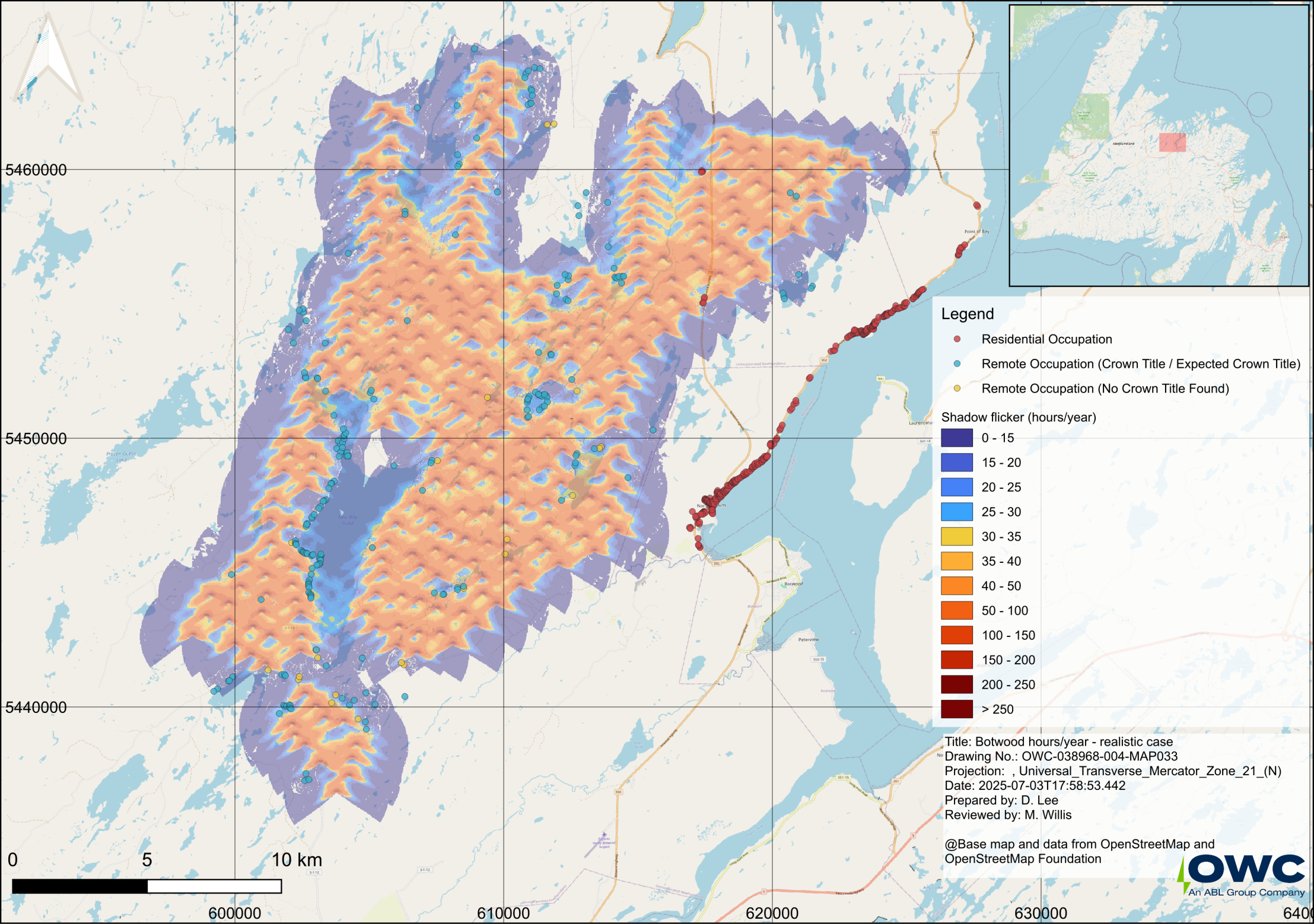

5460000
5450000
5440000
600000
610000
620000
630000
0
5
10 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (mins/day)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 250
250 - 350
> 350
Botwood
Peterview
Title: Botwood mins/day - worst case
Drawing No.: OWC-038968-004-MAP016
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:04:55.174
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

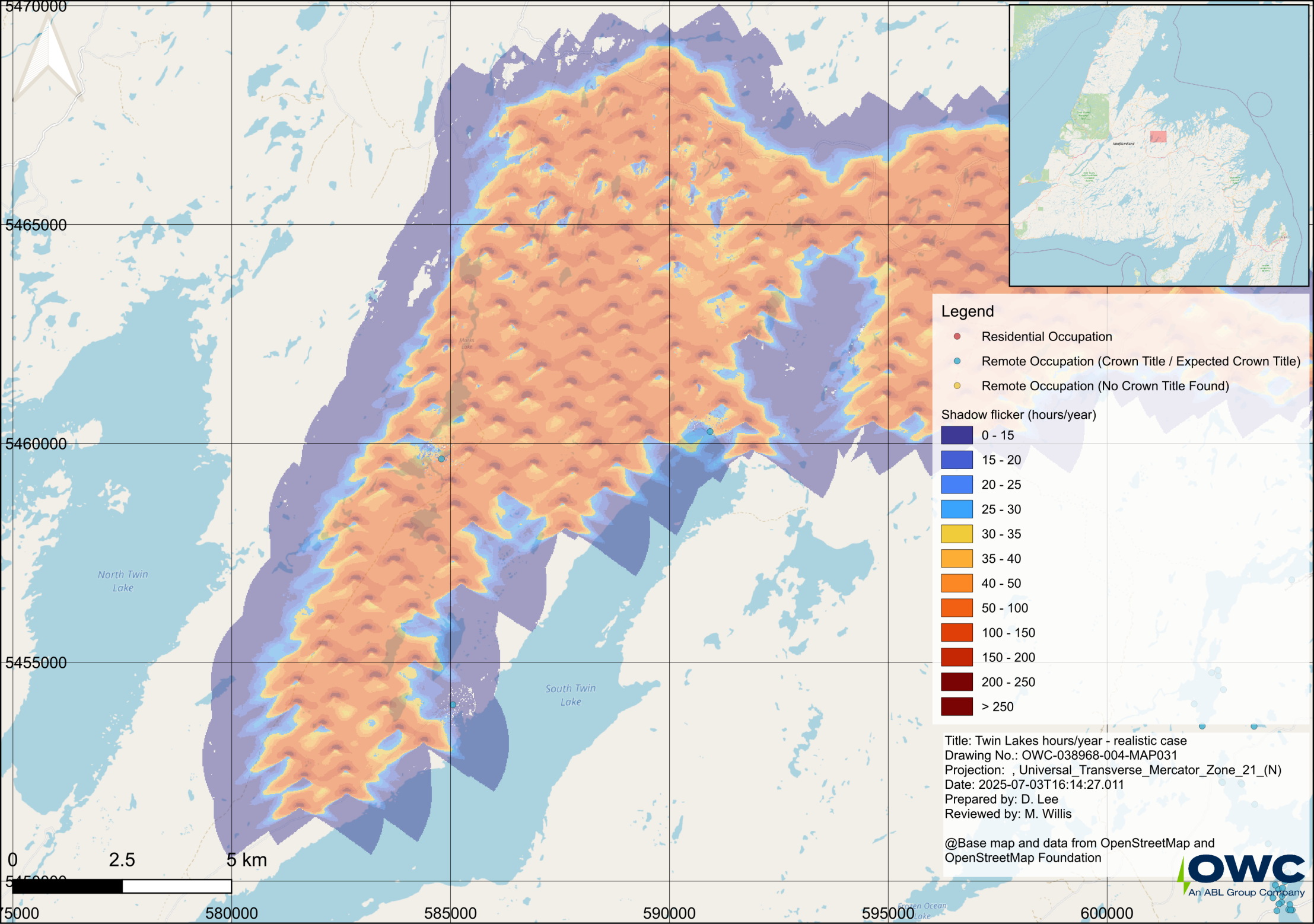

5470000
5465000
5460000
5455000
North Twin Lake
South Twin Lake
0
2.5
5 km
75000
580000
585000
590000
595000
600000
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (mins/day)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 250
250 - 350
> 350
Title: Twin lakes mins/day - worst case
Drawing No.: OWC-038968-004-MAP017
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:06:17.471
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company


5485000
5480000
5475000
5470000
605000
610000
615000
620000
625000
0
2.5
5 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (mins/day)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 250
250 - 350
> 350
Title: Leading Tickles mins/day - worst case
Drawing No.: OWC-038968-004-MAP018
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:08:54.763
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company


5470000
5465000
5460000
5455000
0
2.5
5 km
595000
600000
605000
610000
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (mins/day)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 250
250 - 350
> 350
Title: Seabrights Lake mins/day - worst case
Drawing No: OWC-038968-004-MAP029
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:13:39.881
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

# Appendix F Shadow flicker maps – realistic case

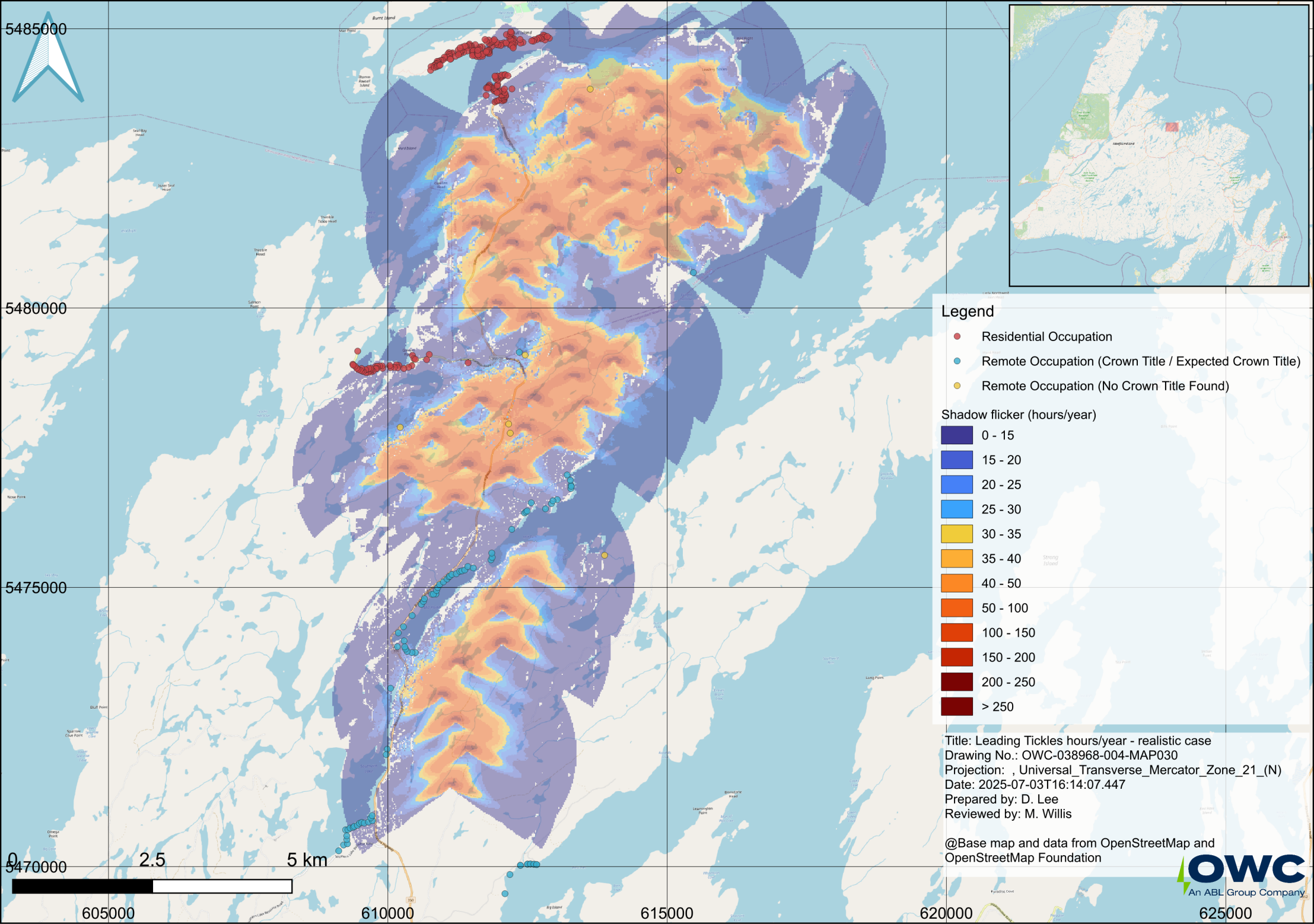

5460000
5450000
5440000
600000
610000
620000
630000
640
0
5
10 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Botwood hours/year - realistic case
Drawing No.: OWC-038968-004-MAP033
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T17:58:53.442
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company

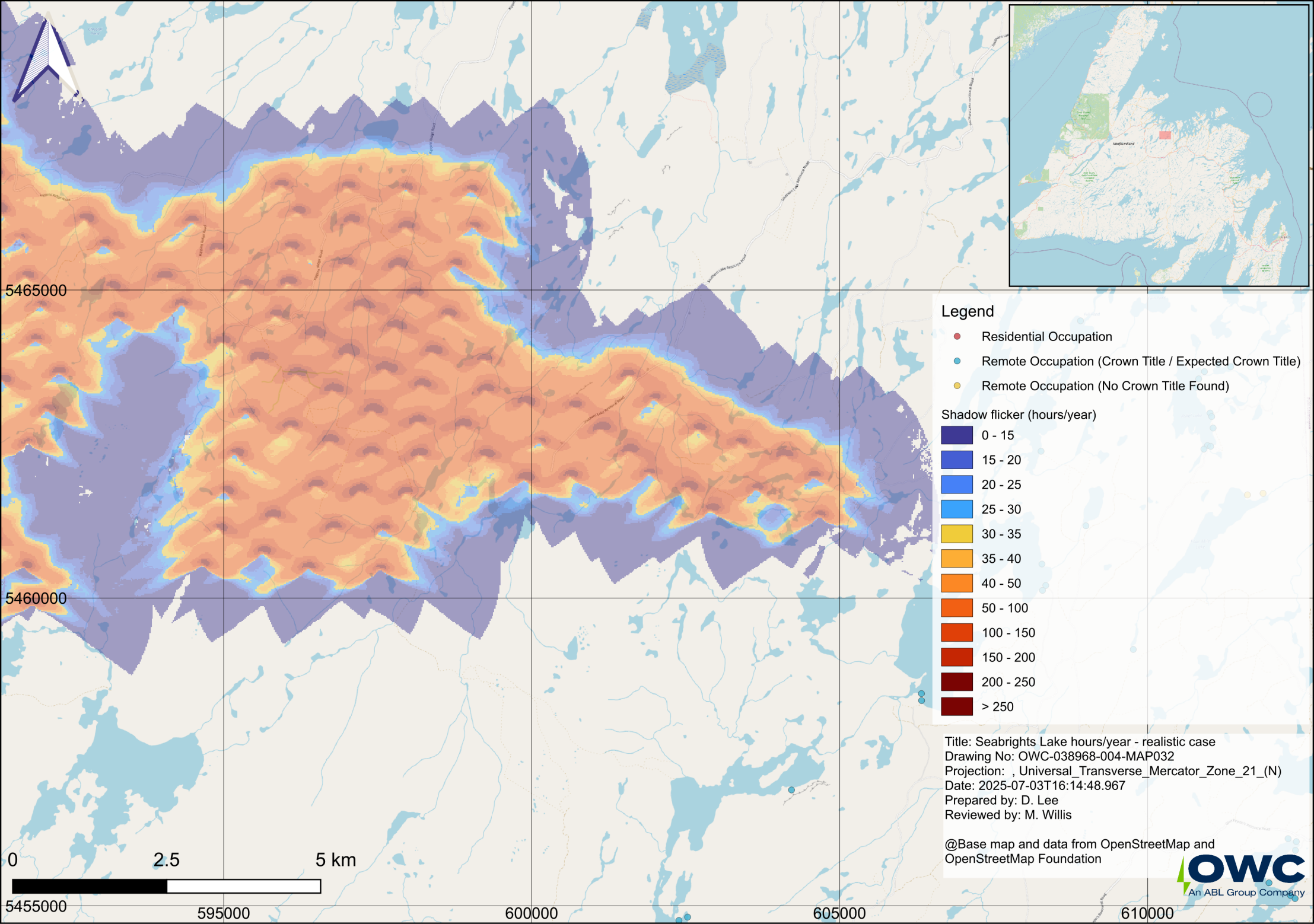



Title: Twin Lakes hours/year - realistic case
Drawing No.: OWC-038968-004-MAP031
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:14:27.011
Prepared by: D. Lee
Reviewed by: M. Willis

@Base map and data from OpenStreetMap and OpenStreetMap Foundation

OWC
An ABL Group Company


5485000
5480000
5475000
5470000
605000
610000
615000
620000
625000
0
2.5
5 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Leading Tickles hours/year - realistic case
Drawing No.: OWC-038968-004-MAP030
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:14:07.447
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
OWC
An ABL Group Company


5465000
5460000
5455000
595000
600000
605000
610000
0
2.5
5 km
Legend
Residential Occupation
Remote Occupation (Crown Title / Expected Crown Title)
Remote Occupation (No Crown Title Found)
Shadow flicker (hours/year)
0 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 50
50 - 100
100 - 150
150 - 200
200 - 250
> 250
Title: Seabrights Lake hours/year - realistic case
Drawing No: OWC-038968-004-MAP032
Projection: , Universal_Transverse_Mercator_Zone_21_(N)
Date: 2025-07-03T16:14:48.967
Prepared by: D. Lee
Reviewed by: M. Willis
@Base map and data from OpenStreetMap and OpenStreetMap Foundation
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# APPENDIX H.1
## Surface Water Quality Results

Prepared by: Strum Consulting

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

## Table 1.1: Freshwater Surface Water Quality Results

| Sample | | | | | WQM-1 | | | WQM-2 | | | WQM-7 | | | WQM-8 | | | WQM-9 | | | WQM-10 | | | WQM-11 | | | WQM-12 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines | Schedule A Guidelines | Units | Reportable Detection Limit | | | | | | | | | | | | | | | | | | | | | | | | |
| **Calculated Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Anion Sum | NV | NV | me/L | N/A | 0.220 | 0.180 | 0.190 | 0.560 | 0.120 | 0.150 | 0.640 | 0.970 | 0.460 | 0.210 | 0.180 | 0.190 | 0.930 | 0.280 | 0.500 | 0.710 | 0.430 | 0.420 | N/A | 0.650 | 0.610 | N/A | 0.160 | 0.290 |
| Bicarb. Alkalinity (calc. as CaCO3) | NV | NV | mg/L | 1.0 | 5.3 | 4.2 | 4.9 | 8.3 | 2.6 | 4.3 | 17 | 24 | 13 | 5.3 | 4.0 | 4.9 | 24 | 6.0 | 8.1 | 12 | 5.7 | 5.4 | N/A | 26 | 26 | N/A | 3.7 | 8.9 |
| Calculated TDS | NV | NV | mg/L | 1.0 | 15 | 14 | 14 | 36 | 11 | 11 | 36 | 62 | 31 | 16 | 15 | 15 | 46 | 19 | 32 | 42 | 29 | 28 | N/A | 45 | 46 | N/A | 16 | 23 |
| Carb. Alkalinity (calc. as CaCO3) | NV | NV | mg/L | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Cation Sum | NV | NV | me/L | N/A | 0.220 | 0.250 | 0.230 | 0.550 | 0.200 | 0.210 | 0.710 | 1.01 | 0.620 | 0.310 | 0.250 | 0.260 | 0.680 | 0.350 | 0.620 | 0.700 | 0.510 | 0.540 | N/A | 0.600 | 0.650 | N/A | 0.350 | 0.420 |
| Hardness (CaCO3) | NV | NV | mg/L | 1.0 | 6.8 | 7.2 | 6.8 | 23 | 6.3 | 6.3 | 21 | 23 | 19 | 10 | 7.1 | 7.2 | 18 | 8.7 | 14 | 16 | 10 | 11 | N/A | 22 | 24 | N/A | 12 | 14 |
| Ion Balance (% Difference) | NV | NV | % | N/A | 0.00 | 16.3 | 9.52 | 0.900 | 25.0 | 16.7 | 5.19 | 2.02 | 14.8 | 19.2 | 16.3 | 15.6 | 15.5 | 11.1 | 10.7 | 0.710 | 8.51 | 12.5 | N/A | 4.00 | 3.17 | N/A | 37.3 | 18.3 |
| Langelier Index (@ 20C) | NV | NV | N/A | N/A | -3.37 | -3.66 | -3.33 | -2.34 | -3.83 | -3.54 | -2.10 | -2.35 | -2.27 | -2.95 | -3.38 | -3.44 | -1.97 | -3.36 | -2.72 | -2.23 | -3.36 | -3.15 | N/A | -1.63 | -1.74 | N/A | -3.10 | -2.76 |
| Langelier Index (@ 4C) | NV | NV | N/A | N/A | -3.62 | -3.91 | -3.58 | -2.59 | -4.08 | -3.79 | -2.36 | -2.60 | -2.53 | -3.20 | -3.64 | -3.70 | -2.22 | -3.62 | -2.97 | -2.48 | -3.61 | -3.40 | N/A | -1.88 | -2.00 | N/A | -3.36 | -3.02 |
| Nitrate (N) | 550 (long-term) or 13 (short-term) | NV | mg/L | 0.050 | 0.059 | 0.059 | 0.071 | 0.10 | <0.050 | <0.050 | <0.050 | <0.050 | 0.058 | <0.050 | 0.067 | 0.074 | <0.050 | <0.050 | <0.050 | 0.063 | 0.056 | <0.050 | N/A | <0.050 | <0.050 | N/A | 0.18 | 0.16 |
| Saturation pH (@ 20C) | NV | NV | N/A | N/A | 10.3 | 10.3 | 10.3 | 9.49 | 10.6 | 10.4 | 9.25 | 9.05 | 9.41 | 10.1 | 10.4 | 10.3 | 9.20 | 10.1 | 9.78 | 9.58 | 10.1 | 10.1 | N/A | 9.06 | 9.03 | N/A | 10.2 | 9.68 |
| Saturation pH (@ 4C) | NV | NV | N/A | N/A | 10.5 | 10.6 | 10.6 | 9.74 | 10.8 | 10.6 | 9.50 | 9.30 | 9.66 | 10.3 | 10.6 | 10.5 | 9.45 | 10.4 | 10.0 | 9.84 | 10.4 | 10.4 | N/A | 9.32 | 9.28 | N/A | 10.4 | 9.94 |
| **Inorganics** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Alkalinity (Total as CaCO3) | NV | NV | mg/L | 5.0 | 5.3 | 4.2 | 4.9 | 8.3 | 2.6 | 4.3 | 17 | 24 | 13 | 5.3 | 4.0 | 4.9 | 25 | 6.0 | 8.1 | 12 | 5.7 | 5.4 | N/A | 26 | 26 | N/A | 3.7 | 8.9 |
| Dissolved Chloride (Cl) | 640 (short-term) or 120 (long-term) | NV | mg/L | 1.0 | 3.7 | 3.1 | 3.0 | 3.6 | 2.3 | 2.2 | 10 | 17 | 7.2 | 3.5 | 3.2 | 3.1 | 12 | 5.5 | 12 | 14 | 11 | 11 | N/A | 2.9 | 3.1 | N/A | 2.6 | 3.5 |
| Colour | Shall not be significantly higher than the seasonally adjusted expected value | NV | TCU | 25 | 46 | 57 | 40 | 6.0 | 42 | 38 | 45 | 58 | 85 | 35 | 52 | 41 | 22 | 55 | 52 | 28 | 46 (1) | 35 | N/A | <5.0 | <5.0 | N/A | 67 | 110 |
| Dissolved Fluoride (F-) | 120 | NV | mg/L | 0.1 | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | N/A | <0.10 | N/A | N/A | <0.10 | N/A |
| Nitrate + Nitrite (N) | NV | 10 | mg/L | 0.050 | 0.059 | 0.059 | 0.071 | 0.10 | <0.050 | <0.050 | <0.050 | <0.050 | 0.058 | <0.050 | 0.067 | 0.074 | <0.050 | <0.050 | <0.050 | 0.063 | 0.056 | <0.050 | N/A | <0.050 | <0.050 | N/A | 0.18 | 0.16 |
| Nitrite (N) | 60 | NV | mg/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | 0.016 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Nitrogen (Ammonia Nitrogen) | NV | 2.0 | mg/L | 0.050 | <0.050 | 0.095 | <0.050 | 0.18 | <0.050 | 0.058 | <0.050 | <0.050 | <0.050 | 0.061 | 0.15 | 0.28 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | N/A | <0.050 | <0.050 | N/A | <0.050 | <0.050 |
| Total Organic Carbon (C) | NV | NV | mg/L | 0.50 | 6.8 | 6.6 | 6.3 | 2.8 | 5.6 | 7.1 | 8.2 | 6.4 | 11 (1) | 6.1 | 6.3 | 6.3 | 6.4 | 5.9 | 9.2 | 5.1 | 5.9 | 5.5 (1) | N/A | <0.50 | <0.50 | N/A | 8.0 | 13 (1) |
| Orthophosphate (P) | NV | NV | mg/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| pH | 6.5 to 9.0 | NV | pH | N/A | 6.90 | 6.69 | 6.97 | 7.15 | 6.74 | 6.83 | 7.14 | 6.70 | 7.14 | 7.13 | 6.99 | 6.83 | 7.22 | 6.76 | 7.06 | 7.36 | 6.76 | 6.96 | N/A | 7.44 | 7.28 | N/A | 7.05 | 6.92 |
| Reactive Silica (SiO2) | NV | NV | mg/L | 0.50 | 3.3 | 3.6 | 3.4 | 2.1 | 2.7 | 2.3 | 0.94 | 8.7 | 3.7 | 2.7 | 3.7 | 3.5 | 0.79 | 2.6 | 2.4 | 2.4 | 3.3 | 2.8 | N/A | 13 | 14 | N/A | 3.5 | 4.8 |
| Total Suspended Solids | Maximun increase of 25mg/L (short-term) or 5mg/L (long-term) from baseline levels | 30 | mg/L | 2.0 | NA | <1.0 | 3.2 | NA | 5.8 | <1.0 | NA | 41 | <1.0 | NA | 3.6 | <1.0 | NA | 5.8 | 1.0 | NA | 18 | <1.0 | NA | <1.0 | <1.0 | NA | <1.0 | <1.0 |
| Dissolved Sulphate (SO4) | NV | NV | mg/L | 2.0 | <2.0 | <2.0 | <2.0 | 14 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 4.5 | <2.0 | <2.0 | 3.5 | <2.0 | <2.0 | N/A | 2.4 | <2.0 | N/A | <2.0 | <2.0 |

| Sample | | | | | WQM-1 | | | WQM-2 | | | WQM-7 | | | WQM-8 | | | WQM-9 | | | WQM-10 | | | WQM-11 | | | WQM-12 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines | Schedule A Guidelines | Units | Reportable Detection Limit | | | | | | | | | | | | | | | | | | | | | | | | |
| Turbidity | Maximum increased of 8 NTUs (short-term) or 2 NTUs (long-term) from background levels | NV | NTU | 0.10 | 0.67 | 0.61 | 0.35 | 0.51 | 0.73 | 0.72 | 0.67 | 15 | 0.68 | 0.76 | 1.4 | 0.32 | 4.2 | 1.9 | 0.54 | 1.4 | 7.3 | 0.65 | N/A | <0.10 | <0.10 | N/A | 0.35 | 1.7 |
| Conductivity | NV | NV | uS/cm | 1.0 | 23 | 25 | 27 | 60 | 21 | 21 | 70 | 110 | 60 | 31 | 24 | 25 | 73 | 38 | 67 | 83 | 60 | 60 | N/A | 62 | 65 | N/A | 34 | 37 |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Aluminum (Al) | 5 | NV | ug/L | 5.0 | 90 | 160 | 84 | 55 | 130 | 87 | 26 | 180 | 220 | 42 | 360 | 90 | 45 | 180 | 90 | 80 | 180 | 110 | N/A | <5.0 | <5.0 | N/A | 110 | 160 |
| Total Antimony (Sb) | NV | NV | ug/L | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Total Arsenic (As) | 5 | 500 | ug/L | 1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.1 | 1.0 | 1.8 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Total Barium (Ba) | NV | 5,000 | ug/L | 1.0 | 1.6 | 1.8 | 1.3 | 3.3 | 2.2 | 1.7 | 3.3 | 4.5 | 2.9 | 1.1 | 2.2 | 1.4 | 2.3 | 2.0 | 2.6 | 1.7 | 2.0 | 1.4 | N/A | <1.0 | <1.0 | N/A | 6.0 | 7.4 |
| Total Beryllium (Be) | NV | NV | ug/L | 1.0 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 |
| Total Bismuth (Bi) | NV | NV | ug/L | 2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Total Boron (B) | 1,500 (long-term) or 29,000 (short-term) | 5,000 | ug/L | 50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | N/A | <50 | <50 | N/A | <50 | <50 |
| Total Cadmium (Cd) | 0.09 (long-term) or 1 (short-term) | 50 | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | 0.018 | <0.010 | <0.010 | 0.013 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Total Calcium (Ca) | NV | NV | ug/L | 100 | 2000 | 2100 | 2000 | 7600 | 1800 | 1900 | 6600 | 8400 | 6200 | 3000 | 2200 | 2100 | 5300 | 2600 | 3900 | 4400 | 2800 | 2600 | N/A | 6900 | 7200 | N/A | 3500 | 4600 |
| Total Chromium (Cr) | NV | 50 (hexavalent)1,000 (trivalent) | ug/L | 1.0 | <1.0 | 2.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 6.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Total Cobalt (Co) | NV | NV | ug/L | 0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | <0.40 | N/A | <0.40 | <0.40 | N/A | <0.40 | <0.40 |
| Total Copper (Cu) | 2 | 300 | ug/L | 0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 1.8 | 0.61 | <0.50 | 1.1 | 0.59 | <0.50 | 0.57 | <0.50 | 0.80 | <0.50 | 0.60 | <0.50 | <0.50 | 0.54 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Total Iron (Fe) | 300 (long term) | 10,000 | ug/L | 50 | 85 | 160 | 96 | <50 | 110 | 130 | 280 | 280 | 270 | 100 | 480 | 77 | 100 | 160 | 120 | 170 | 180 | 150 | N/A | <50 | <50 | N/A | 150 | 240 |
| Total Lead (Pb) | 1 | 200 | ug/L | 0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 1.3 | <0.50 | <0.50 | 0.69 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Total Lithium (Li) | NV | NV | ug/L | 2.0 | <2.0 | NV | N/A | <2.0 | NV | N/A | <2.0 | NV | N/A | NV | NV | N/A | NV | NV | N/A | <2.0 | NV | N/A | N/A | NV | N/A | N/A | NV | N/A |
| Total Magnesium (Mg) | NV | NV | ug/L | 100 | 510 | 570 | 500 | 850 | 390 | 410 | 1100 | 960 | 1000 | 720 | 610 | 530 | 1100 | 740 | 970 | 1200 | 970 | 970 | N/A | 1500 | 1500 | N/A | 690 | 780 |
| Total Manganese (Mn) | NV | NV | ug/L | 2.0 | 8.3 | 7.3 | 5.1 | 21 | 18 | 8.4 | 26 | 100 | 17 | 8.1 | 57 | 4.9 | 34 | 31 | 16 | 44 | 24 | 14 | N/A | <2.0 | <2.0 | N/A | 12 | 16 |
| Total Molybdenum (Mo) | 73 | NV | ug/L | 2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Total Nickel (Ni) | 25 | 500 | ug/L | 2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 3.4 | <2.0 | 12 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Total Phosphorus (P) | NV | 0.5 | ug/L | 100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | N/A | <100 | <100 | N/A | <100 | <100 |
| Total Potassium (K) | NV | NV | ug/L | 100 | 150 | 150 | 120 | 160 | 120 | 100 | 240 | 280 | 150 | 140 | 230 | 110 | 190 | 100 | 220 | 250 | 170 | 200 | N/A | 300 | 370 | N/A | 130 | <100 |
| Total Selenium (Se) | 1 | 10 | ug/L | 0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Total Silver (Ag) | 0.25 | 50 | ug/L | 0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 |
| Total Sodium (Na) | NV | NV | ug/L | 100 | 2000 | 2300 | 2000 | 1900 | 1600 | 1500 | 6900 | 13000 | 5400 | 2400 | 2400 | 2100 | 7200 | 4400 | 7100 | 8300 | 7500 | 6500 | N/A | 3400 | 3600 | N/A | 2900 | 2900 |
| Total Strontium (Sr) | NV | NV | ug/L | 2.0 | 7.8 | 7.3 | 7.0 | 18 | 6.0 | 5.8 | 22 | 20 | 16 | 10 | 7.6 | 7.4 | 35 | 12 | 21 | 18 | 11 | 11 | N/A | 21 | 23 | N/A | 12 | 14 |
| Total Thallium (Tl) | 0.8 | NV | ug/L | 0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | N/A | <0.10 | <0.10 | N/A | <0.10 | <0.10 |
| Total Tin (Sn) | NV | NV | ug/L | 2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Total Titanium (Ti) | NV | NV | ug/L | 2.0 | <2.0 | 2.7 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | 3.9 | 7.8 | <2.0 | 9.8 | <2.0 | <2.0 | 3.1 | <2.0 | 2.6 | 2.2 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |

| Sample | | | | | WQM-1 | | | WQM-2 | | | WQM-7 | | | WQM-8 | | | WQM-9 | | | WQM-10 | | | WQM-11 | | | WQM-12 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines | Schedule A Guidelines | Units | Reportable Detection Limit | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Uranium (U) | 15 (long-term) or 33 (short-term) | NV | ug/L | 0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | N/A | 0.22 | 0.23 | N/A | <0.10 | <0.10 |
| Total Vanadium (V) | NV | NV | ug/L | 2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Total Zinc (Zn) | 7 (long-term) or 37 (short-term) | 500 | ug/L | 5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 8.5 | <5.0 | <5.0 | 7.4 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | N/A | <5.0 | <5.0 | N/A | <5.0 | <5.0 |
| **Petroleum Hydrocarbons** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Benzene | 0.37 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 |
| Toluene | 0.002 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 |
| Ethylbenzene | 0.09 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 | N/A | <0.0010 | <0.0010 |
| Total Xylenes | NV | NV | mg/L | 0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | N/A | <0.0020 | <0.0020 | N/A | <0.0020 | <0.0020 |
| C6 - C10 (less BTEX) | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | N/A | <0.090 | <0.090 | N/A | <0.090 | <0.090 |
| >C10-C16 Hydrocarbons | NV | NV | mg/L | 0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | N/A | <0.050 | <0.050 | N/A | <0.050 | <0.050 |
| >C16-C21 Hydrocarbons | NV | NV | mg/L | 0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | N/A | <0.050 | <0.050 | N/A | <0.050 | <0.050 |
| >C21-<C32 Hydrocarbons | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | N/A | <0.090 | <0.090 | N/A | <0.090 | <0.090 |
| Modified TPH (Tier1) | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | <0.090 | N/A | <0.090 | <0.090 | N/A | <0.090 | <0.090 |
| Reached Baseline at C32 | NV | NV | mg/L | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Hydrocarbon Resemblance | NV | NV | mg/L | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **Volatile Organic Carbons** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | NV | NV | ug/L | 2.0 | NA | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| 1,1-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| 1,1,1-Trichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| 1,1,2-Trichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| 1,1,2,2-Tetrachloroethane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Ethylene Dibromide | NV | NV | ug/L | 0.20 | NA | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 |
| 1,2-Dichlorobenzene | 0.7 | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| 1,2-Dichloroethane | 100 | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| cis-1,2-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| trans-1,2-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| 1,2-Dichloropropane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| 1,3-Dichlorobenzene | 150 | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| cis-1,3-Dichloropropene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| trans-1,3-Dichloropropene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| 1,4-Dichlorobenzene | 26 | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Bromodichloromethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Bromoform | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Bromomethane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Carbon Tetrachloride | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Chlorobenzene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |

| Sample | | | | | WQM-1 | | | WQM-2 | | | WQM-7 | | | WQM-8 | | | WQM-9 | | | WQM-10 | | | WQM-11 | | | WQM-12 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines | Schedule A Guidelines | Units | Reportable Detection Limit | | | | | | | | | | | | | | | | | | | | | | | | |
| Chloroethane | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 |
| Chloroform | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Chloromethane | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 |
| Dibromochloromethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Methylene Chloride(Dichloromethane) | NV | NV | ug/L | 3.0 | NA | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 | N/A | <3.0 | <3.0 |
| Methyl t-butyl ether (MTBE) | 10,000 | NV | ug/L | 2.0 | NA | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 | N/A | <2.0 | <2.0 |
| Styrene | 72 | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Tetrachloroethylene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Trichloroethylene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| Trichlorofluoromethane (FREON 11) | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 | N/A | <8.0 | <8.0 |
| Vinyl Chloride | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 | N/A | <0.50 | <0.50 |
| Total Trihalomethanes | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 | N/A | <1.0 | <1.0 |
| **Microbiological** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Escherichia coli | NV | NV | CFU/100mL | N/A | <10 | N/A | N/A | 40 | N/A | N/A | <10 | N/A | N/A | 300 | N/A | N/A | 20 | N/A | N/A | 90 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Coliforms | NV | 5,000 | CFU/100mL | N/A | 680 | N/A | N/A | 680 | N/A | N/A | 1700 | N/A | N/A | 1300 | N/A | N/A | 260 | N/A | N/A | 490 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **Permanent Gases** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Carbon Dioxide | NV | NV | L/m3 | 0.6 | 1.6 | NV | N/A | <0.6 | NV | N/A | 2.1 | NV | N/A | 1.5 | NV | N/A | <0.6 | NV | N/A | 0.6 | NV | N/A | N/A | NV | N/A | N/A | NV | N/A |
| Calculated Carbon Dioxide | NV | NV | mg/L | 1 | 3 | NV | N/A | <1 | NV | N/A | 4 | NV | N/A | 3 | NV | N/A | <1 | NV | N/A | NV | NV | N/A | N/A | NV | N/A | N/A | NV | N/A |
| **Polyaromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | NV | NV | ug/L | 0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | N/A | <0.050 | <0.050 | N/A | <0.050 | <0.050 |
| 2-Methylnaphthalene | NV | NV | ug/L | 0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | N/A | <0.050 | <0.050 | N/A | <0.050 | <0.050 |
| Acenaphthene | 5.8 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Acenaphthylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Anthracene | 0.012 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(a)anthracene | 0.018 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(a)pyrene | 0.015 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(b)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(b/j)fluoranthene | NV | NV | ug/L | 0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | N/A | <0.020 | <0.020 | N/A | <0.020 | <0.020 |
| Benzo(g,h,i)perylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(j)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Benzo(k)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Chrysene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Dibenzo(a,h)anthracene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Fluoranthene | 0.04 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Fluorene | 3 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Indeno(1,2,3-cd)pyrene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |
| Naphthalene | 1.1 | NV | ug/L | 0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | N/A | <0.20 | <0.20 | N/A | <0.20 | <0.20 |
| Perylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |

| Sample | | | | | WQM-1 | | | WQM-2 | | | WQM-7 | | | WQM-8 | | | WQM-9 | | | WQM-10 | | | WQM-11 | | | WQM-12 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | 2024/08 | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 | N/A | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines | Schedule A Guidelines | Units | Reportable Detection Limit | | | | | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 0.4 | NV | ug/L | 0.010 | 0.020 | <0.010 | 0.016 | 0.021 | <0.010 | 0.011 | 0.018 | <0.010 | 0.014 | 0.017 | <0.010 | 0.010 | 0.021 | <0.010 | 0.011 | 0.022 | <0.010 | 0.011 | N/A | <0.010 | <0.010 | N/A | <0.010 | 0.014 |
| Pyrene | 0.025 | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | N/A | <0.010 | <0.010 | N/A | <0.010 | <0.010 |

ND= Not detected, N/A= Not Applicable, NV= No value, NC = Not calculated, due to no detection of an alkalinity value, (1) = Elevated reporting limit due to sample matrix

Highlighted values exceed the CCME FWAL Guidelines

## Table 1.2: Marine Surface Water Quality Results at WQM-6

| Sample | | | | | WQM-6 | | |
|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines (Marine) | Schedule A Guidelines | Units | Reportable Detection Limit | | | |
| **Calculated Parameters** | | | | | | | |
| Anion Sum | NV | NV | me/L | N/A | 411 | 440 | 79.3 |
| Bicarb. Alkalinity (calc. as CaCO3) | NV | NV | mg/L | 1.0 | 91 | 100 | 40 |
| Calculated TDS | NV | NV | mg/L | 1.0 | 23000 | 26000 | 4600 |
| Carb. Alkalinity (calc. as CaCO3) | NV | NV | mg/L | 1.0 | <1.0 | <1.0 | <1.0 |
| Cation Sum | NV | NV | me/L | N/A | 363 | 473 | 79.1 |
| Hardness (CaCO3) | NV | NV | mg/L | 1.0 | 3700 | 5000 | 850 |
| Ion Balance (% Difference) | NV | NV | % | N/A | 6.16 | 3.62 | 0.120 |
| Langelier Index (@ 20C) | NV | NV | N/A | N/A | 0.287 | 0.411 | -0.910 |
| Langelier Index (@ 4C) | NV | NV | N/A | N/A | 0.0490 | 0.173 | -1.15 |
| Nitrate (N) | 200 (long-term) or 1,500 (short-term) | NV | mg/L | 0.050 | <0.050 | 0.082 | 0.13 |
| Saturation pH (@ 20C) | NV | NV | N/A | N/A | 7.51 | 7.33 | 8.36 |
| Saturation pH (@ 4C) | NV | NV | N/A | N/A | 7.74 | 7.57 | 8.60 |
| **Inorganics** | | | | | | | |
| Total Alkalinity (Total as CaCO3) | NV | NV | mg/L | 5.0 | 92 | 100 | 40 |
| Dissolved Chloride (Cl) | NV | NV | mg/L | 1.0 | 13000 | 14000 | 2500 |
| Colour | Shall not be significantly higher than the seasonally adjusted expected value | NV | TCU | 25 | <5.0 | <5.0 | 33 |
| Dissolved Fluoride (F-) | 120 | NV | mg/L | 0.1 | 0.48 | 0.73 | N/A |
| Nitrate + Nitrite (N) | NV | 10 | mg/L | 0.050 | <0.050 | 0.082 | 0.13 |
| Nitrite (N) | 60 | NV | mg/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Nitrogen (Ammonia Nitrogen) | NV | 2.0 | mg/L | 0.050 | <0.050 | <0.050 | <0.050 |
| Total Organic Carbon (C) | NV | NV | mg/L | 0.50 | <5.0 (1) | <5.0 (1) | <5.0 (1) |
| Orthophosphate (P) | NV | NV | mg/L | 0.010 | <0.010 | 0.013 | <0.010 |
| pH | 7.8 to 8.7 | NV | pH | N/A | 7.79 | 7.75 | 7.45 |
| Reactive Silica (SiO2) | NV | NV | mg/L | 0.50 | 1.6 | 1.0 | 3.9 |

| Sample | | | | | WQM-6 | | |
|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines (Marine) | Schedule A Guidelines | Units | Reportable Detection Limit | | | |
| Total Suspended Solids | Maximum increase of 25 mg/L (short-term) or 5 mg/L (long-term) from baseline levels | 30 | mg/L | 2.0 | N/A | 30 | <1.0 |
| Dissolved Sulphate (SO4) | NV | NV | mg/L | 2.0 | 1700 | 2100 | 360 |
| Turbidity | Maximum increased of 8 NTUs (short-term) or 2 NTUs (long-term) from background levels | NV | NTU | 0.10 | 0.56 | 1.2 | 0.40 |
| Conductivity | NV | NV | uS/cm | 1.0 | 37000 | 45000 | 8500 |
| **Metals** | | | | | | | |
| Total Aluminum (Al) | NV | NV | ug/L | 5.0 | <50 | 99 | 53 |
| Total Antimony (Sb) | NV | NV | ug/L | 1.0 | <10 | <10 | <1.0 |
| Total Arsenic (As) | 12.5 | 500 | ug/L | 1.0 | <10 | <10 | <1.0 |
| Total Barium (Ba) | NV | 5,000 | ug/L | 1.0 | 60 | 26 | 25 |
| Total Beryllium (Be) | NV | NV | ug/L | 1.0 | <1.0 | <1.0 | <0.10 |
| Total Bismuth (Bi) | NV | NV | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Boron (B) | NV | 5,000 | ug/L | 50 | 3000 | 3700 | 620 |
| Total Cadmium (Cd) | 0.12 | 50 | ug/L | 0.010 | 0.25 | 0.11 | 0.045 |
| Total Calcium (Ca) | NV | NV | ug/L | 100 | 270000 | 340000 | 66000 |
| Total Chromium (Cr) | NV | 50 (hexavalent)1,000 (trivalent) | ug/L | 1.0 | <10 | <10 | <1.0 |
| Total Cobalt (Co) | NV | NV | ug/L | 0.40 | <4.0 | <4.0 | <0.40 |
| Total Copper (Cu) | NV | 300 | ug/L | 0.50 | <5.0 | 8.5 | 1.3 |
| Total Iron (Fe) | NV | 10,000 | ug/L | 50 | <500 | <500 | 85 |
| Total Lead (Pb) | NV | 200 | ug/L | 0.50 | 6.6 | 35 | 2.5 |
| Total Lithium (Li) | NV | NV | ug/L | 2.0 | 110 | N/A | N/A |
| Total Magnesium (Mg) | NV | NV | ug/L | 100 | 830000 | 1100000 | 170000 |
| Total Manganese (Mn) | NV | NV | ug/L | 2.0 | <20 | <20 | 8.1 |
| Total Molybdenum (Mo) | NV | NV | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Nickel (Ni) | NV | 500 | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Phosphorus (P) | NV | 0.5 | ug/L | 100 | <1000 | <1000 | <100 |
| Total Potassium (K) | NV | NV | ug/L | 100 | 250000 | 320000 | 51000 |
| Total Selenium (Se) | NV | 10 | ug/L | 0.50 | <5.0 | <5.0 | <0.50 |
| Total Silver (Ag) | 7.5 | 50 | ug/L | 0.10 | <1.0 | <1.0 | <0.10 |
| Total Sodium (Na) | NV | NV | ug/L | 100 | 6900000 | 8800000 | 1400000 |
| Total Strontium (Sr) | NV | NV | ug/L | 2.0 | 4900 | 6000 | 1000 |
| Total Thallium (Tl) | NV | NV | ug/L | 0.10 | <1.0 | <1.0 | <0.10 |
| Total Tin (Sn) | NV | NV | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Titanium (Ti) | NV | NV | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Uranium (U) | NV | NV | ug/L | 0.10 | 2.2 | 2.9 | 0.46 |
| Total Vanadium (V) | NV | NV | ug/L | 2.0 | <20 | <20 | <2.0 |
| Total Zinc (Zn) | NV | 500 | ug/L | 50 | <50 | <50 | 11 |

| Sample | | | | | WQM-6 | | |
|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines (Marine) | Schedule A Guidelines | Units | Reportable Detection Limit | | | |
| **Petroleum Hydrocarbons** | | | | | | | |
| Benzene | 110 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 |
| Toluene | 215 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 |
| Ethylbenzene | 25 | NV | mg/L | 0.0010 | <0.0010 | <0.0010 | <0.0010 |
| Total Xylenes | NV | NV | mg/L | 0.0020 | <0.0020 | <0.0020 | <0.0020 |
| C6 - C10 (less BTEX) | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 |
| >C10-C16 Hydrocarbons | NV | NV | mg/L | 0.050 | <0.050 | <0.050 | <0.050 |
| >C16-C21 Hydrocarbons | NV | NV | mg/L | 0.050 | <0.050 | <0.050 | <0.050 |
| >C21-<C32 Hydrocarbons | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 |
| Modified TPH (Tier1) | NV | NV | mg/L | 0.10 | <0.090 | <0.090 | <0.090 |
| Reached Baseline at C32 | NV | NV | mg/L | N/A | N/A | N/A | N/A |
| Hydrocarbon Resemblance | NV | NV | mg/L | N/A | N/A | N/A | N/A |
| **Volatile Organic Carbons** | | | | | | | |
| 1,1-Dichloroethane | NV | NV | ug/L | 2.0 | NA | <2.0 | <2.0 |
| 1,1-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,1,1-Trichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| 1,1,2-Trichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| 1,1,2,2-Tetrachloroethane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,1,2-Trichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| 1,1,2,2-Tetrachloroethane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| Ethylene Dibromide | NV | NV | ug/L | 0.20 | NA | <0.20 | <0.20 |
| 1,2-Dichlorobenzene | 42 | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,2-Dichloroethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| cis-1,2-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| trans-1,2-Dichloroethylene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,2-Dichloropropane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,3-Dichlorobenzene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| cis-1,3-Dichloropropene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| trans-1,3-Dichloropropene | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| 1,4-Dichlorobenzene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Bromodichloromethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Bromoform | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Bromomethane | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| Carbon Tetrachloride | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| Chlorobenzene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Chloroethane | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 |
| Chloroform | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Chloromethane | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 |
| Dibromochloromethane | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Methylene Chloride(Dichloromethane) | NV | NV | ug/L | 3.0 | NA | <3.0 | <3.0 |

| Sample | | | | | WQM-6 | | |
|---|---|---|---|---|---|---|---|
| Sample Date | | | | | 2024/08 | 2025/04 | 2025/11 |
| Parameters | CCME Guidelines (Marine) | Schedule A Guidelines | Units | Reportable Detection Limit | | | |
| Methyl t-butyl ether (MTBE) | 5,000 | NV | ug/L | 2.0 | NA | <2.0 | <2.0 |
| Styrene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Tetrachloroethylene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Trichloroethylene | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| Trichlorofluoromethane (FREON 11) | NV | NV | ug/L | 8.0 | NA | <8.0 | <8.0 |
| Vinyl Chloride | NV | NV | ug/L | 0.50 | NA | <0.50 | <0.50 |
| Total Trihalomethanes | NV | NV | ug/L | 1.0 | NA | <1.0 | <1.0 |
| **Microbiology** | | | | | | | |
| Escherichia coli | NV | NV | CFU/100mL | N/A | 50 | N/A | N/A |
| Total Coliforms | NV | 5,000 | CFU/100mL | N/A | 550 | N/A | N/A |
| **Permanent Gases** | | | | | | | |
| Carbon Dioxide | NV | NV | L/m3 | 0.6 | 0.7 | N/A | N/A |
| Calculated Carbon Dioxide | NV | NV | mg/L | 1 | 1 | N/A | N/A |
| **Polyaromatic Hydrocarbons** | | | | | | | |
| 1-Methylnaphthalene | NV | NV | ug/L | 0.050 | <0.050 | <0.050 | <0.050 |
| 2-Methylnaphthalene | NV | NV | ug/L | 0.050 | <0.050 | <0.050 | <0.050 |
| Acenaphthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Acenaphthylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Anthracene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(a)anthracene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(a)pyrene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(b)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(b/j)fluoranthene | NV | NV | ug/L | 0.020 | <0.020 | <0.020 | <0.020 |
| Benzo(g,h,i)perylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(j)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(k)fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Chrysene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Dibenzo(a,h)anthracene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Fluoranthene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Fluorene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Indeno(1,2,3-cd)pyrene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Naphthalene | 1.4 | NV | ug/L | 0.20 | <0.20 | <0.20 | <0.20 |
| Perylene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |
| Phenanthrene | NV | NV | ug/L | 0.010 | 0.016 | <0.010 | 0.013 |
| Pyrene | NV | NV | ug/L | 0.010 | <0.010 | <0.010 | <0.010 |

ND= Not detected, N/A= Not Applicable, NV= No value, NC = Not calculated, due to no detection of an alkalinity value, (1) = Elevated reporting limit due to sample matrix

Highlighted values exceed the CCME FWAL Guidelines