Henvey Inlet First Nation
LAND LAW 2015/16-012

ENVIRONMENTAL PERMIT
Issue Date: February 28, 2016

Henvey Inlet Wind GP Inc.
Operating as general partner of and on behalf of Henvey Inlet Wind LP
355 Adelaide Street West, Suite 100
Toronto, Ontario M5V 1S2

Project **Proposed Henvey Inlet Wind Energy Centre**
Location: Henvey Inlet First Nation, Reserve No.2, Ontario, Canada

In accordance with sections 18 and 19 of the HIFN Environmental Stewardship Regime ENVIRONMENTAL ASSESSMENT AND PERMITTING, Land Law XX-2015, Council of the Henvey Inlet First Nation has decided to issue this environmental permit to prepare for, construct, install, operate and decommission wind energy physical works and activities consisting of the following:

-- a wind energy facility with a total name plate capacity of 300 megawatts (MW).

For the purpose of this environmental permit, the following definitions apply:

1. "Aboriginal traditional knowledge" means the cumulative knowledge held by aboriginal peoples through generations of living in close contact with nature. It encompasses cultural, environmental, economic, political, and spiritual inter-relationships;

2. "Acoustic Audit – Emission" means an investigative procedure that is compliant with the International Electrotechnical Commission (IEC) Standard 61400-11 and consisting of measurements and/or acoustic modelling of noise emissions produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise (acoustic) equipment specifications and emission data of the wind turbine generators;

3. "Acoustic Audit – Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the *Equipment*, assessed to determine compliance with the Noise Performance Limits set out in this *Permit*;

4. "Acoustic Audit Report-Emission" means a report presenting the results of the *Acoustic Audit - Emission*;

5. "Acoustic Audit Report-Immission" means a report presenting the results of the *Acoustic Audit - Immission*;

6. "Acoustic Audit - Transformer Substation" means an investigative procedure consisting of measurements and/or acoustic modelling of all transformer substation noise sources, assessed to determine compliance with the *Sound Power Level* specification of the transformer substation described in the *Noise Impact Assessment Report*;

7. "Acoustic Audit Report - Transformer Substation" means a report presenting the results of the *Acoustic Audit - Transformer Substation*;

8. "Acoustical Consultant" means a *person* currently active in the field of environmental acoustics and noise/vibration control, and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities;

9. "Act" and "FNLMA" mean the *First Nations Land Management Act*, S.C. 1999, c. 24, as amended;

10. "adverse effect" means one or more of,

    (a) impairment of the quality of the *natural environment* for any use that can be made of it,

    (b) injury or damage to Nishshing Aki, land or organic and inorganic matter and living organisms,

    (c) harm or material discomfort to any *person*,

    (d) an adverse impact on the health of any *person*,

    (e) impairment of the safety of any *person*,

    (f) rendering any land or plant or animal life unfit for human use,

    (g) loss of enjoyment of normal use of land, resource, structure, or thing, and

    (h) interference with the normal conduct of business as a result of an effect described in paragraphs (a) to (g);

11. "air" means open air not enclosed in a building, structure, machine, chimney, stack or flue;

12. "Application" means the following supporting documentation for this *Permit* (including amended documentation submitted up to the date of this *Permit*) to the extent that such documentation identifies the location of the temporary and permanent components of the *Energy Centre:* Final Environmental Assessment including Appendices dated January 8th, 2016 and Addendum dated February 23, 2016, as amended.

13. "Archaeological resources" includes artifacts, archaeological sites, and marine archaeological sites. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with Ontario Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists;

14. "A-weighting" means the frequency weighting characteristic as specified in the International IEC Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";

15. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an *A-weighting* network. It is measured in *decibel*s, A-weighted, and denoted as "dBA";

16. "CAN/CSA Standard C 61400-11:07" means the CSA Group (CSA) document "Wind turbine generator systems - Part 11: Acoustic noise measurement techniques," dated October 2007, or an amended version of the publication;

17. "Commissioner" means a *person* appointed by *Council* to act independently of *Council* who has environmental and administrative expertise and relevant experience;

18. "Community" means the membership from time to time of *HIFN*;

19. "Compliance Protocol for Wind Turbine Noise" means the Ontario Ministry of Environment document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, PIBS# 8540e, as may be amended from time to time;

20. "Construction Activities" means the construction activities described in Section 2 of Schedule B to this *Permit*;

21. "contaminant" means any solid, liquid, gas, odour, heat, sound, vibration, radiation, or combination of any of them resulting directly or indirectly from human activities that causes or may cause an *adverse effect*;

22. "Council" means the *Council* of the Henvey Inlet First Nation elected pursuant to the provisions of the *Indian Act*, R.S.C., 1985, c. I-5;

23. "contractor" includes any *person*, who is not directly employed by *HIW*, conducting work or other activities in relation to the *Energy Centre* on behalf of or at the request of *HIW*;

24. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;

25. "Decommissioning Activities" means the decommissioning activities described in Section 5 of Schedule B to this *Permit*;

26. "Decommissioning Plan Report" means the plan report entitled Henvey Inlet Wind *Energy Centre* – Decommissioning Plan Report dated September 2015;

27. "Designated Environmental Assessment Records" means those records designated pursuant to section 5 of Part 2 of the HIFN Environmental Assessment and Permitting Land Law;

28. "discharge" when used as a verb includes add, deposit, leak, or emit, and when used as a noun includes addition, deposit, emission, or leak;

29. "EA Guidance Instrument" means HIFN Land Law 2015/15-010 enacted 04 August 2015, entitled Henvey Inlet First Nation Environmental Stewardship Regime For The Proposed HIW *Energy Centre* On Henvey Inlet Reserve #2 Lands: EA GUIDANCE INSTRUMENT;

30. "EA and Permitting Land Law" means HIFN Land Law 2015/15-009 enacted 04 August 2015, entitled *Henvey Inlet First Nation Environmental Stewardship Regime for the proposed HIW Energy Centre on Henvey Inlet Reserve #2 Lands: ENVIRONMENTAL ASSESSMENT AND PERMITTING*;

31. "Emergency Response Plan" means the plan prepared and implemented in accordance with Condition P hereunder;

32. "Energy Centre" means the wind energy physical works and activities proposed for construction, operation, and eventual decommissioning on Reserve No. 2 lands by *HIW* pursuant to the 2011 Feed-in-Tariff (*FIT*) Contract Identification # F-001556-WIN-130-601, issued by Ontario Power Authority to Nigig Power Corporation;

33. "environment" means the components of the Earth and includes:

    (a) land, *water* and *air*, including all layers of the atmosphere,

    (b) all organic and inorganic matter and living organisms, and

    (c) the interacting natural systems that include components referred to in (a) and (b);

34. "environmental effect" means, in respect of the proposed *Energy Centre*,

    (a) any change that the *Energy Centre* may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat, or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*, S.C. 2002, c.29,

    (b) any effect of any change referred to in paragraph (a) on:

        (i) health and socio-economic conditions,

        (ii) physical and cultural heritage,

        (iii) the current use of lands and resources for traditional purposes by aboriginal *person*s, or

        (iv) any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance, or

    (c) any change to the *Energy Centre* that may be caused by the environment, whether any such change or effect occurs on or off *Reserve lands*;

35. "Environmental Effects Monitoring Plan" and "EEMP" mean the "Henvey Inlet Wind *Energy Centre* – Environmental Effects Monitoring Plan," dated August, 2015;

36. "EPA" means *Environmental Protection Act*, R.S.O. 1990, c. E.19 and regulations thereunder, as may be amended from time to time;

37. "equipment" means the 91 wind turbine generators and 2 transformer substations, identified in this *Permit*;

38. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted as "L_{eq}", and is measured in dB *A-weighting* (dBA);

39. "HIFN" means Henvey Inlet First Nation;

40. "HIW" means Henvey Inlet Wind GP Inc. operating as general partner of and on behalf of Henvey Inlet Wind LP, its successors, transferees, and assigns;

41. "IEEE Standard C57.12.90" means the Institute of Electrical and Electronic Engineers (IEEE) document "Standard Test Code for Liquid-Immersed Distribution, Power and Regulating Transformers, 2010" or an amended version of the publication;

42. "Independent Acoustical Consultant" means an *Acoustical Consultant* who is not representing *HIW* and was not involved in preparing the *Noise Impact Assessment Report*. The *Independent Acoustical Consultant* shall not be retained by the *Acoustical Consultant* involved in the noise impact assessment;

43. "impair" when used in relation to the quality of *water*, means the *discharge* of material if the material or a derivative of the material enters or may enter the *water*, directly or indirectly, and,

    (a) the material or derivative causes or may cause injury to or interference with any living organism that lives in or comes into contact with,

        (i) the *water*, or

        (ii) the soil or sediment that is in contact with the *water*,

    (b) the material or derivative causes or may cause injury to or interference with any living organism as a result of it using or consuming,

        (i) the *water*,

        (ii) soil or sediment that is in contact with the *water*, or

        (iii) any organism that lives in or comes into contact with the *water* or soil or sediment that is in contact with the *water*,

    (c) the material or derivative causes or may cause a degradation in the appearance, taste or odour of the *water*,

    (d) a scientific test that is generally accepted as a test of aquatic toxicity indicates that the material or derivative, in diluted or undiluted form, is toxic, or

(e) peer-reviewed scientific publications indicate that the material or derivative causes injury to or interference with organisms that are dependent on aquatic ecosystems;

44. "industrial waste" includes:

(a) damaged, defective, or superfluous materials, liquids, or substances used or produced by industrial processes or operations, including without restriction, by the *Energy Centre*,

(b) by-products of materials, liquids, or substances used in industrial processes or operations, including without restriction, by the *Energy Centre* operations,

(c) used or superfluous lubricants, including petroleum-derived or synthetic crankcase oil, engine oil, hydraulic fluid, transmission fluid, gear oil, heat transfer fluid, or other oil or fluid used for lubricating machinery or *equipment*, and

(d) hazardous waste and hazardous waste chemicals as defined in Ontario Regulation 347: General –Waste Management;

45. "intermittent stream" means a natural or artificial channel, other than a dam, that carries *water* intermittently and does not have established vegetation within the bed of the channel, except vegetation dominated by plant communities that require or prefer the continuous presence of *water* or continuously saturated soil for their survival;

46. "In-water Works" means any *Construction Activity* that takes place below the high water mark during flowing conditions and/or when water is present;

47. "Land Code" means the Henvey Inlet First Nation Land Code passed on September 9, 2009, amended on November 27, 2012, and certified on April 29, 2013 and as amended from time to time;

48. "land" means surface land not enclosed in a building, land covered by *water* and all subsoil, or any combination or part thereof;

49. "mitigation" means the elimination, reduction, or control of any adverse *environmental effect* of a proposed work or activity. It also includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or other means;

50. "monitoring and follow-up plans" means plans to provide for the evaluation of the effectiveness of proposed *mitigation* measures and to verify the accuracy of the environmental assessment predictions. If adverse *environmental effect*s are more severe than predicted or if *mitigation* is less effective than planned, these measures serve as early warning signals that allow remedial measures to be implemented in a timely manner;

51. "natural environment" means the *air*, *land* and *water*, or any combination or part thereof, on or within *Reserve lands*;

52. "natural feature" includes all or part of,

(a) a wetland,

(b) wildlife habitat, or

(c) a woodland;

53. "Noise Guidelines" means the *Noise Guidelines for Wind Farms*, Ontario Ministry of the Environment, October 2008, as amended;

54. "Noise Impact Assessment Report" means the report entitled Henvey Inlet Wind *Energy Centre* Noise Impact Assessment dated September 15, 2015;

55. "Nishshing Aki" means an existing social or cultural feature or condition that has been (i) identified as valued by *HIFN*, or (ii) designated as valued by *HIFN* with Community Input as provided in the *Land Code*;

56. "Noise Receptor" means one of the following locations at which noise discharged from the *Energy Centre* is received but does not include a location on a parcel of land if any part of the *Energy Centre* will be located on that parcel of land:

(a) the centre of a building or structure that contains one or more dwellings,

(b) the centre of a building used for an institutional purpose, including an educational facility, a day nursery, a health care facility, a Community centre or a place of worship,

(c) the centre of a proposed building or structure mentioned in paragraph (a) or (b) where building has not commenced but a land use planning or building permit for the building or structure has been issued by an authority with jurisdiction to issue the permit,

(d) a location on a vacant lot, other than an inaccessible vacant lot, that has been zoned to permit a building mentioned in paragraph (a) or (b) and in respect of which no permit or building permit mentioned in paragraph (c) has been issued and at which a building would reasonably be expected to be located, having regard to the existing zoning by-law and the typical building pattern in the area,

(e) a portion of property that is used as a campsite or campground at which overnight accommodation is provided by or on behalf of a *public* agency or as part of a commercial operation; or

(f) as defined pursuant to Ontario Ministry of Environment Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995.

57. "Operation Activities" means the operation and maintenance activities described in Section 3 of Schedule B to this *Permit*;

58. "Operations and Maintenance Manual" means the manual prepared and implemented in accordance with Condition O hereunder;

59. "permanent stream" means a stream that continually flows in an average year;

60. "Permit" means this Environmental Permit, including any schedules to it, issued in accordance with Regime;

61. "person" includes a corporation or a natural person and means *HIW*, its officers, employees, agents, or *contractor*s;

62. "Point of Reception" has the same meaning as in the *Noise Guidelines* and is subject to the same qualifications described in that document;

63. "pollutant" means a contaminant other than heat, sound, vibration or radiation, and includes any substances from which a *pollutant* is derived;

64. "Pre-Construction Activities" means the site preparation and land clearing activities described in Section 1 of Schedule B to this *Permit*;

65. "public" means *persons* who are not members of *HIFN*;

66. "Publication NPC-233" means Ministry Publication NPC-233, "Information to be Submitted for Permit of Stationary Sources of Sound," October 1995;

67. "Regime" means the Henvey Inlet First Nation Environmental Stewardship Regime for the Proposed *HIW Energy Centre* on Henvey Inlet Reserve No. 2 Lands, including the HIFN *EA and Permitting Land Law* and the *Environmental Protection Land Law*;

68. "Reserve lands" means lands subject to the *Land Code*;

69. "significant adverse environmental effect" means an adverse environmental effect that has been assessed as significant in accordance with the criteria established by the EA Guidance Instrument;

70. "Sound Level" means the A-weighted Sound Pressure Level;

71. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level Leq;

72. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of 10^{-12} Watts;

73. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal (μPa);

74. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure (μPa) of a sound to the reference pressure of 20 μPa;

75. "source of contaminant" means anything that *discharge*s into the *natural environment* any *contaminant*;

76. "UTM" means Universal Transverse Mercator coordinate system;

77. "valued ecosystem component" or "VEC" means an existing component of the *environment* that has recognized ecological value in existing science, law, or policy;

78. "waste" means *industrial waste*, commercial waste, construction waste, ashes, garbage, refuse, domestic waste and sewage;

79. "water" means a *well*, lake, river, pond, spring, stream, reservoir, artificial watercourse, intermittent watercourse, groundwater, or other water or watercourse;

80. "water body" includes a lake, a *permanent stream*, an *intermittent stream*, and a seepage area but does not include,

    (a) grassed waterways,

    (b) temporary channels for surface drainage, such as furrows or shallow channels that can be tilled and driven through,

    (c) rock chutes and spillways,

    (d) roadside ditches that do not contain a permanent or *intermittent stream*,

    (e) temporarily ponded areas that are normally farmed,

    (f) dugout ponds, or

    (g) artificial bodies of *water* intended for the storage, treatment, or recirculation of runoff from farm animal yards, manure storage facilities, and sites and outdoor confinement areas;

81. "wetland" means *land* such as a swamp, marsh, bog, or fen, other than *land* that is being used for agricultural purposes and no longer exhibits wetland characteristics, that,

    (a) is seasonally or permanently covered by shallow *water* or has the *water* table close to or at the surface, and

    (b) has hydric soils and vegetation dominated by hydrophytic or *water*-tolerant plants;

82. "wildlife habitat" means an area where plants, animals, and other organisms live or have the potential to live and find adequate amounts of food, *water*, shelter, and space to sustain their population, including an area where a species concentrates at a vulnerable point in its annual or life cycle and an area that is important to a migratory or non-migratory species;

83. "woodland" means a treed area, woodlot, or forested area, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees; and

84. "well" means a hole made in the ground to locate or to obtain ground *water* or to test or to obtain information in respect of groundwater or an aquifer, and includes a spring around or in which works are made or *equipment* is installed for collection or transmission of *water* and that is or is likely to be used as a source of *water* for human consumption.

You are hereby notified that this Permit is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

A. GENERAL

A.1 *HIW* shall only construct, install, use, operate, maintain and decommission the *Energy Centre* in accordance with the terms and conditions of this *Permit* and in accordance with the schedules attached hereto, which are incorporated as part of this *Permit*:

- Schedule A – *Energy Centre* Description
- Schedule B – Permitted Physical Activities by Phase
- Schedule C – Decommissioning Plan Report
- Schedule D – Coordinates of Equipment
- Schedule E – Noise Receptors
- Schedule F – Waste Management Measures
- Schedule G – Endangered Species Mitigation, Monitoring and Contingency Measures
- Schedule H – Required Mitigation Measures
- Schedule I – Environmental Effects Monitoring Plan
- Schedule J – Nishshing Aki

A.2 By undertaking any activity authorized by this *Permit*, *HIW* accepts and acknowledges the jurisdiction of Ontario courts where recourse to Ontario courts is provided for in Parts 5, 6 and 7 of the HIFN *Environmental Protection Land Law*.

A.3 Where this *Permit* requires *mitigation* measures or plans to be developed after the date this *Permit* is issued, the *mitigation* measure or plans shall form part of this *Permit* and be added as schedules hereto.

A.4 The physical activities, buildings and structures permitted for each phase of the *Energy Centre* including temporary buildings and structures are set out in Schedule B to this *Permit.*

A.5 All temporary buildings and structures to be used in the construction or decommissioning phases of the *Energy Centre* shall be removed at the end of the phase in which they are needed.

A.6 As described in Schedule A of this *Permit*, *HIW* shall not construct or operate more than 91 wind turbine generators identified in Schedule D of this *Permit*.

A.7 *HIW* shall provide the *Commissioner* at least ten (10) days written notice of the following:

A.7.1 the commencement of any *Construction Activities* for the *Energy Centre*;

A.7.2 the completion of the *Construction Activities* for the *Energy Centre*; and

A.7.3 the commencement of the operation of the *Energy Centre*.

A.8 *HIW* shall, at least six (6) months prior to the anticipated decommissioning date of the entire *Energy Centre*, or part of the *Energy Centre*, review and update the Decommissioning Plan Report set out in Schedule C to this *Permit* and apply for the approval of *Council* of the updated Decommissioning Plan Report.

A.9 Before approving the updated Decommissioning Plan Report, *Council* shall ensure that it is consistent with the lease between HIFN and *HIW* regarding the works to be removed, the lands to be restored, and the restoration of soil to baseline conditions (as identified by a study to be carried out by *HIW* prior to any construction of the *Energy Centre*). *Council* may require an update to the Environmental Assessment for the *Energy Centre* before considering whether to approve updated Decommissioning Plan Report.

A.10 *HIW* shall ensure a copy of this *Permit*, including schedules, is:

A.10.1 posted on *HIW*'s publicly accessible website within five (5) business days of receiving this *Permit*; and

A.10.2 accessible at all times by *HIW* staff operating the *Energy Centre*.

A.11 Where there is a conflict between a provision of this *Permit* and any document submitted by *HIW* in relation to the *Application*, the conditions in this *Permit* shall take precedence.

A.12 Where there is a conflict between the text of this *Permit* and the schedules attached hereto, the text of this *Permit* shall prevail.

A.13 Where there is a conflict between a provision of this *Permit* and the *Regime*, the *Regime* shall prevail.

A.14 Any ambiguity in this *Permit* shall be resolved in favour of the interpretation that is most protective of the *environment* and *Nishshing Aki*.

B. PROHIBITIONS

B.1 Notwithstanding any other provision of this *Permit*, no *person* shall *discharge* or cause or permit the *discharge* of a *contaminant* into the *natural environment*, if the *discharge* causes or may cause an *adverse effect*.

B.2 Every *person* that *discharge*s or causes or permits the *discharge* of a *contaminant* into the *natural environment* shall forthwith notify the *Commissioner* if the *discharge* is out of the normal course of events and causes or is likely to cause an *adverse effect*.

B.3 Without limiting the generality of Condition B.1 and notwithstanding any other provision of this *Permit*, no *person* shall *discharge* or cause or permit the *discharge* of any material of any kind into or in any waters or on any shore or bank thereof or into or in any other place where the material is likely to enter *water* if the material may *impair* the quality of the *water* of any waters.

B.4 Every *person* that *discharge*s or causes or permits the *discharge* of any material of any kind, and such *discharge* is not in the normal course of events, or from whose control material of any kind escapes, into or in any waters or on any shore or bank thereof or into or in any other place where the material is likely to enter *water* if the material may *impair* the quality of the *water* of any waters, shall forthwith notify the *Commissioner* of the *discharge* or escape, as the case may be.

B.5 *HIW* shall not cause or permit any *waste* generated in conjunction with the installation, construction, operation or decommissioning of the *Energy Centre* to be permanently stored on *Reserve* lands.

C. IMPLEMENTATION OF PERMIT

C.1 Where the *Commissioner* requests of *HIW*:

C.1.1 information regarding implementation of this *Permit*, including without restriction, detailed information regarding the implementation of *mitigation* measures and plans; or

C.1.2 one or more site visits or meetings to review implementation of this *Permit;*

HIW shall comply with the Commissioner's request in a timely manner.

C.2 Where the *Commissioner* on reasonable grounds is of the opinion that guidance is needed to ensure that the *mitigation* measures and plans required under the *Permit* are implemented so as to ensure *significant adverse environmental effects* are unlikely, the *Commissioner* may provide directives to HIW with respect to the implementation of such *mitigation* measures and plans, provided that no directive may add to, remove or alter the *mitigation* measures and plans required by this *Permit*.

C.3 Directives issued by the *Commissioner* pursuant to Condition C2, shall be implemented by *HIW*.

C.4 The *Commissioner's* directives are not modifications for the purposes of Part U of this *Permit* or amendments for the purposes of section 20 and 21 of the *EA and Permitting Land Law*.

D. EXPIRY OF PERMIT

D.1 Construction and installation of the *Energy Centre* must be completed within four (4) years of the later of:

D.1.1 the date this *Permit* is issued; or

D.1.2 if there is a hearing or other litigation in respect of the issuance of this *Permit*, the date that this hearing or litigation is disposed of, including all appeals.

D.2 This *Permit* ceases to apply in respect of any portion of the *Energy Centre* not constructed or installed before the later of the dates identified in Condition D.1.

E. NOISE

E.1 Noise reference limits

E.1.1 *HIW* shall ensure that:

E.1.1.1 the Sound Levels from the *Equipment*, at the *Noise Receptors* identified in Schedule E, comply with the Sound Level Limits set in the *Noise Guidelines* for *Points of Reception*.

E.1.2 the *Equipment* is constructed and installed at either of the following locations:

E.1.2.1 at the locations identified in Schedule D of this *Permit*; or

E.1.2.2 at a location that does not vary by more than 10 metres from the locations identified in Schedule D of this *Permit* and provided that,

(i) the *Equipment* will comply with the routine operating and maintenance procedures set out in the *Operations and Maintenance Manual*; and

(ii) the noise-related setbacks established under O. Reg. 359/09 are complied with;

E.1.2.3 the *Equipment* complies with the noise specifications set out in the *Noise Impact Assessment Report*.

E.1.3 If *HIW* determines that some or all of the *Equipment* cannot be constructed in accordance with Condition E.1.2, prior to the construction and installation of the *Equipment* in question, *HIW* shall apply in writing to the *Commissioner* for modification to the terms and conditions of this *Permit*.

E.1.4 Within three (3) months of the completion of the construction of the *Energy Centre*, *HIW* shall submit to the *Commissioner* a written confirmation signed by an individual who has the authority to bind *HIW*

that the *UTM* coordinates of the "as constructed" *equipment* comply with the requirements of Condition E.1.2.

E.1.5 There are no vacant lot noise receptors related to the *Energy Centre*.

E.2 Acoustic Audit – Immission

E.2.1 *HIW* shall carry out an *Acoustic Audit - Immission* of the *Sound Levels* produced by the operation of the *equipment* in accordance with the following:

E.2.1.1 the acoustic audit measurements shall be undertaken in accordance with Part D of the *Compliance Protocol for Wind Turbine Noise*;

E.2.1.2 the acoustic audit measurements shall be performed by an *Independent Acoustical Consultant* on two (2) separate occasions at two (2) different *Points of Reception*;

E.2.1.3 the *Points of Reception* shall be selected using the following criteria, subject to the documented constraints imposed by location of the *Points of Reception*:

(i) the selected *Point(s) of Reception* shall represent the location of the greatest predicted noise impact, i.e., the highest predicted *Sound Level*; and

(ii) to the extent technically feasible and site conditions permit, the selected *Point(s) of Reception* should be located in the direction of prevailing winds from the *Energy Centre.*

E.2.1.4 notwithstanding D.2.1.3(i) and (ii) above, with the written agreement of the *Commissioner*, a location other than a *Point of Reception* may be selected if *HIW* provides clear and substantiated evidence to the *Commissioner* that access to the *Point(s) of Reception* is not reasonably possible.

E.2.2 *HIW* shall submit to the *Commissioner* an *Acoustic Audit Report-Immission*, prepared by an *Independent Acoustical Consultant*, at the following points in time:

E.2.2.1 no later than twelve (12) months, or such other date as agreed to in writing by the *Commissioner*, after the commencement of the operation of the *Energy Centre* for the first of the two (2) acoustic audit measurements at the five (5) *Points of Reception*; and

E.2.2.2 no later than eighteen (18) months, or such other date as agreed to in writing by the *Commissioner*, after the commencement of the operation of the *Energy Centre* for the second of the two (2) acoustic audit measurements at the five (5) *Points of Reception*.

E.2.3 *HIW* shall carry out an *Acoustic Audit-Transformer Substation* with respect to the northerly transformer station and shall submit to the *Commissioner* an *Acoustic Audit Report - Transformer Substation* prepared by an *Independent Acoustical Consultant*, in accordance with *Publication NPC-233* and no later than twelve (12) months after the commencement of the operation of the *Energy Centre*.

E.3 Acoustic Audit-Emission

E.3.1 To the extent technically feasible and site conditions permit, *HIW* shall carry out an *Acoustic Audit-Emission* of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:

E.3.1.1 the acoustic emission measurements shall be undertaken in accordance with the *CAN/CSA Standard C 61400-11:07* as may be amended from time to time;

E.3.1.2 the acoustic emission measurements shall be performed by an *Independent Acoustical Consultant*; and

E.3.1.3 the acoustic emission measurements shall be performed on two (2) of the wind turbine generators used in the *Energy Centre*.

E.3.2 *HIW* shall submit to the *Commissioner* an *Acoustic Audit Report-Emission*, prepared in accordance with Section 9 of the *CAN/CSA Standard C 61400•11:07* by an *Independent Acoustical Consultant*, no later than twelve (12) months, or such other date as agreed to in writing by the *Commissioner*, after the commencement of the operation of the *Energy Centre*.

E.3.3 The *Acoustic Audit Report-Emission* must include a summary of the measurement results, including:

E.3.3.1 *Sound Power Levels* (overall levels and frequency spectra in octave bands for each wind speed) of the wind turbine generators; and

E.3.3.2 tonal audibility values (for each wind speed) of the wind turbine generators;

E.3.3.3 a statement that the wind turbine generators sound power levels comply with the maximum sound power level specified in the *Noise Impact Assessment Report*; and

E.3.3.4 a statement that the wind turbine generators tonal audibility values comply with the maximum tonal audibility value noted in the *Noise Impact Assessment Report*.

E.3.4 If results from the *Acoustic Audit Report-Emission* described in Condition E.3.3 find that any of the wind turbine generators sound power levels and/or the tonal audibility values do not comply with the values specified in the Noise Impact Assessment Report, *HIW* shall:

E.3.4.1 provide within the *Acoustic Audit Report-Emission* a detailed description of the operational *mitigation* measures which shall be implemented (no later than nine (9) months after the commandment of the operation of *Energy Centre*, or such other date as agreed to in writing by the *Commissioner*) to ensure compliance with the applicable criteria; and

E.3.4.2 carry out an *Acoustic Audit Report-Emission* of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the requirements described in described in Condition E.3.3 above, and submit the *Acoustic Audit Report-Emission* to the *Commissioner* no later than twelve (12) months after the commencement of the operation of the *Energy Centre*, or such other date as agreed to in writing by the *Commissioner*.

F. STORMWATER MANAGEMENT

F.1 *HIW* shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and decommissioning of the *Energy Centre*.

F.2 The erosion and sediment control and stormwater management measures shall be maintained and inspected during construction by *HIW* and shall be subject to inspection by the *Commissioner* and/or his or her designate.

F.3 Within six (6) months of the completion of the construction of the *Energy Centre*, *HIW* shall provide the *Commissioner* with a stormwater management report that includes a detailed design of the stormwater management works for the collection, transmission, treatment, and disposal of stormwater runoff from various catchment areas for the *Energy Centre*. The stormwater management report shall also include an operations manual describing the visual inspections, frequency, and any other activities necessary for the adequate operation of the stormwater management works.

G. IN-WATER WORKS DURING CONSTRUCTION

G.1 No activity, including *In-Water Works*, authorized under this *Permit* shall contravene section 35 of the *Fisheries Act*, R.S.C., 1985, c. F-14.

H. WATER TAKING ACTIVITIES

H.1 For foundation dewatering, if the amount of water that is *discharged* exceeds 50,000 litres per day:

H.1.1 the inlet pump head shall be surrounded with clear stone and filter fabric;

H.1.2 the *discharge* must be sampled each day that water is discharged and analyzed for total suspended solids. In the event that sampling results show that total suspended solids in the water exceeds 25 mg/L, *HIW* shall implement appropriate measures to *mitigate* those impacts; and

H.1.3 *HIW* shall regulate the *discharge* at such a rate that there is no flooding in the receiving *water body* or adverse effect.

H.2 For stream diversion, if the amount of *discharge* exceeds 50,000 litres per day and dam and pump technology is used:

H.2.1.1 *HIW* shall regulate the *discharge* at such a rate that there is no flooding in the downstream area and no soil erosion or stream channel scouring caused at the point of *discharge*. *HIW* shall use a discharge diffuser or other energy dissipation device, if necessary, to *mitigate* flows that physically alter the stream channel or banks; and,

H.2.1.2 siltation control measures shall be installed at both the taking location upstream of the construction site and (if necessary) the discharge site and shall be sufficient for the volumes pumped. *HIW* shall take all measures to properly maintain these control devices throughout the duration of the *discharge*.

H.3 For *water* takings for the purposes of concrete mixing, dust suppression, *equipment* washing, and similar activities:

H.3.1.1 *water* may be taken from surface *water* only;

H.3.1.2 notwithstanding the authorized rate of *water* taking, this *Permit* limits the taking of *water* at any site at the project location for up to 10% of the instantaneous streamflow present on the day or days of taking. The authorized *water* taking rate may therefore have to be adjusted downward to remain within this 10% maximum; and

H.3.1.3 no modification to the existing stream channel by excavation or damming is permitted under this *Permit*.

H.4 If, during construction, *water* bodies that were previously not identified are discovered, *HIW* shall apply the Department of Fisheries and Oceans Operational Statement.

H.5 Prior to any groundwater takings in excess of 50,000 L per day to facilitate the *Construction Activities*, *HIW* shall prepare, with the approval of the *Commissioner*, and implement a pre-construction groundwater monitoring program. Prior to operation of the *Energy Centre*, *HIW* shall prepare, with the approval of the *Commissioner*, and implement for a minimum period of two (2) years a post-construction groundwater monitoring program.

H.6 *HIW* shall report the summary of the results of the pre- and post-construction ground *water* monitoring program on an annual basis to the *Commissioner*.

I. SPILL CONTAINMENT RELATED TO SEWAGE WORKS OF THE TRANSFORMER SUBSTATION

I.1 *HIW* shall design and construct transformer substation oil spill containment at the *Energy Centre* which meets the following requirements:

I.1.1 the spill containment at the *Energy Centre* serving each transformer substation shall have a minimum volume equal to the volume of transformer oil and lubricants plus the volume equivalent to providing a minimum 24-hour duration, 50-year return storm capacity for the stormwater drainage area around the transformer under normal operating conditions. This containment area shall have:

I.1.1.1 an impervious floor with walls usually of reinforced concrete or impervious plastic liners, sloped toward an outlet / oil control device, allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external storm *water* flows from entering the *Energy Centre*. The *Energy Centre* shall have a minimum of 300 mm layer of crushed stone (19 mm to 38 mm in diameter) within, all as needed in accordance to site specific conditions and final design parameters; or

I.1.1.2 a permeable floor with impervious plastic walls and around the transformer pad; equipped with subsurface drainage with a minimum 50 mm diameter drain installed on a sand layer sloped toward an outlet for sample collection purposes; designed with an oil absorbent material on floor and walls, and allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the *Energy Centre*. The *Energy Centre*'s berm shall be designed as

needed in accordance to site specific conditions and the *Energy Centre* shall have a minimum 300mm layer of crushed stone (19 mm to 38 mm in diameter) on top of the system, as needed in accordance to site specific conditions and final design parameters.

I.1.2 the spill containment at each transformer substation shall be equipped with an oil detection system; it also shall have a minimum of two (2) PVC pipes (or equivalent material) 50 mm in diameter to allow for visual inspection of *water* accumulation. One pipe has to be installed half way from the transformer pad to the vehicle access route;

I.1.3 the spill containment at each transformer substation shall have appropriate sewage appurtenances as necessary, such as but not limited to: sump, oil/grit separator, pumpout manhole, level controllers, floating oil sensors, etc., that allows for batch *discharge*s or direct *discharge*s and for proper implementation of the monitoring program described under Condition I.4; and

I.1.4 *HIW* shall have a qualified technician with expertise in transformer station containment systems onsite during construction to ensure that the system is installed in accordance with the approved design and specifications.

I.2 *HIW* shall:

I.2.1 within six (6) months after the completion of the construction of the transformer substation spill containment facilities, provide to the *Commissioner* an engineering report and as-built design drawings of the sewage works for the spill containment facilities and any stormwater management works required for them signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical and environmental engineering. The engineering report shall include the following:

I.2.1.1 as-built drawings of the sewage works for the spill containment facilities and any stormwater management works required for them;

I.2.1.2 a written report signed by a qualified person with expertise in transformer station containment systems confirming the following:

(iii) on-site supervision during construction;

(iv) in case of a permeable floor systems: type of oil absorbent material used (for mineral-based transformer oil or vegetable-based transformer oil, make and material specifications;

(v) use of stormwater best management practices applied to prevent external surface *water* runoff from entering the spill containment facilities;

(vi) confirm adequacy of the installation in accordance with specifications;

(vii) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works; and

(viii) procedures to provide emergency response to the site in the form of pumping and clean-up *equipment* within 24 hours after an emergency has been identified. Such response shall be provided even under adverse weather conditions to prevent further danger of material loss to the environment.

I.2.2 as a minimum, *HIW* shall check the oil detection systems on a monthly basis and create a written record of the inspections, which shall be maintained at the *Energy Centre* and provided to the *Commissioner* upon request;

I.2.3 ensure that the effluent is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters;

I.2.4 immediately identify and clean-up all losses of oil from the transformers;

I.2.5 upon identification of oil in the spill containment at the *Energy Centre*, take immediate action to prevent the further occurrence of such loss;

I.2.6 ensure that *equipment* and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept within easy access and in good repair for immediate use in the event of:

I.2.6.1 loss of oil from the transformers;

I.2.6.2 a *discharge* into the *natural environment* of a *pollutant* from a structure, vehicle or other container that is abnormal in quality or quantity in light of all circumstances of the discharge; or

I.2.6.3 the identification of an abnormal amount of oil in the effluent.

I.2.7 in the event of finding *water* accumulation in the PVC pipes, *HIW* shall:

I.2.7.1 for impervious floors, inspect the sewage appurtenances that allow drainage of the concrete pit; or

I.2.7.2 for permeable systems, replace the oil absorbent material to ensure integrity of the system performance and design objectives.

I.2.8 for permeable floor systems, *HIW* shall only use the type of oil specified in the design, i.e. mineral-based transformer oil or vegetable-based transformer oil. If a change is planned to modify the type of oil, *HIW* shall also change the type of the oil absorbent material and obtain approval from the *Commissioner* to amend this *Permit* before any modification is implemented.

I.3 *HIW* shall design, construct, and operate the sewage works such that the concentration of the effluent parameter named in the table below does not exceed the maximum concentration objective shown for that parameter in the effluent, and shall comply with the following requirements:

Effluent Parameters	**Maximum Concentration Objective**
Oil and Grease	15mg/L

I.3.1 notify the *Commissioner* as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;

I.3.2 take immediate action to identify the cause of the exceedance; and

I.3.3 take immediate action to prevent further exceedances.

I.4 Upon commencement of the operation of the *Energy Centre*, *HIW* shall establish and carry out the following monitoring program for the sewage works:

I.4.1 *HIW* shall collect and analyze the required set of samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified for the effluent parameter, oil and grease, and create a written record of the monitoring:

Effluent Parameters	**Measurement Frequency and Sample Points**	**Sample Types**
Oil and Grease	Quarterly, i.e. four times over a year, relatively evenly spaced having a minimum two (2) of these samples taken within 48 hours after a 10 mm rainfall	Grab

Effluent Parameters	Measurement Frequency and Sample Points	Sample Types
	event	

I.5 *HIW* shall comply with the following methods and protocols for any sampling, analysis, and recording undertaken in accordance with Condition H.4:

I.5.1 Ontario Ministry of the Environment and Climate Change publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater," January 1999, or in an amended version of the publication, and

I.5.2 the publication "Standard Methods for the Examination of Water and Wastewater," 21st edition, 2005, or in an amended version of the publication.

I.6 in the event of an exceedance of the maximum concentration objective set out in Condition I.3, *HIW* shall:

I.6.1 increase the frequency of sampling to once per month, for each month that effluent *discharge* occurs, and

I.6.2 provide the *Commissioner*, on a monthly basis, with copies of the written record created for the monitoring until the *Commissioner* provides written direction that monthly sampling and reporting is no longer required.

I.7 if over a period of twenty-four (24) months of effluent monitoring, there are no exceedances of the maximum concentration set out in Condition I.3, *HIW* may reduce the measurement frequency of effluent monitoring to a frequency as the *Commissioner* may specify in writing, provided that the new specified frequency is never less than annual.

J. WASTE

J.1 *HIW* shall implement the waste management *mitigation* measures set out in Schedule F.

K. BLASTING

K.1 *HIW* shall prepare and submit to the Commissioner, at least one month prior to the commencement of any blasting in conjunction with *Construction Activities*, a blasting plan which employs best management practices for drilling and blasting, including site security and safety and hazard *mitigation*. HIW shall not commence blasting until such plan has been approved in writing by the Commissioner.

K.2 During construction, *HIW* shall implement the blasting plan.

L. ENDANGERED SPECIES

L.1 For each of the pre-construction, construction, operation and decommissioning phases of the *Energy Centre*, set out in Schedule B, *HIW* shall implement any *mitigation*, monitoring and contingency measures, with respect to a species that is listed as (i) extirpated, endangered or threatened pursuant to the Canadian *Species at Risk Act*, S.C. 2002, c. 29 or (ii) endangered or threatened pursuant to the Ontario *Endangered Species Act, 2007*, S.O. 2007, c. 6, in accordance with Schedule G.

L.2 Within three (3) months of the end of each calendar year in which the monitoring took place *HIW* shall provide a report in writing to the Commissioner:

L.2.1 setting out the results of the monitoring for which reporting is required pursuant with Schedule G; and

L.2.2 evaluating whether any modifications may be made to Schedule G to better protect the endangered species and the critical habitat identified therein.

L.3 Any modifications proposed under L.2.2 shall be deemed modifications and be subject to the approval of the *Commissioner*.

L.4 *HIW* shall not:

L.4.1 kill, harm, harass, capture or take a living member of a species that is listed as extirpated, endangered or threatened pursuant to the Canadian *Species at Risk Act;*

L.4.2 kill, harm, harass, capture or take a living member of a species that is listed as endangered or threatened pursuant to the Ontario *Endangered Species Act, 2007*;

L.4.3 damage or destroy the residence of species listed as endangered, threatened or extirpated (if a recovery strategy has recommended reintroduction of the species into the wild in Canada), pursuant to the Canadian *Species at Risk Act* or destroy any part of the critical habitat of a species listed as endangered, threatened or extirpated (if a recovery strategy has recommended reintroduction of the species into the wild in Canada), pursuant to the Canadian *Species at Risk Act;*

L.4.4 damage or destroy the habitat of a species listed as extirpated, endangered or threatened pursuant to the Ontario *Endangered Species Act, 2007*;

except in accordance with this *Permit* and any authorization under the Canadian *Species at Risk Act*.

L.5 If a species that is extirpated, endangered or threatened, other than a species listed in Schedule G to this *Permit* or any authorization under the Canadian *Species at Risk Act*, is encountered on the site of the *Energy Centre*, *HIW* shall immediately:

L.5.1 cease any activity that may adversely impact the species;

L.5.2 contact the *Commissioner* immediately to discuss how and when activities shall resume; and

L.5.3 provide a report of such encounter, including the date, time and location of observation, a description of the species, its behaviour and any noted features of surrounding habitat as well as actions taken to minimize or mitigate adverse impacts, if any, as developed in accordance with Condition K.2.2 above.

L.6 No activity requiring authorization under the Canadian *Species at Risk Act* may proceed unless the necessary authorizations have been obtained by *HIW*. *HIW* shall ensure compliance with any authorization under the Canadian *Species at Risk Act*.

M. NATURAL HERITAGE

M.1 For the pre-construction, construction, operation and decommissioning phases of the *Energy Centre* set out in Schedule B, *HIW* shall implement the *mitigation* measures set out in Schedule H for that respective phase.

M.2 *HIW* shall implement the Environmental Effects Monitoring Plan including the post-construction bird and bat mortality monitoring described in the Environmental Effects Monitoring Plan at a minimum of 27 of 91 constructed turbines.

M.3 If *HIW* determines that it must deviate from the Environmental Effects Monitoring Plan, *HIW* shall contact the *Commissioner* prior to making any modifications to the Environmental Effects Monitoring Plan and follow any directions provided.

M.4 A subset of turbines will be selected for mortality monitoring based upon representation of areas adjacent to features identified in the Application.

M.5 *HIW* shall contact the *Commissioner* if any of the following bird and bat mortality thresholds, exceeds:

M.5.1 10 bats per turbine per year across the *Energy Centre*;

M.5.2 14 birds per turbine per year at individual turbines or turbine groups;

M.5.3 0.2 raptors per turbine per year (all raptors) across the *Energy Centre*;

M.5.4 0.1 raptors per turbine per year (provincially tracked raptors) across the *Energy Centre*;

M.5.5 10 or more birds at any one turbine during a single monitoring survey; or

M.5.6 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.

M.6 If the bat mortality threshold described in Condition M.5 is exceeded, *HIW* shall implement operational *mitigation* measures consistent with those described in the Ontario Ministry of Natural Resources and Forestry publication entitled "Bats and Bat Habitats: Guidelines for Wind Power Projects" dated July 2011, or in an amended version of the publication.

M.7 If the bat mortality threshold described in Condition M.5.1 is exceeded after operational *mitigation* is implemented in accordance with Condition M.6, *HIW* shall prepare and implement a contingency plan, in consultation with the *Commissioner* to address *mitigation* and scoped monitoring requirements.

M.8 If any of the bird mortality thresholds described in Conditions M.5.2, M.5.3 or M.5.4 are exceeded for turbines located within 120 metres of important bird *wildlife habitat*, or if disturbance effects are realized at important bird *wildlife habitat* within 120 metres of turbine(s) while monitoring is being implemented in accordance with Condition M.1, *HIW* shall implement immediate *mitigation* actions as described in the Environmental Effects Monitoring Plan and conduct an additional three (3) years of effectiveness monitoring.

M.9 If any of the bird mortality thresholds described in Conditions M.5.2, M.5.3 or M.5.4 are exceeded for turbines located outside 120 metres of important bird *wildlife habitat*, *HIW* shall conduct two (2) years of subsequent scoped mortality monitoring and cause and effects monitoring. Following the completion of scoped monitoring, *HIW* shall implement operational *mitigation* and effectiveness monitoring at individual turbines as agreed to between *HIW* and the *Commissioner* for the first three (3) years following the implementation of *mitigation*.

M.10 If either of the bird mortality thresholds described in Conditions M.5.5 or M.5.6 are exceeded, *HIW* shall prepare and submit for the approval of the *Commissioner*, to address immediate *mitigation* actions which shall include:

M.10.1 periodic shut-down of select turbines; or

M.10.2 blade feathering at specific times of year; or

M.10.3 an alternate plan agreed to between *HIW*, the *Commissioner*.

M.11 If any of the bird mortality thresholds described in Conditions M.5.2, M.5.3 or M.5.4 are exceeded while monitoring is being implemented in accordance with Conditions M.8 or M.9, or if either of the bird mortality thresholds described in Conditions M.5.5 or M.5.6 are exceeded after *mitigation* is implemented in accordance with Condition M.10, *HIW*

shall prepare and submit for the approval of the *Commissioner* an appropriate response plan that shall include some or all of the following *mitigation* measures:

M.11.1 increased reporting frequency to identify potential threshold exceedance;

M.11.2 additional behavioural studies to determine factors affecting mortality rates;

M.11.3 periodic shut-down of select turbines;

M.11.4 blade feathering at specific times of year; or

M.11.5 an alternate plan agreed to between *HIW* and the *Commissioner*.

M.12 *HIW* shall implement the response plan subject to any changes made by the *Commissioner*.

Reporting and Review of Results

M.13 *HIW* shall report, in writing, the results of the post-construction monitoring described in Condition M.8, to the *Commissioner* for three (3) years on an annual basis and within three (3) months of the end of each calendar year in which the monitoring took place.

M.14 *HIW* shall report, in writing, bird and bat mortality levels to the *Commissioner* for three (3) years on an annual basis and within three (3) months of the conclusion of the November mortality monitoring, with the exception of the following:

M.14.1 if either of the bird mortality thresholds described in Conditions M.5.5 or M.5.6 are exceeded, *HIW* shall report the mortality event to the *Commissioner* within 48 hours of observation;

M.14.2 for any and all mortality of species at risk (including a species listed by the Committee on the Status of Endangered Wildlife in Canada as Extirpated, Endangered or Threatened under the provincial Endangered Species Act, 2007) that occurs, *HIW* shall report the mortality to Environment Canada and the *Commissioner* within 48 hours of observation or the next business day;

M.14.3 if the bat mortality threshold described in Condition M.5.1 is exceeded, *HIW* shall report mortality levels to the *Commissioner* for the additional three (3) years of monitoring described in Condition M.6, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring for each year;

M.14.4 if any of the bird mortality thresholds described in Conditions M.5.2, M.5.3 or M.5.4 are exceeded for turbines located within 120 metres of important bird *wildlife habitat*, *HIW* shall report mortality levels to the

Commissioner for the additional three (3) years of effectiveness monitoring described in Condition M.8, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year;

M.14.5 if any of the bird mortality thresholds described in Conditions M.5.2, M.5.3 or M.5.4 are exceeded for turbines located outside 120 metres of important bird *wildlife habitat*, *HIW* shall report mortality levels to the *Commissioner* for the additional two (2) years of cause and effects monitoring described in Condition M.9 on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year; and

M.14.6 if *HIW* implements operational *mitigation* following cause and effects monitoring in accordance with Condition M.9, *HIW* shall report mortality levels to the *Commissioner* for the three (3) years of subsequent effectiveness monitoring described in Condition M.9, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year

M.15 *HIW* shall provide the following documents as specified below:

M.15.1 on its website, any modifications or amendments to this *Permit*, including any modifications or amendments to the schedules contained in this *Permit* within ten (10) days of acceptance of the final plan by the *Commissioner* or *Council* as the case may be;

M.15.2 to the *Council*, the results of the post-construction disturbance monitoring as described in Condition M.13 within ten (10) days of acceptance of the final report(s) by the *Commissioner* ; and

M.15.3 to the *Council*, annual bird and bat mortality monitoring as described in Condition M.14 with the exception of Condition M.14.2 within ten (10) days of acceptance of the final report(s) by the *Commissioner*.

N. ENVIRONMENT CANADA

N.1 To the extent Environment Canada requires *HIW* to make commitments with respect to exceptional weather events, *HIW* shall enter into the necessary arrangements with Environment Canada.

O. ARCHAEOLOGICAL RESOURCES AND *NISHSHING AKI*

O.1 *HIW* shall not construct, install, use, operate, maintain, decommission or conduct any other physical activity in the areas of *Nishshing Aki*, as identified in the HIWEC Heritage Assessment Report dated August, 2015 and listed in Schedule J to this *Permit*.

O.2 *HIW* shall, prior to commencement of *Construction Activities*, prepare and submit to the Commissioner a plan for any further archaeological fieldwork and for *mitigation* measures for the protection of archaeological sites, and an Archaeological Resources Protection Plan. *HIW* shall not commence construction of the *Energy Centre* until such plan has been approved in writing by the Commissioner. *HIW* shall implement the Archaeological Resources Protection Plan in conjunction with the construction of the *Energy Centre*.

O.3 Should any previously undocumented *archaeological resources* be discovered at any time in the course of constructing, operating or decommissioning the *Energy Centre*, *HIW* shall:

O.3.1 cease all alteration of the area in which the *archaeological resources* were discovered immediately;

O.3.2 notify *Council* and the *Commissioner* as soon as reasonably possible;

O.3.3 engage a consultant archaeologist to:

O.3.3.1 carry out the archaeological fieldwork necessary to further assess the area in accordance with the Ontario Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists; and

O.3.3.2 propose a plan to protect the *archaeological resources*; and

O.3.4 if *Council* requests one or more *Community* meetings to discuss the archaeological find(s) and the proposed Archaeological Resources Protection Plan, arrange and participate in such meeting(s).

O.4 No further alteration of the area shall proceed until such time as *Council* is satisfied that an appropriate plan is in place that will ensure the protection of the previously undocumented *archaeological resources*.

O.5 All *archaeological resources* and *Nishshing Aki* are the property of HIFN and shall not be removed from the site without the written authorization of Council.

P. OPERATIONS AND MAINTENANCE

P.1 Prior to the commencement of the operation of the *Energy Centre*, *HIW* shall prepare the *Operations and Maintenance Manual*, for use by *HIW* staff and contractors outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:

P.1.1 routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the *equipment* suppliers;

P.1.2 emergency procedures;

P.1.3 procedures for any record keeping activities relating to operation and maintenance of the *equipment*; and

P.1.4 all appropriate measures to minimize noise emissions from the *equipment*.

P.2 HIW shall implement the operations and maintenance procedures set out in the *Operations and Maintenance Manual*, which may be updated from time to time. *HIW* shall make available a copy of the *Operations and Maintenance Manual* to the *Commissioner* upon request.

Q. EMERGENCY RESPONSE

Q.1 Prior to the commencement of Construction Activities at the *Energy Centre*, *HIW* shall prepare and submit to the Commissioner an *Emergency Response Plan*, for use by *HIW* staff and contractors, outlining the response procedures to be carried out to address each project phase (construction, operation or decommissioning) of the *Energy Centre* and shall include at a minimum the following information:

Q.1.1 Hazard identification and assessment;

Q.1.2 Communication system (including updated emergency contact information for *HIW*) and procedures;

Q.1.3 Administration of the plan (including roles and responsibilities, and emergency resources); and

Q.1.4 Emergency response procedures.

Q.2 In the event that a trigger identified in the *Emergency Response Plan* arises, *HIW* shall comply with and implement the *Emergency Response Plan*.

Q.3 *HIW* may modify the *Emergency Response Plan* to add additional triggering events or to better respond to emergencies.

R. COMMUNITY CONSULTATION

R.1 *HIW* shall provide the following to the *Community*:

R.1.1 updated project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and;

R.1.2 updates on key steps in the construction, installation, operation, use and decommissioning phases of the *Energy Centre*, including:

R.1.2.1 notice of the commencement of *Construction Activities* at the project location;

R.1.2.2 notice of completion of *Construction Activities* and commencement of operations; and

R.1.2.3 notice of decommissioning.

R.2 During the construction, installation, operation, use and decommissioning of the *Energy Centre*, *HIW* shall:

R.2.1 create and maintain written records of any communications with the *Community*; and

R.2.2 make the written records available for review by the *Commissioner* upon request.

R.3 If *Council* requests a *Community* meeting to obtain information relating to the construction, installation, operation, use and decommissioning of the *Energy Centre*, *HIW* shall arrange and participate in such a meeting.

S. RECORD CREATION AND RETENTION

S.1 *HIW* shall create written records consisting of the following:

S.1.1 an operations log summarizing the *Operation Activities* of the *Energy Centre*;

S.1.2 within the operations log, a summary of all inspections of the *Energy Centre*, including routine inspections; and

S.1.3 a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or decommissioning of the *Energy Centre*.

S.2 A record described under Condition S.1 shall include:

S.2.1 a description of the complaint that includes as a minimum the following:

S.2.1.1 the date and time the complaint was made;

S.2.1.2 the name, address and contact information of the *person* who submitted the complaint;

S.2.2 a description of each incident to which the complaint relates that includes as a minimum the following:

S.2.2.1 the date and time of each incident;

S.2.2.2 the duration of each incident;

S.2.2.3 the wind speed and wind direction at the time of each incident;

S.2.2.4 the ID of the *equipment* involved in each incident and its output at the time of each incident;

S.2.2.5 the location of the *person* who submitted the complaint at the time of each incident; and

S.2.3 a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.

S.3 *HIW* shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition S.1, and make these records available for review by the *Commissioner* upon request.

T. NOTIFICATION OF COMPLAINTS

T.1 *HIW* shall notify the *Commissioner* of each complaint within two (2) business days of the receipt of the complaint.

T.2 *HIW* shall provide the *Commissioner* with the written records created under Condition S.1 within eight (8) business days of the receipt of the complaint.

U. MODIFICATIONS

U.1 The *Commissioner* may, without the approval of Council, modify this *Permit* and its schedules, as follows:

U.1.1 modifications to any requirement of this *Permit* that are necessary to achieve minimum compliance with an authorization under the Canadian *Species at Risk Act*, *Fisheries Act* or *Migratory Birds Convention Act, 1994*, S.C. 1994, c. 22, or an order of any Federal or Ontario Court of competent jurisdiction.

U.1.2 modifications to mitigation, monitoring and contingency measures including those in Schedules C, F, G or H;

U.1.3 modifications to reporting requirements; and

U.1.4 modifications to the wording of this *Permit* or its schedules for the purposes of clarity that are in keeping with the intent of this *Permit*.

U.2 The *Commissioner* shall not modify this permit unless the *Commissioner* determines that the modifications:

U.2.1 do not reduce the level of protection provided to the *environment*, *archaeological resources* or *Nishshing Aki* by this *Permit*:

U.2.2 are not likely to result in increased adverse *environment effects;* and

U.2.3 do not conflict with Canadian *Species at Risk Act*, *Fisheries Act* or *Migratory Birds Convention Act, 1994*, or any authorization issued thereunder.

U.3 Where, pursuant to U.1.1, a modification is necessary in order to achieve minimum compliance with an authorization under the Canadian *Species at Risk Act*, *Fisheries Act* or *Migratory Birds Convention Act, 1994* or an order of any Federal or Ontario Court of competent jurisdiction, Conditions U.2.1-U.2.3 shall be deemed to have been met.

U.4 The modifications may be proposed by the *Commissioner*, or at the written request of *HIW* as follows:

U.4.1 Where modifications are proposed by either the *Commissioner* or HIW, the *Commissioner* shall provide to *Council* reasonable notice. Except where the Commissioner has proposed the modification pursuant to Conditions U.1.2, Council shall have an opportunity to make written submissions regarding the proposed modifications.

U.4.2 Where modifications are proposed by the *Commissioner,* the *Commissioner* shall provide to *HIW* reasonable notice and an opportunity to make written submissions.

U.4.3 Where modifications are proposed by *HIW*, the *Commissioner* may require a report demonstrating that the proposed modifications meet Conditions U.2.1-U.2.3.

U.4.4 Where the *Commissioner* approves a modification, written notice is to be given to HIW. Where the *Commissioner* proposed and approves a modification pursuant to Conditions U.1.2 or U.1.4, *HIW* may appeal the modification to Council, subject to the following:

U.4.4.1 *HIW* shall provide written notice of the grounds of appeal to the Commissioner and Council within 30 days of the day *HIW* first received written notice of the Commissioner's decision to approve the modification;

U.4.4.2 in the case of U.1.4, an appeal may be initiated on the basis that a modification is consistent with the wording or intent of the Permit;

U.4.4.3 the *Commissioner* and *HIW* may make submissions to Council; and

U.4.4.4 Council may only allow the appeal where it has determined that the modification is not necessary to avoid a *significant adverse environmental effect*.

U.5 No modification made by the *Commissioner* pursuant to Condition U.1 is effective unless it is proposed in writing and approved in writing.

U.6 Modifications made by the *Commissioner* pursuant to Condition U.1 are not amendments for the purposes of section 20 and 21 of the *EA and Permitting Land Law*.

U.7 Changes to *equipment* location otherwise authorized by this Permit, including Schedules G and H, are not modifications pursuant to Condition U.1.

V. CHANGE IN OWNERSHIP

V.1 *HIW* shall notify the *Commissioner* in writing, and forward a copy of the notification to the *Commissioner*, within thirty (30) days of the occurrence of any of the following changes:

V.1.1 the ownership of the *Energy Centre*;

V.1.2 the operator of the *Energy Centre*;

V.1.3 the address of *HIW*;

V.1.4 the partners, where *HIW* is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c. B.17, as amended, shall be included in the notification; and

V.1.5 the name of the corporation where *HIW* is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

W. AMENDMENTS

W.1 Where *Council* is considering amending this Land Law, *Council* shall provide notice in writing to *HIW* of the proposed amendment at least 10 days in advance of deciding whether to approve the amendment.

SCHEDULE A

ENERGY CENTRE DESCRIPTION

The *Energy Centre* shall consist of the construction, installation, operation, maintenance, use and decommissioning of the following:

(a) up to ninety-one (91) Vestas V126-3.3 wind turbine generators each rated at up to 3.6 megawatts generating output capacity

with a total nameplate capacity of 300 megawatts, each with a maximum hub height of up to 137 metres above grade and each with a maximum rotor diameter of 137 metres sited at the location shown in Schedule D; and

(b) associated ancillary equipment, systems, components and technologies including two transformer stations to step up the 34.5kV voltage of the collector lines to the 230kV voltage of the transmission line, on-site access roads, an operations and maintenance building and collector and transmission lines,

all in accordance with the Application.

SCHEDULE B

PERMITTED PHYSICAL ACTIVITIES BY PHASE

PRE-CONSTRUCTION PHASE

1. The following physical activities are permitted during the pre-construction phase:

    (a) Site Preparation and Land Clearing:

        (i) Geotechnical sampling

        (ii) Delineation of work area

        (iii) Vegetation clearing

        (iv) Delineation and preparation of temporary work areas

CONSTRUCTION PHASE

2. The following physical activities are permitted during the construction phase:

    (a) Construction of access roads and laydown areas:

        (i) Construction of access roads as required (including blasting)

        (ii) Installation of temporary facilities including concrete batch plant(s), crusher(s), Wind Turbine staging areas, construction compounds and laydown yards

    (b) Transportation of *equipment* and material:

        (i) On-site delivery of construction vehicles, *equipment*, and materials

    (c) Foundation excavation and construction:

        (i) Installation (includes excavation, blasting, and construction as required) of Wind Turbine foundations

        (ii) Installation (includes excavation, blasting, and construction as required) of crane pads

        (iii) Installation (includes excavation, blasting, and construction as required) of pad-mounted transformers

        (iv) Installation (includes excavation, blasting, and construction as required) of Transformer Substation foundations

        (v) Installation (includes excavation, blasting, and construction as required) of O&M foundation and building

(d) Wind Turbine installation:

(i) Erection of Wind Turbines

(e) Collector system and transmission line installation:

(i) Installation of above and/or below ground electrical collector lines

(ii) Installation of on-Reserve transmission infrastructure

(f) Installation of Transformer Substations

(g) Construction completion

(i) Reclamation of temporary construction areas

(ii) Demobilization of construction works

(h) Power connection and commissioning

(i) Construction phase *mitigation* measures and monitoring

3. All temporary buildings and structures shall be removed and all construction related physical activities shall cease prior to the commencement of the operation of the *Energy Centre*.

OPERATIONS AND MAINTENANCE

4. The following physical activities are permitted during the operating phase of the *Energy Centre*:

(a) *Energy Centre* Operation:

(i) Wind Turbine operation

(ii) Meter calibrations

(iii) Met tower data acquisition

(b) Wind Turbine, collector system, road and crossing repair/maintenance:

(i) Preventative and unplanned maintenance of *Energy Centre* components (includes accessing such components)

(ii) Maintenance of the collector system and any on-Reserve transmission lines (includes accessing such components)

(iii) Access road maintenance

(c) *Mitigation* measures and monitoring

DECOMMISSIONING

5. The following physical activities are permitted during the decommissioning phase of the *Energy Centre*:

(a) Power disconnection and decommissioning of service:

(i) Disconnection of collector Transformer Stations

(b) Transportation of materials:

(i) On-site delivery of decommissioning vehicles and *equipment*

(ii) Removal of *Energy Centre* components and infrastructure from site

(c) Disassembly and removal of collector system components:

(i) Disassembly and removal of collector Transformer Stations

(ii) Disassembly and removal of pad-mounted transformers

(iii) Disassembly and removal of above and/or below ground electrical collector lines

(iv) Disassembly and removal of on-Reserve transmission infrastructure

(d) Wind Turbine and/or tower disassembly and removal:

(i) Disassembly and removal of Wind Turbine infrastructure

(ii) Disassembly and removal of Meteorological towers

(iii) Disassembly and removal of O&M building infrastructure

(e) Decommissioning completion:

(i) Reclamation of disturbed areas (includes reclamation of access roads)

(ii) Grading of concrete foundations

(iii) Demobilization of decommissioning works

(iv) *Mitigation* measures and monitoring

SCHEDULE C

DECOMMISSIONING PLAN REPORT

http://www.henveyinletwind.com/index.php/download_file/view/256/135/

SCHEDULE D

COORDINATES OF EQUIPMENT

Turbine ID	Easting [m]	Northing [m]
3	523121	5079906
4	523527	5079507
5	523801	5078989
7	523524	5078349
8	524642	5078218
9	524064	5078074
10	523729	5080288
11	524049	5079892
12	524357	5079296
13	525248	5077957
14	525350	5078487
15	527421	5078857
16	523941	5080825
17	524323	5080374
18	525119	5080356
19	525968	5079735
24	528351	5079834
25	527408	5080090
26	527595	5079486
27	528146	5079222
28	528910	5079678
30	528837	5080463
31	529601	5079784
32	529297	5080169
33	529797	5080740
34	530071	5080243
35	529499	5081120
36	525504	5074920
37	526446	5075009
38	526560	5075647
39	527713	5075411

Turbine ID	Easting [m]	Northing [m]
40	526809	5076303
41	527265	5076047
42	528114	5074425
43	528421	5073536
44	528847	5074062
45	528144	5075012
46	526456	5074519
47	529348	5074549
48	528808	5074717
49	528807	5075356
50	529470	5075524
51	529849	5075135
52	530020	5074662
53	528070	5076261
54	528366	5075731
56	528453	5076902
57	528916	5077778
58	529162	5077137
59	529453	5078210
60	529540	5077683
61	529742	5076770
62	530238	5077263
66	531670	5075919
67	531023	5075433
68	530276	5076631
69	530029	5076106
70	530390	5075594
71	527472	5074206
73	526968	5081286
74	527432	5081184
77	522354	5075451
78	522983	5075707
79	523310	5075327
80	522549	5075033
81	523404	5074679

Turbine ID	Easting [m]	Northing [m]
82	524586	5074970
83	524641	5074525
84	525161	5074143
85	525749	5074315
86	526860	5073884
87	526160	5073866
88	527405	5073568
89	527740	5073257
92	522423	5079763
93	522766	5079426
94	523022	5078984
95	523906	5077558
96	525245	5080899
97	525687	5080122
98	526081	5078430
99	526639	5078778
101	526026	5079213
102	524699	5078878
103	522710	5074574
104	530197	5078125
105	531039	5076363
107	527118	5075097
108	527349	5074679
109	525317	5079070
110	524099	5078545
111	526947	5079256
114	527914	5073940
115	525956	5075143
122	529137	5076532
Transformer North	527480	5078545
Transformer South	527641	5076030

SCHEDULE E

NOISE RECEPTORS

Receptor ID	Easting [m]	Northing [m]
R1000	524659	5075916
R1006	521670	5076295
R1007	521927	5076285
R1008	522283	5076478
R1093	524333	5081674
R1094	524345	5081651
R1095	524365	5081652
R1097	527875	5081890
R1098	528102	5081873
R1099	529959	5082046
R1282	525440	5073337
R1288	521325	5075473
R1289	521314	5075461
R1290	521329	5075454
R1291	521312	5075440
R1292	521304	5075427
R1293	521310	5075414
Rl294	521315	5075399
R1295	521312	5075374
R1296	521324	5075365
R1297	521337	5075374
R1298	521345	5075393

Receptor ID	Easting [m]	Northing [m]
R1299	521331	5075418
R1300	521325	5075437
R2028	526180	5081883

SCHEDULE F

WASTE MANAGEMENT MEASURES

Waste	Management Protocol
All waste	Waste will be stored so as to prevent leaks or spills. There will be no permanent storage of waste on site. Temporary storage will be either (a) permitted during the Pre-construction, Construction and Decommissioning phases until the completion of such phase or 90 days thereafter; or (b) permitted during Operating Activities for up to 90 days. Disposal (following any temporary storage, as above) will be arranged at off-site, licensed facilities. Transportation off-site will be by licensed haulers with appropriate manifests, in accordance with applicable provincial or federal regulations.
Potentially hazardous waste	Stored temporarily in containment systems (labelled, sized to provide a minimum impoundment of 100% of the volume of the largest tank/drum plus 10% of the aggregate volume of all remaining tanks/drums).
Domestic solid waste (e.g., garbage, cardboard, plastics and organics)	Collected and permanently disposed of at offsite licensed facility.
Surplus excess impacted soil (topsoil and subsoil)	If soil impacted with contaminants is encountered during course of excavations, removal offsite, disposed will be arranged at offsite, licensed facilities as appropriate (in accordance with applicable provincial or federal regulations).
Wood waste	Removed from site and recycled.
Construction waste and debris	Collected by licensed operator and disposed of at licensed facility. All reasonable efforts will be made to recycle materials.
Packing frames for WTG components and cabling spools	Returned to their respective vendors or will be recycled.
Plastics from other containers and packaging	Disposed of through offsite disposal and recycling facilities, where appropriate.
Construction materials and scrap metals (e.g., copper wiring and conductor)	Where not saleable/reusable, recycle or permanently dispose of at offsite licensed facility.

Waste	Management Protocol
Spent welding rods used during Construction Activities	Disposed of by licensed contractor at licensed offsite facility.
Oils, fuels and lubricants used in maintenance and operation of equipment or machinery	Stored temporarily in containment systems (labelled, sized to provide a minimum impoundment of 100% of the volume of the largest tank/drum plus 10% of the aggregate volume of all remaining tanks/drums) and subsequently removed and disposed of off-site.
Surplus lubricating oils, grease, rags, batteries and filters used in maintenance during Operation Activities	Stored temporarily in accepted containment systems (labelled, sized to provide a minimum impoundment of 100% of the volume of the largest tank plus 10% of the aggregate volume of all remaining tanks) and subsequently removed and disposed of at off-site, licensed disposal and/or recycling facility.
Cleaning of concrete trucks and cement construction materials	Will occur at designated areas, located greater than 30 m from water features Ensure wash water used for cleaning of cement construction materials does not come in contact with ground and deposit waste water in concrete washout container that allows evaporation and hardening for easier disposal or recover and recycle wash water back into cement truck.
Sanitary sewage (O&M building washroom facilities)	Transported to an off-site, licensed facility by hauler, as needed.
Some packing-material waste	All recyclable materials will be separated from non-recyclable materials and both streams will be removed from site and disposed of at licensed facility.
Impacted soil from accidental spills or releases of contaminants (i.e., fuel, lubricating oils and other fluids)	During Construction Activities, spills to be cleaned up as soon as possible, with soils impacted with contaminants to be removed off-site, to a licensed disposal site if required (in accordance with applicable provincial or federal regulations). During Operation Activities, Spill Prevention and Response Plan developed by HIW will be implemented, addressing waste arising from spills. During Decommissioning Activities, in event any soils are impacted with contaminants, impacted soils will be removed offsite and disposed of at licensed facility if required (in accordance with applicable provincial or federal regulations).
Any soil encountered during Construction or Operation Activities that has visual staining or odours, or contains rubble, debris, cinders or other visual evidence of impacts or	Soils impacted with contaminants to be removed to off-site, to an offsite licensed disposal site where required (under applicable provincial or federal regulations). Soils impacted with contaminants identified at Decommissioning phase will be removed off site and disposed of at off-site, licensed facility where required (under applicable

Waste	Management Protocol
contaminants identified during Decommissioning Activities	provincial or federal regulations).
Dismantled turbine generators, pad-mounted transformers, access roads, overhead collector lines, transformer stations, meteorological towers and O&M building – includes removed concrete including any rebar or steel anchor bolts, removed granular base material/crushed gravel from access roads and metal and wood components	Efforts will be made to re-use equipment and salvage parts; otherwise, removed components will be disposed off-site at licensed waste facility, scrap metal yard or recycling facilities. Granular base material and crushed gravel used to construct access roads will be removed from site. At the request of HIFN, all or portions of access roads may be left in place for future use. Culverts installed during Construction Activities will also be removed from the site unless otherwise requested by HIFN.
Stripped chemically-treated exterior of dismantled monopoles of overhead collection lines	Monopoles will be removed and disposed of at off-site, licensed facility.
Geotextile fabric removed during Decommissioning Activities	Will be removed and disposed of at off-site, licensed facility.

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measure Applicable to All Species At Risk ("SAR")	
Measure	**Description**
Micrositing	For the purposes of both Schedules G and H, "micrositing" means minor shifts (ie. up to a maximum of 20 m) of project components (eg. equipment, laydown areas, roads) to further avoid important SAR habitat features. Such shifts will be proposed only after completion of any pre-construction surveys to further identify important habitat features. Where there are shifts to the locations of equipment specified in Schedule D that exceed 10m, the *Noise Impact Assessment Report* shall be updated before any such shift is implemented to ensure compliance with the *Noise Guidelines for Wind Farms*, and submitted to the *Commissioner* for approval.
Environmental Monitor	The following mitigation measures will be implemented in respect to the Environmental Monitor: • An Environmental Monitor will be on site during all construction activities. • An Environmental Monitor will be present during blasting activities (to review the site prior to and during blasting activities, and ensure compliance with the *Blasting Plan*). • Additional Environmental Monitors will be present during key construction activities including vegetation removal, dewatering and blasting, and as required to ensure compliance with environmental requirements. • Environmental Monitors will also complete daily, weekly and monthly monitoring of general and specific activities/measures (such as monitoring ecopassages and culverts to ensure that no debris is compromising their use, effectiveness of erosion and sedimentation control measures, fuel storage tanks etc.). • Environmental Monitors will also keep daily logs of their activities and note any non-compliance issues. Any non-compliance issues will be provided to the General Contractor for immediate follow-up. The Environmental Monitor will be on-site during construction activities and conduct daily monitoring and inspections during vegetation removal, dewatering and blasting, and as necessary during other activities to ensure compliance with environmental requirements. In addition: • One Environmental Monitor will be present with each construction crew completing the above activities during breeding bird season (April 1 –August 31), the active turtle period (April 15 – September 30), active snake period (April 15 – September 30) and bat roosting period (April 30 – September 1). • A qualified Biologist or the Environmental Monitor will drive along existing access roads and monitor for SAR each morning and afternoon. If encountered, Sighting Response Protocol (as set out in Schedule H below) will be followed. • An Environmental Monitor will be present during blasting activities (to review the site prior to and during blasting activities). Should there be a SAR mortality, the SAR Adaptive Management Plan, set out below, will be reviewed and if necessary revised to provide additional SAR protection. The determination as to whether and how to revise the Adaptive Management is subject to the approval of the *Commissioner*.

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measure Applicable to All Species At Risk ("SAR")	
Measure	**Description**
Poaching	The following mitigation measures apply with respect to the potential for illegal poaching or persecution of SAR: • An Environmental Monitor shall regularly patrol the site to identify illegal SAR poaching and report any such activities to authorities for appropriate action. • Surveillance cameras will be place strategically throughout the site, in both sensitive and non-sensitive habitats and both hidden and plain-view cameras are to be used. Location of such cameras will not be disclosed to construction/operations staff. Environmental Monitor will regularly review recordings and report any suspicious or illegal activity to authorities. • A check-in/check-out policy will be implemented for all vehicles entering and leaving the site and each registered vehicle will prominently display an access form on the dash or windshield of the vehicle. • Undertake an anti-poaching public awareness initiative involving HIFN members. • Regular vehicle checks for wildlife will occur for vehicles leaving the site. • Illegal activities regarding SAR, including poaching, intentional harming, harassing or killing, will not be tolerated by HIW and will be immediately reported to authorities for appropriate action. • HIW shall provide a monetary reward to any individual that provides information that leads to a successful investigation of a poaching incident within the project area. • All contractors will be required to sign a Non-Disclosure Agreement (NDA) that relates to all wildlife observed at the site.
Adaptive Management	A SAR adaptive management plan shall be provided by HIW for the protection of SAR and their habitat ("SAR Adaptive Management Plan") for each of the following phases: • *Pre-Construction Phase*, following pre-construction surveys. • *Construction Phase*, before the commencement of the phase. • *Operations Phase*, before the commencement of the phase. • *Decommissioning Phase*, before the commencement of the phase. The SAR Adaptive Management Plan will include: • Performance objectives for any mitigation measures included in this schedule. • Triggers for further mitigation that relate to these performance objectives (including for any operational mitigation). • Monitoring in relation to performance objectives and mitigation. • Further mitigation, or modification to existing mitigation where appropriate based on monitoring, performance objectives and triggers. SAR Adaptive Management Plans will be subject to the acceptance of the Commissioner.

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measure Applicable to All Species At Risk ("SAR")	
Measure	**Description**
Overall Benefit	HIW shall provide an overall benefit plan for each SAR species (and their habitat) protected by the mitigation measures set out in this schedule (the "Overall Benefit Plan"). The Overall Benefit Plan will set out the measures that will confer an overall benefit to the species within a reasonable time. The Overall Benefit Plan will include all existing measures in this *Permit* that confer a benefit on the SAR species, and should additional measures be required to confer an overall benefit on one or more SAR species, such additional measures which may include: • upgrades to habitat; • compensation or offsets for habitat; • funding of research conducted by academic institutions targeting information gaps or potential threats associated with SAR found in the site area; • contribution to Fatal Light Awareness Program (ww.flap.org) and/or habitat enhancement for Kirtland's Warbler; • contribution to a reptile rehabilitation centre in proximity to the site; • facilitating, directly or in collaboration with an appropriate organization (eg. EC-CWS, MNRE, Toronto Zoo), an anti-poaching public awareness initiative targeting the Parry Sound District; • upgrades to the existing Bekanon Road to reduce current risks (unrelated to the Project) to SAR. The Overall Benefit Plan for the SAR impacts during the *Pre-Construction*, *Construction* and *Operations Phases* of the *Energy Centre* shall be delivered by HIW for approval by the *Commissioner* after any preconstruction surveys, but before commencement of *Construction Activities*. An Overall Benefit Plan for the *Decommissioning Phase* shall be delivered for approval by the *Commissioner* prior to that phase. Overall benefit plans shall include monitoring and reporting of all compensation and offset measures. HIW shall comply with the Overall Benefit Plans and commence implementation of the overall benefit measures in accordance with the plans immediately upon approval by the *Commissioner*.

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
Pre-Construction Activities *Construction Activities* *Decommissioning Activities*	Preconstruction surveys will be undertaken to further identify key habitats such as hibernation, gestation, nesting areas for micrositing of *equipment* and infrastructure to avoid these areas or apply appropriate mitigation. From May 7 to July 7, 2016 a survey will be conducted re: Kirtland's Warbler use of habitat by same team as conducted 2015 bird breeding surveys (within environmental assessment study area and in publically accessible Georgian Bay Shoreline areas). If vegetation must be removed during the overall bird nesting season of April 1 to August 31, the following mitigation will apply, in accordance with the *Migratory Birds Convention Act*: • Within complex habitats*, removal of all vegetation will occur outside the core bird nesting season of May 1 to July 28, when a minimum of 60% of nesting activity occurs in each of the 3 habitat types, as per Environment Canada's Nesting Calendar for Zone C3 (Environment Canada 2014d). • From April 1st to April 30th, nest and nesting activity searches will be conducted in areas defined as simple habitat* immediately prior to vegetation clearing. • From May 1st to July 28th, nest and nesting activity searches will be conducted in simple habitat immediately prior to vegetation clearing. Vegetation clearing will not occur within complex habitats during this period. • From July 29th to August 31st, nest and nesting activity searches will be conducted in simple habitat immediately prior to vegetation clearing. **Note: Complex habitats refer to habitats that contain a variety of individual nesting sites in a range of habitats. For instance, forest and shrub-dominated communities may contain nesting spots within the canopy, sub-canopy, shrub layer and ground layer, where identification of active nests may be difficult. Simple habitats refer to habitats that contain few likely nesting spots or a homogenous community where identification of active nests can be completed with confidence. For instance, open rock barrens or other sparsely vegetated habitats may be considered simple habitats, depending on site-specific vegetation cover.*	A qualified Biologist will be on-site from April 1 to August 31 during clearing activities to oversee vegetation removal and conduct nest and nest activity surveys as required. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in avian ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual and auditory identification of birds, working under direct guidance from a qualified Biologist. Nest surveys may be conducted in simple habitat (as defined under mitigation measures) and will include searching around the general vicinity of areas proposed for vegetation removal, including within 10m. Nesting activity will be documented when it consists of confirmed breeding evidence, as defined by OBBA criteria (OBBA 2001) • Distraction display or injury feigning • Used nest or egg shell found (occupied/laid this season) • Recently fledged young or downy young • Adults leaving or entering nest site in circumstances indicating occupied nest • Adult carrying faecal sac • Adult carrying food for young • Nest containing eggs • Nest with young seen or heard	If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity. The radius of the buffer will range depending on the species, level of disturbance and landscape context which will be confirmed by a qualified Biologist (Environment Canada 2014d), but will protect a minimum area of 10m surrounding the nest. This minimum buffer is expected to provide protection of the nest from minor work, such as vegetation clearing, access road creation, and general heavy machinery usage or vehicle operation. The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation, however the outer limits of the buffer can be marked (Environment Canada 2014d) and UTM co-ordinates will be taken.
	Minimize vegetation removal and limit to within the construction footprint. The construction footprint will be clearly defined prior to vegetation removal. Delineation will be in the form of flagging tape, wooden stakes and/or silt fence barriers that will	Regular environmental construction monitoring and routine inspections will be undertaken to ensure vegetation removal occurs within the delineated	Repair any barrier fencing/boundary delineation materials if damaged, as identified by the Environmental Monitor, project staff, or

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	each provide clear identification of the construction limits. With respect to the latter (silt fence barriers), these will be implemented if sedimentation control is also required.	construction footprint. Confirmation of delineation of the construction footprint will be completed by the Environmental or Engineering Monitor as per construction drawings.	construction personnel. Prune any perimeter tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS .
	The construction footprint will be microsited within the larger permitted project location to construct *equipment* and project infrastructure, such as roads, away from SAR habitats and residences and complex habitats, by the qualified Biologist. Micrositing will include notation of potential Kirtland Warbler's habitat (eg. Jack Pine stands at a height of 1.5 to 5m). If this is not possible, appropriate timing windows, clearing restrictions, and nest buffers will be applied (see above).	Regular environmental construction monitoring and routine inspections will be undertaken to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by Environmental or Engineering Monitor as per construction drawings.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS .
	Rehabilitation of temporary work areas to be advanced (within 1 year of completion of the construction/decommissioning phase) as appropriate to the type of habitat that was removed (*eg*. replant forested areas using native stock) for these species. In order to enhance insect prey populations preferred by bird SAR (*ie*. Canada Warbler and Olive-sided Flycatcher), planting plans for the rehabilitated areas will include flowering herbaceous plants that are known to occur within environmental assessment study area. Although it is not possible to calculate the area of temporary disturbance associated with access roads due to micrositing and site-specific conditions, the temporary disturbance area associated with turbine construction/decommissioning is approximately 17.3ha.	Monitoring of the rehabilitation activities will be completed annually for the first 3 years to ensure vegetation is established.	If, after 3 years, vegetation has not established, additional rehabilitation activities will be undertaken in areas that remain deficient of established vegetation.
	Clearly post speed limit signage along access roads (20km/hr), install speed bumps and post speed limits of 10km/hr within areas of concentrated wildlife activity, and instruct all staff to be vigilant for wildlife while driving on site. Restrict driving on-site to daytime hours (sunrise to sunset) during the breeding bird season (April 1 to August 31). Travel at night along access roads will only occur in emergency situations.	The Environmental Monitor is to ensure speed limits are posted and communicated to project staff.	Should any mortality occur outside in areas where speed bumps have not already been installed, consideration will be given to installing additional speed bumps or speed limit signs in the immediate vicinity of areas of SAR mortality.
	The *Blasting Plan* will be adhered to including: • Blasting will only occur in areas that have already been cleared of vegetation;	Pre-blasting inspections by the Environmental Monitor will include ensuring blasting is occurring	Repair any barrier fencing/boundary delineation materials if damaged.

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	• The construction footprint will be microsited to reduce blasting to the greatest extent possible. • Blast mats will be used to control debris generated from blasting; • Prior to blasting, a qualified Biologist will conduct an area search of the proposed blasting area to ensure no SAR birds are present (e.g. ground-nesting birds perched on ground); • Ensure wildlife (e.g. birds flying over) are not in the blasting zone prior to detonation. If wildlife is encountered in the blasting zone, postpone detonation until the wildlife has vacated the area; • Follow proper drilling, explosive handling and loading procedures; • Implement safe handling and storage procedures for all materials, including soluble substances used for blasting; and • Remove all blasting debris and other associated equipment/products from the blast area.	in areas where vegetation has already been cleared and ensuring blast mats are used appropriately control debris generated from blasting. A qualified Biologist will conduct an area search of the proposed blasting area to ensure no SAR birds, or nests, are present, the day of blasting, as close to the blasting time as safety considerations will allow. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in avian ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual and auditory identification of birds, working under direct guidance from a qualified Biologist.	Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS . If any accidental damage to habitat occurs, rehabilitation will occur as appropriate to the type of habitat that was accidentally removed, within 1 year of the completion of the construction/ decommissioning phase.
	Conduct construction and decommissioning activities during daylight hours for increased visibility, as well as to avoid light pollution effects during the night. ▪ In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting or spotlights will be directed downward, temporary and kept to a minimum..	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	Develop and implement Sighting Response Protocol ("SRP" as set out in Schedule H below).	The Environmental Monitor to ensure the species observation log is kept up to date, procedures are followed and reporting is submitted to EC, as required.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, HIW's environmental management team will discuss and revise the Protocol accordingly. The environmental team includes HIW's environmental manager and its construction and operations managers.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the Operations building and will be wildlife-proof.		

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
Operations	Implement a proactive approach to feathering turbine blades below the manufacturer's recommended cut-in speed. Feathering refers to the act of pitching turbine blades by 90°, parallel to the wind or turning the turbine nacelle so that the blades are facing away from the wind. Feathering is an effective approach to minimize blade rotation in low wind speeds.	Conduct 3 years of post-construction bird mortality monitoring following *Birds and Bird Habitats: Guidelines for Wind Power Projects* (OMNR 2011b).	A report outlining the methods employed and the results of monitoring will be prepared and submitted to Commissioner and EC-CWS on an annual basis to determine if additional monitoring and/or mitigation measures are warranted. Consider changes in turbine operations (e.g., changes in cut-in speed, selective shutdown of specific turbines at key times of year or under certain weather conditions) during periods of high mortality.
	Utilize a lighting scheme that will minimize continuous lighting and the use of bright lights throughout the Project Area to reduce confusion to bird SAR and minimize attraction to lit structures (EC-CWS 2007b). Lighting scheme to include the following, while still fulfilling minimum Transport Canada requirements: • Implement red LED flashing lights on turbines, • Light turbines and permanent met/communication towers to the minimum federal standards, • Ground-level lights (i.e. buildings, turbine bases, etc.) will be directed downward and shall use motion or heat sensors where practical and allowed by applicable codes and the authority having jurisdiction, • Use of high-intensity lighting or spotlights, if required, will be temporary and will be kept to a minimum, • Any internal nacelle lighting will only be used when occupied.	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	Operations staff to ensure the species observation log is kept up to date and that procedures are followed. All operations staff will be required to report any SAR turtle mortality or turtle activity on roads to the appropriate staff.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, the operations staff will discuss and revise the Protocol accordingly.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Vegetation trimming will be limited to areas that have been previously cleared during construction. Schedule trimming of any necessary vegetation removal during routine maintenance activities to occur outside of the overall bird nesting season, from April 1 to August 31 (Environment Canada 2014d). If this is not possible, the following mitigation will apply, in accordance with the *Migratory Birds Convention Act* and the *EPP*'s Wildlife Management Plan: • Within complex habitats*, removal of all vegetation is proposed to occur outside the core bird nesting season of May 1 to July 28, when a minimum of 60% of nesting activity occurs in each of the 3 habitat types, as per Environment Canada's Nesting Calendar for Zone C3 (Environment Canada 2014d), • Nest surveys will be conducted in areas defined as simple habitat* immediately prior to vegetation clearing. **Note: Complex habitats refer to habitats that contain a variety of individual nesting sites in a range of habitats. For instance, forest and shrub-dominated communities may contain nesting spots within the canopy, sub-canopy, shrub layer and ground layer, where identification of active nests may be difficult. Simple habitats refer to habitats that contain few likely nesting spots or a homogenous community where identification of active nests can be completed with confidence. For instance, open rock barrens or other sparsely vegetated habitats may be considered simple habitats, depending on site-specific vegetation cover.* If any suitable hazard tree, such as a tree which poses an immediate safety risk to individuals and/or a risk to the functionality of *equipment*, is identified, the tree may be removed at any time through consultation with the *Commissioner* and EC-CWS. The need for additional mitigation measures or permits in these circumstances will be addressed on a site-specific basis.	If vegetation trimming is to occur within the bird nesting season (April 1 to August 31), a qualified Biologist will complete a nest and nesting activity survey immediately prior to vegetation maintenance. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in avian ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual and auditory identification of birds, working under direct guidance from a qualified Biologist. Nest surveys will be conducted in simple habitat (as defined under mitigation measures) and will include searching around the general vicinity of areas proposed for vegetation removal, including within 10m. Nesting activity will be documented when it consists of confirmed breeding evidence, as defined by OBBA criteria (OBBA 2001) • Distraction display or injury feigning; • Used nest or egg shell found (occupied/laid this season); • Recently fledged young or downy young; • Adults leaving or entering nest site in circumstances indicating occupied nest; • Adult carrying faecal sac; • Adult carrying food for young; • Nest containing eggs; or • Nest with young seen or heard.	Prune any tree limbs or roots using proper arboricultural techniques. If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity until a qualified Biologist has confirmed the nest is no longer active. The radius of the buffer will range depending on the species, level of disturbance and landscape context which will be confirmed by a qualified Biologist (Environment Canada 2014d), but will protect a minimum area of 10m surrounding the nest. This minimum buffer is expected to provide protection of the nest from nearby activities, such as vegetation clearing and heavy machinery or vehicle operation. The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation, however the outer limits of the buffer can be marked (Environment Canada 2014d) and UTM co-ordinates will be taken.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Clearly post speed limit signage along access roads (20km/hr), install speed bumps and post speed limits of 10 km/hr within areas of concentrated wildlife activity (see Map 21), and instruct all staff to be vigilant for wildlife while driving on site. During the breeding bird season (April 1 to August 31), all maintenance and biological crews (which will encompass the vast majority of vehicle traffic on access roads) will consist of two people, one of which will be trained to scan for SAR birds that may be on the road, and will use binoculars (when appropriate). The trained wildlife spotter will continually scan the access road ahead of the vehicle to ensure no SAR birds are roosting or nesting on the road or shoulder. Restrict driving on-site to daytime hours (sunrise to sunset) during breeding bird season (April 1 to August 31). Travel at night along access roads will only occur in emergency situations. If a SAR bird is identified on the road, the vehicle will immediately stop and will continue around the bird at a very low speed (e.g. less than 5 km/h), if there is enough room to safely proceed.	During the breeding bird season (April 1 to August 31), all maintenance and biological crews will consist of two people, one of which will be trained to spot SAR birds that may be on the road. The wildlife spotter will be trained to identify SAR birds that may be roosting or nesting on the road and will enforce speed limits on all access roads.	The selected adaptive management approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species. Should any mortality occur in areas where speed bumps have not already been installed, consideration will be given to installing additional speed bumps or speed limit signage in the immediate vicinity of areas of SAR mortality.
	The following mitigation measures regarding post-construction monitoring will be implemented: • Develop and implement a follow-up and monitoring plan, which includes a post-construction bird mortality and disturbance monitoring program consistent with *Birds and Bird Habitats: Guidelines for Wind Power Projects* (OMNR 2011a); • Report the findings of the post-construction monitoring program to *Commissioner* and EC-CWS as required on an annual basis; • Implement adaptive management techniques, such as operational mitigation as determined appropriate through post-construction monitoring; Report confirmed Species at Risk mortalities during post-construction monitoring to the *Commissioner* and EC-CWS within 48hrs of a confirmed species identification.	Conduct 3 years of bird mortality monitoring consistent with *Birds and Bird Habitats: Guidelines for Wind Power Projects* (OMNR 2011a). Conduct the following post-construction bird disturbance monitoring for a minimum of 3 years: • Pre-construction breeding bird surveys completed in 2015, as well as 12 other representative sites at varying distances from the HIWEC location, will be repeated annually for a minimum of 3 years post-construction to ensure similar species abundance and diversity continue to be found in the HIWEC Project Area (with interim technical memos during migratory/breeding bird season of each surveyed year). • Pre-construction crepuscular bird surveys completed in 2015 will be repeated annually for a minimum of 3 years post-construction to ensure similar species abundance and diversity continue to be found in the HIWEC Project Area.	The selected adaptive management approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species. A report outlining the methods employed and the results of monitoring will be prepared and submitted to Commissioner and EC-CWS on an annual basis to determine if additional monitoring and/or mitigation measures are warranted. Consider changes in turbine operations (e.g., changes in cut-in speed, selective shutdown of specific turbines at key times of year or under certain weather conditions) during periods of high mortality. If mortality of Common Nighthawk is recorded during 3 years of monitoring, adaptive management

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Bird Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
			measures will be determined by qualified avian Biologist and HIW (e.g. potential turbine curtailment at dusk and dawn during breeding bird season for Common Nighthawk). In the event that, after 2 years, breeding bird surveys indicate notable changes in bird abundance or species diversity, EC-CWS will be consulted to determine if additional mitigation measures are warranted through an adaptive management approach. In the event post-construction surveys identify an increased presence of Brown-headed Cowbird, selective culling or trapping of such species may occur or additional breeding bird monitoring may be implemented, as determined necessary through consultation with EC-CWS.
	Conduct maintenance activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night, wherever possible. In emergency circumstances where operational activities must occur at night during breeding bird season (April 1 to August 31), a lighting scheme will be used to minimize potential risks to bird SAR and lighting or spotlights will be directed downward, temporary and kept to a minimum.	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with species that may be encountered.	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.		

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
Pre-Construction Activities *Construction Activities* *Decommissioning Activities*	Preconstruction surveys to be undertaken to further identify key habitats such as hibernation, gestation, nesting areas for micrositing of *equipment* and infrastructure, to avoid these areas or apply appropriate mitigation. The following will be adhered to within areas that provide confirmed and/or likely turtle nesting habitat (e.g., within sandy habitats, shorelines, soil-filled cracks in rock barren, or wetlands where turtle nesting activity has been observed or where suitable habitat is within an area with confirmed turtle observations) and that are identified to be cleared of vegetation between June 1 and September 15: • Construction footprint will be sited within the Project Location to avoid suitable nesting habitat between June 1 and September 15.; • In suitable nesting areas that are unavoidable, exclusionary fencing will be installed around the extent of construction footprint that overlaps nesting habitat prior to the turtle nesting/hatching period of June 1 to September 15 to prevent turtle nesting activity prior to construction activities. Construction activities will not occur within 30m of any confirmed turtle nest during the period of June 1 to September 15. Habitat creation is to be completed either prior to the potential use of habitat by species or prior to removal of habitat. For turtles SAR, each nesting mound will be created prior to June 1 (if habitat removal occurs between September 16 and May 31) or will be created prior to the removal of any suitable nearby site that it is intended to replace (if that habitat is removed between June 1 and September 15). A minimum of 12 artificial turtle nesting mounds will be created strategically throughout the site with the potential for additional habitats to be created based on the micrositing process. Mounds to be created strategically (without additional disturbance) by using a method developed by Paterson, *et al*. (2013) that combines a mixture of gravel (60%) and sand (40%) into a pile approximately 6m across and 0.5m high, placed preferentially within 100m of habitat that contains open aquatic features and also in areas where turtle observations have occurred on the same side of the access road as the open aquatic habitat. Specific mound sizes and locations will be developed through a more detailed site-specific evaluation of suitable habitat and will not adversely impact other important habitats. Stockpile areas placed prior to June 30 (turtle egg laying period) will be assessed by a	In the rare case where construction was initially designed to avoid an area and exclusionary fencing had not been installed prior to the turtle nesting period, a qualified Biologist experienced in working with turtles will complete area searches immediately prior to construction to identify any potential nesting areas and nesting activity during the turtle nesting/hatching period of June 1 to September 15. Once the Biologist has cleared the area, install turtle appropriate exclusionary fencing during construction/ decommissioning within areas of concentrated turtle activity to limit road and construction-related mortality. Between June 1 and September 15, a qualified Biologist will search the area of disturbance immediately prior to vegetation clearing occurring between June 1 and September 15 to ensure no nests are present. If any confirmed, or suspected, turtle nests are identified within the vicinity of the project location, nest monitoring will be conducted twice per week during the construction and decommissioning phases to monitor the success of the nest and ensure its protection from construction impacts. Surveys will be completed during the turtle nesting/hatching season between June 1 and September 15. Daily monitoring of areas where active vegetation removal is occurring will be conducted by Environmental Monitor to ensure vegetation removal is occurring from within the delineated boundaries of the construction footprint and that area searches for turtle nests are conducted prior to vegetation removal	If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity. The radius of the buffer will range depending on the species, level of disturbance and landscape context which will be confirmed by a qualified Biologist, but will be protected by a minimum radius of 30m surrounding the nest. This minimum buffer is expected to provide protection of the nest from minor work, such as vegetation clearing, access road creation, and general heavy machinery usage or vehicle operation. The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation, however the outer limits of the buffer can be marked and UTM co-ordinates will be taken. Through consultation with CWS, a protective cage may be placed over the nest to protect it from predation. Repair any exclusionary fencing, if damaged or otherwise not functioning properly, as identified by the Environmental Monitor, project staff, or construction personnel.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	qualified biologist to determine if they are suitable turtle nesting habitat, and exclusionary fencing will be installed where necessary. Immediately prior to vegetation clearing, a qualified Biologist will conduct a search of the area to ensure no turtle SAR are present. Field crews will immediately stop work for all turtles observed within the construction area during searches and observe whether individuals vacate the construction area. Should turtles (except for nesting turtles) encountered not vacate the area, they will be relocated to an area of similar habitat at least 50m, but less than 300m to where they were found and in the same direction that they are facing/moving by a trained turtle handler. In the unlikely event that similar habitat is not found within those parameters, the turtle will be relocated to the next closest location of similar habitat. All required permits under Section 73(2) of SARA will be obtained prior to handling SAR. Removal of natural vegetation within suitable turtle hibernating habitat (wetland and aquatic habitat) will be completed by hand from October 15 to April 30, when feasible. Removal of vegetation using heavy machinery will be avoided within suitable turtle hibernating habitat (wetland and aquatic habitat) during the winter turtle and snake hibernation season, from October 15 to April 30. Best management practices for heavy machinery usage within wetlands will be used to reduce impact on overwintering turtles. Best management practices may include, but are not limited to, low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths and low tire inflation pressure. Heavy machinery will be required to cross wetlands during the turtle hibernation period of October 15 to April 30. Where these crossings are necessary, heavy machinery will avoid known hibernation sites as identified through baseline and pre-construction surveys and cross at the most narrow crossing location (as deemed reasonable) or as close to the edge as possible within the construction footprint. Best management practices for heavy machinery use in wetlands will also be applied, which may include, but will not be limited to, low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths and low tire inflation pressure.	occurring within June 1 and September 15.	
	Minimize vegetation removal and limit to within the identified construction footprint. The construction footprint will be clearly defined prior to vegetation removal. Delineation will be in the form of flagging tape, wooden stakes and/or silt fence barriers that will each provide clear identification of the construction limits. With respect to the latter (silt fence barriers), these will be implemented if sedimentation control is also required.	Regular environmental construction monitoring and routine inspections will be undertaken to ensure vegetation removal occurs within the delineated construction footprint.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any perimeter tree limbs or roots that are accidentally damaged by construction activities

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		Confirmation of delineation of the construction footprint will be completed by the Environmental or Engineering Monitor as per construction drawings.	using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS .
	Rehabilitation of temporary work areas to be advanced (within 1 year of completion of the construction/decommissioning phase) as appropriate to the type of habitat that was removed (*eg*. installation of artificial nesting structures) for these species. Although it is not possible to calculate the area of temporary disturbance associated with access roads due to micrositing and site-specific conditions, the temporary disturbance area associated with turbine construction/decommissioning is approximately 17.3ha.	Monitoring of the rehabilitation activities will be completed annually for the first 3 years to confirm vegetation has established.	If, after 3 years, vegetation has not established, additional rehabilitation activities will be undertaken in areas that remain deficient of established vegetation.
	The construction footprint will be micro-sited within the larger permitted project location to site *equipment* and infrastructure, such as roads, away from SAR habitats and residences and complex habitats.. If this is not possible, appropriate timing windows, clearing restrictions, and nest buffers will be applied (see above).	Regular environmental construction monitoring and routine inspections will be undertaken by the Environmental Monitor to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by Environmental or Engineering Monitor as per construction drawings.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS .
	Blasting, where required, will adhere to the *Blasting Plan*: • Blasting will only occur in areas that have already been cleared of vegetation; • The construction footprint will be microsited to reduce blasting to the greatest extent possible. • No blasting will occur in wetland or open aquatic habitats; • Blast mats will be used to control debris and sound generated from blasting; • Pre-blast species searches will be completed by a qualified Biologist prior to any blasting activity that occurs during the active period for turtles (April 15 to September 30). If a turtle SAR is encountered during a pre-blast search, it will be relocated to an area of similar habitat at least 50m from the area proposed for blasting; and • Follow proper drilling, explosive handling and loading procedures. If turtle SAR is encountered while nesting, all construction activities within 30m of nesting site will stop immediately until one of the following steps are taken:	Pre-blasting inspections by the Environmental Monitor will include ensuring blasting is occurring in areas where vegetation has already been cleared and ensuring blast mats are used appropriately to control debris generated from blasting. Between April 15 and September 30, a qualified Biologist will conduct an area search of the proposed blasting area to ensure no SAR turtles or nests are present. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in turtle ecology, identification, and impact assessments,	If turtle Species at Risk are encountered during a pre-blast search, work will be immediately stopped and observe whether the individuals vacate the area. Should observed turtles (except for nesting turtles) not vacate the area, a trained turtle handler can relocate the turtle to an area of similar habitat at least 50m, but less than 300m (and in the same direction that they are facing/moving), from the blasting location. A distance of 300m represents the approximate distance of the home range of the turtle SAR considered in this report. In the highly unlikely event that similar habitat is not found within those parameters, the turtle will be relocated to

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	▪ If the nest can be avoided during construction, it will be clearly delineated by a qualified Biologist and a nesting cage will be installed to protect from predation. ▪ If the nest cannot be avoided during the construction phase, a qualified Biologist will relocate the nest to an area with similar site conditions and soil quality outside the construction footprint and protect it from predators with a nesting cage, or if similar conditions are not available within reasonable proximity the eggs will be transported to an incubation facility for artificial incubation for the purpose of release at the original nest site. ▪ The installed nesting cage will be removed in advance of the anticipated hatching of the nest, prior to August 1, or the nest will be inspected daily from August 1 until September 15 to ensure cage is removed when hatchlings emerge.	or a field staff with demonstrated skills in visual identification of turtles, working under direct guidance from a qualified Biologist.	the next closest location of similar habitat Any suspected nesting female turtle (ie. terrestrial observation in May or June) that must be moved will be .moved to aquatic or wetland edge habitat to allow for water stores to be replenished before nesting activity is carried out. Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS . If any accidental damage to habitat occurs, rehabilitation will occur as appropriate to the type of habitat that was accidentally removed, within 1 year of the completion of the construction/ decommissioning phase.
	The following will be implemented with regards to dewatering activities: • Conduct a Detailed Water Taking Assessment based on geotechnical investigation results to determine anticipated groundwater taking quantities, groundwater quality and predicted zone of influence (ZOI) prior to dewatering. Based on this assessment site-specific mitigation measures and a monitoring program for groundwater dependent natural features within the anticipated ZOI will be provided. • In areas where Detailed Water Taking Assessment identifies connectivity between wetlands and dewatering sites, and dewatering volumes will be large enough to potentially result in wetland drawdown, dewatering will be avoided during reptile hibernation (October 15 to April 30). • To confirm the effectiveness of the above mitigation during watertaking activities, the following will occur during any dewatering activity:	During turtle hibernation period (October 15 to April 30), water levels of wetlands or aquatic feature experiencing dewatering activities where such activities may have an effect on hibernation habitat within wetlands or aquatic features will be monitored to observe any drawdown. Monitoring will include taking pre-, during and post-dewatering water levels at the feature. Develop and implement a detailed monitoring program to effectively assess impacts to wetlands through monitoring wells installed as required in accordance	If there is drawdown, stop construction work and determine mitigation appropriate to the site (e.g., redirect water or monitor rain events to see if water will be replenished) through discussions with a qualified Biologist and Hydrogeologist. In the event of a reduction in wetland water levels and/or water quantity, corrective measures will be undertaken in accordance with the recommendations of the Detailed Water Taking Assessment.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	• Monitor surface water levels in potentially affected groundwater dependent natural features prior to and during dewatering activities and compare to site-specific thresholds and early waning indicators for water level drawdown; • If drawdown is noted, stop construction work and determine mitigation appropriate to the site (i.e. redirect water, monitor rain events, etc.) through discussions with a qualified Biologist and Hydrogeologist. • Monitor shallow groundwater levels and vertical hydraulic conductivity in potentially affected groundwater-dependent natural features, where installation of mini-piezometer devices is possible (eg. areas with a minimum of 40 cm soil depth). Monitor groundwater levels prior to and during dewatering and compare to site-specific thresholds for groundwater level drawdown; • Visual inspection of vegetation health during construction; and • In the event surface water levels and/or groundwater level drawdown exceeds established site-specific thresholds mitigation measures may include where appropriate the diversion of groundwater dewatering discharge to affected feature following appropriate water quality control (eg. sediment tanks, filter bags, flow diversion, soaker hoses, etc.); • Limit duration of dewatering to as short a time frame as possible; • Limit dewatering quantities by implementing targeted groundwater cut-offs (i.e., slurry trench walls) under specific conditions, which will assist in stopping the infiltration of groundwater into the excavations.	with the Detailed Water Taking Assessment, within the predicted ZOI for changes in wetland water levels and/or water quality prior to, during, and post completion of construction.	Contingency measures including but not limited to the rescue of stranded turtles will also be developed. A post-construction monitoring program will be implemented to evaluate the effectiveness of mitigation measures.
	Ecopassages, or designated movement corridors, will be installed to limit road mortality. A minimum of 32 ecopassages will be installed using large corrugated steel or box culverts designs. In addition, 2 clear-span bridges will also be installed within the Project Area to facility turtle movement between habitats without crossing over a road. The locations of these have been based on a variety of site-specific conditions, including species observations, habitat, topography and expected road use. In areas where species concentrations are more likely, higher densities of ecopassages have been proposed. Pre-construction herpetofaunal surveys, as completed in 2015, will be repeated in 2016. The completion of additional pre-construction surveys will be used to locate a number of additional ecopassages if necessary. Motion-sensor cameras will also be installed at each ecopassage to document the use of ecopassages by turtle SAR. Movement fencing will be installed on either side of the ecopassage, providing site-specific	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of ecopassages/designated movement corridors and turtle mortality rates. These surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high turtle activity. In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. Motion-sensor cameras will be checked regularly during the active	Any documented road mortality of a SAR turtle species will trigger contingency measures and adaptive management. The selected approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species. Analysis of road mortality surveys, as well as Species Encounter Reports will determine high use areas and assist in identifying potential locations to consider retrofitting a road with an ecopassage, speed bump, or wildlife crossing sign.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	conditions allow installation, to encourage the use of the ecopassage. Chain-link fencing, in combination with geotextile fabric or wire meshing will be used to provide a barrier to juveniles, as this is the most effective type of movement fencing for turtles (McIntosh Perry 2013). Fencing will be constructed to be 60cm in height. An overhanging lip of 10-20cm on the species side should be used to prevent turtles from climbing the fence. Fences should be installed with a turn-around at the ends to assist in redirecting turtles away from any fence openings. Curving the fence inward may help to reduce access to these locations. Fencing should be buried into the ground /soil mounded along the bottom edge, where possible. If not possible, flush to the rock so that individuals cannot fit underneath.	period for turtles (April 15 to September 30) when construction is occurring. Periodically monitor (once in early spring after snow melt and once in summer/fall) to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high turtle activity has been identified in order to limit road mortality. All construction staff will be required to report to the Environmental Monitor any SAR turtle mortality or turtle activity on roads, as per the *SRP*.	If road mortality is noted, consideration will be given to closing specific access road segments to all non-essential vehicular traffic. Essential vehicular traffic will include any traffic required to meet permitting obligations or maintain infrastructure in good working order. The duration of access road closure will be determined by a qualified Biologist and will be based on the specific circumstances under which the impact has occurred. Repair any movement fencing, if damaged or otherwise not functioning properly, as identified by the Environmental Monitor, project staff, or construction personnel. A map and directions to the nearest turtle trauma centre and wildlife rehabilitation centre will be posted in all construction buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined. Signage will be considered to raise awareness and alert vehicle drivers that wildlife may be crossing the road using wildlife crossing signs. If implemented, signage will be placed at least 10m from the ecopassage openings to maintain the natural appearance. Additional site-specific mitigation measures may be identified through ongoing analysis of monitoring results and will be considered in an adaptive management approach in consultation with Commissioner and EC-CWS .
	Conduct construction and decommissioning activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from	No monitoring required for this mitigation measure.	No contingency plan required for this mitigation measure.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.		
	Clearly post speed limit signage along access roads (20km/hr), install speed bumps and post speed limits of 10 km/hr within areas of concentrated turtle activity and instruct all staff to be vigilant for wildlife while driving on site.		Reduced speed limits will be considered in any area where road mortality is apparent or in other areas identified as high-use through observations during the construction phase. A map and directions to the nearest turtle trauma centre and wildlife rehabilitation centre will be posted in all construction buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.
	Each construction crew that is completing site clearing or blasting will be accompanied by at least 1 qualified Biologist that will report directly to HIW and will be responsible for searching for, and relocating (when appropriate), SAR and ensuring all applicable environmental mitigation measures are implemented if a SAR individual or residence is encountered. Each Biologist working with a construction team will be equipped with a probe camera that will allow for more robust searches under rocks and crevices. The specific unit selected will have a minimum scope length to adequately search under and within gestation sites and surface crevices.		The presence of any SAR individual within the construction footprint that either cannot, or should not, be relocated (as per the mitigation measures contained herein), will trigger a temporary stop in local construction activity until that individual is no longer present.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	The Environmental Monitor to ensure the species observation log is kept up to date, procedures are followed and reporting is submitted to EC, as required. All construction staff will be required to report to the Environmental Monitor any SAR turtle mortality or turtle activity on roads, as per the *SRP*.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, HIW's environmental management team will discuss and revise the Protocol accordingly. The environmental team includes HIW's environmental manager and its construction and operations managers.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for this mitigation measure.	No contingency required for this mitigation measure.
	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of ecopassages/designated movement corridors and turtle mortality rates. This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit still	Road mortality surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high turtle activity.	Analysis of road mortality surveys as well as Species Encounter Reports will determine high use areas and assist in identifying potential locations to consider retrofitting an access road

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	relatively low traffic is expected. Motion-sensor cameras will also be installed at each ecopassage to document the use of ecopassages by turtle SAR. Periodically monitor (once in early spring after snow melt and once in summer/fall) to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high turtle activity has been identified in order to limit road mortality.	In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. All operations staff will be required to report any SAR turtle mortality or turtle activity on roads to the Environmental Monitor as per the SRP. Conduct inspections of ecopassages (once in early spring after snow melt and once in summer/fall) during road mortality surveys for a minimum of two years post-construction. Turtle monitoring will be conducted following methodology used in pre-construction surveys unless otherwise required through consultation with the appropriate agencies.	with an ecopassage, speed bump, or wildlife crossing sign. In the event that, after 2 years, herpetofauna surveys indicate notable changes in turtle abundance and species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted. A map and directions to the nearest turtle trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.		
Operations	Conduct maintenance activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.	No monitoring required for this mitigation measure.	No contingency plan required for this mitigation measure.
	Avoid all grading and structural access road maintenance activities during the turtle nesting/hatching period (June 1 to September 15). If there are serious safety concerns or other circumstances where road maintenance may be required during this period, Commissioner and EC-CWS will be consulted prior to the activity taking place.	If any confirmed turtle nests are identified within the vicinity of the Project Location, nest monitoring will be conducted twice per week during the operational phase to monitor the success of the nest and ensure its protection from operational impacts. Surveys will be completed during the turtle nesting/hatching season between June 1 and September 15.	If a nest is identified, it will not be marked using flagging tape or other similar material as this increases the risk of nest predation, however the UTM co-ordinates of the nest will be documented. Through consultation with CWS, a protective cage may be placed over the nest to protect it from predation.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Avoid maintenance of culverts where substrates at or below the frost line are disturbed during the turtle winter hibernation period (October 15 to April 30) to the extent possible, where suitable turtle hibernation habitat within wetlands or aquatic features has been identified. However, under emergency circumstances, a contingency mitigation strategy will be determined in consultation with Commissioner and EC-CWS.	A qualified Biologist will conduct an area search of the proposed area of maintenance activities to ensure no SAR turtles or nests are present. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in turtle ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual identification of turtles, working under direct guidance from a qualified Biologist.	In the highly unlikely case that a turtle is disturbed and brought out of hibernation, Commissioner and EC-CWS will be notified and the individual will be transported immediately to the nearest turtle trauma centre. A map and directions to the nearest turtle trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.
	Maintain speed limit signage (20km/hr), speed bumps installed along access roads with posted speed limits of 10 km/hr within areas of concentrated wildlife activity, instruct all staff to be vigilant for wildlife while driving on site. During the active turtle period (April 15 – September 30), all maintenance and biological crews (which will encompass the vast majority of vehicle traffic on access roads) will consist of two people, one of which will be trained to scan for SAR turtles that may be on the road. The trained wildlife spotter will use binoculars (when appropriate) and will continually scan the access road ahead of the vehicle to ensure no SAR turtles are near or on the road. If a SAR turtle is identified on the road, the vehicle will immediately be stopped and will continue around the turtle at a very low speed (e.g. less than 5 km/h), if there is enough room to safely proceed. All measures will be taken to ensure the safety of the turtle, which may include moving the turtle to a safe location off the road, and keeping vehicles at a safe distance to limit influence on natural movement behavior.	All operations staff will be required to report any SAR turtle mortality or turtle activity on roads to the Environmental Monitor. During the active turtle period (April 15 – September 30) all maintenance and biological crews will consist of two people, one of which will be trained to spot SAR turtles that may be on or near the road. The wildlife spotter will be trained to identify SAR turtles that may be on or near the road and will enforce speed limits on all access roads. An end of year report will be provided to EC-CWS, supplemented by an interim technical memo, on annual basis for the minimum 3 years of post-construction mortality surveys.	Reduced speed limits will be considered in any area where road mortality is apparent or in other areas identified as high-use through observations during the operational phase. All required permits under Section 73(2) of *SARA* will be obtained prior to handling SAR. Individuals will be handled by Qualified Biologists. In the event that, after 2 years, herpetofauna mortality rates and post-construction behaviour surveys indicate notable changes in turtle abundance and species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted.
	Restrict public use of access roads to minimize risk of road mortality and poaching through installation of electronic access gates in coordination with operations staff throughout the site. Gates will be installed at the entrances to the Project site and patrolling will be conducted.	Ensure regulation of the site, in coordination with operations staff.	No contingency required for this mitigation measure.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	Operations staff to ensure the species observation log is kept up to date and that procedures are followed. All operations staff will be required to report any SAR	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, the operations staff will discuss

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		turtle mortality or turtle activity on roads to the appropriate staff.	and revise the Protocol accordingly.
	Road mortality surveys will be conducted twice a week from May 1 to October 31 for a minimum of 3 years during the operational phase to monitor the effectiveness of ecopassages/designated movement corridors and turtle mortality rates. This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit still relatively low traffic is expected. Conduct the following post-construction monitoring to determine operational impacts, if any, on turtle SAR: • Two years of post-construction turtle behaviour surveys; • Prepare a 2-year report that will be provided to Commissioner and EC-CWS to determine if additional monitoring and/or mitigation measures are warranted; • Report confirmed SAR observed during post-construction monitoring to Commissioner and EC-CWS.	Road mortality surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high turtle activity. These surveys will be conducted twice a week from May 1 to October 31 for a minimum of 3 years post-construction to monitor turtle mortality rates and the effectiveness of mitigation measures (e.g. ecopassages, speed limits, speed bumps and wildlife crossing signs). In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. Motion-sensor cameras will be checked regularly from May 1 to October 31 for the first 3 years that the project is operational. All operations staff will be required to report any SAR turtle mortality or turtle activity on roads to the appropriate staff. Conduct inspections of ecopassages (once in early spring after snow melt and once in summer/fall) during road mortality surveys for a minimum of two years post-construction. Pre-construction herpetofauna surveys completed in 2015 will be repeated annually for a minimum of 3 years post-construction to ensure similar species abundance and diversity continue to be found in the areas of the HIWEC Project Area. An end of year report will be provided to Commissioner and EC-CWS, supplemented by an	Analysis of road mortality surveys will determine high use areas and assist in identifying potential locations to consider retrofitting an access road with an ecopassage, speed bump, or wildlife crossing sign. In the event that, after 2 years, herpetofauna surveys indicate notable changes in turtle abundance and species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted. A map and directions to the nearest turtle trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Required Mitigation, Monitoring and Contingency Measures for Turtle Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		interim technical memo, for the minimum 3 years, to determine if additional monitoring and/or mitigation measures are warranted. Turtle monitoring will be conducted following methodology used in pre-construction surveys unless otherwise required through consultation with the appropriate agencies.	
	Post SAR Fact Sheet in areas where on-site staff can become familiar with species that may be encountered.	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the Operations building and will be wildlife-proof.		

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
Pre-Construction Activities *Construction Activities* *Decommissioning Activities*	Preconstruction surveys will be undertaken to further identify key habitats such as hibernation, gestation, nesting areas for micrositing of *equipment* and infrastructure to avoid these areas or apply appropriate mitigation. Removal of all natural vegetation within suitable nesting habitat is proposed to occur outside the nesting/early neonate season of July 1 to October 15 within sandy habitats or shorelines. Removal of natural vegetation within suitable snake hibernation habitat (wetland habitat) will be completed by hand from October 15 to April 30, when feasible. Removal of vegetation using heavy machinery will be avoided within suitable snake hibernating habitat during the winter snake hibernating season, October 15 to April 30. Best management practices for heavy machinery usage within wetlands will be used to reduce impact on overwintering snakes. Best management practices may include, but are not limited to, low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths, and low tire inflation pressure. Heavy machinery will be required to cross wetlands during the snake hibernation period of October 15 to April 30. Where these crossings are necessary, heavy machinery will avoid known hibernation sites identified through baseline and preconstruction surveys and cross that most narrow crossing location (as deemed reasonable) or as close to the edge as possible within the construction footprint. Best management practices for heavy machinery use in wetlands will also be applied, which may include, but will not be limited to, low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths, and low tire inflation pressure.	Daily monitoring of areas where active vegetation removal is occurring will be conducted by the Environmental Monitor experienced in working with snakes to ensure vegetation removal is occurring from within the delineated boundaries of the construction footprint. Additional Environmental Monitors (e.g., Rattlesnake Monitors) will be present during key construction activities including vegetation removal, dewatering and blasting, and as required to ensure compliance with environmental requirements. A qualified Biologist or trained Environmental Monitor will drive along existing access roads and monitor for SAR each morning and afternoon. Should SAR be identified, SRP will be followed. During the active period for snakes, from April 15 to September 30, a Rattlesnake Monitor will complete area searches immediately prior to all vegetation removal and blasting to identify any snake activity.	If snake SAR are encountered during a pre-work search, work will be immediately stopped until a trained snake handler can relocate the snake to an area of similar habitat at least 50m, but less than 300m, from the area where the activity is occurring and in the same direction that they are facing/moving.. A distance of 300m is well within the home range of the snake SAR. In the highly unlikely event that similar habitat is not found within those parameters, the snake will be relocated to the next closest location of similar habitat.
	Minimize vegetation removal and limit to within the identified construction footprint. The construction footprint will be clearly defined prior to vegetation removal. Delineation will be in the form of flagging tape, wooden stakes and/or silt fence barriers that will each provide clear identification of the construction limits. With respect to the latter (silt fence barriers), these will be implemented if sedimentation control is also required.	Regular environmental construction monitoring and routine inspections will be undertaken by the Environmental Monitor to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by the Environmental or Engineering Monitor as per construction drawings.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any perimeter tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS .

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Rehabilitation of temporary work areas to be advanced (within 1 year of completion of the construction/decommissioning phase) as appropriate to the type of habitat that was removed for these species. Although it is not possible to calculate the area of temporary disturbance associated with access roads due to micrositing and site-specific conditions, the temporary disturbance area associated with turbine construction/decommissioning is approximately 17.3ha. A minimum of 24 gestation sites for Massasauga Rattlesnake and ten (10) hibernation sites for Eastern Hog-nosed Snake and Eastern Foxsnake will be established throughout the environmental assessment study area, with the potential for additional habitats to be created based on micrositing process. Each location will be placed within 1 km of a habitat suitable for hibernation and gestation, and locations will be preferentially chosen to occur in areas where potential hibernation/gestation sites were removed during construction. Where reasonable, sites will be on same side of infrastructure as hibernation habitat. Blast rock will be utilized to create suitable gestation, basking and retreat sites for Massasauga Rattlesnake. Hibernacula will be constructed in a south-facing, well-drained area and will consist of a large hole/pit dug below the frost line and within approximately 2m of the water table, filled with layers of rubble to create multiple chambers at various depths. Brush piles will be placed around the edge of artificial hibernaculas. Habitat creation will be either prior to the potential use of the habitat by the species or prior to the removal of the habitat, depending on the species and date of proposed removal. ▪ For Massasauga Rattlesnake, each gestation site will be created prior to May 1 (if habitat removal occurs between October 15 and April 30) or will be created prior to the removal of ay suitable nearby site that it is intended to replace (if the habitat is removed between May 1 and October 14).	Monitoring of the rehabilitation activities will be completed annually for the first 3 years to confirm vegetation has established.	If, after 3 years, vegetation has not established, additional rehabilitation activities will be undertaken in areas that remain deficient of established vegetation.
	The construction footprint will be micro-sited within the larger permitted project location to site *equipment* and infrastructure, such as roads, away from SAR habitats and residences and complex habitats. Where possible, avoid construction activities within the boundaries of suitable nesting habitat for Eastern Hog-nosed Snake. Transmission line poles are to be sited outside the boundaries of suitable nesting habitat for Eastern Hog-nosed Snake, if possible. If this is not possible, appropriate timing windows and clearing restrictions will be applied (see above).	Regular environmental construction monitoring and routine inspections will be undertaken by the Environmental Monitor to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by Environmental or Engineering Monitor as per construction drawings.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Blasting, where required, will adhere to the *Blasting Plan* including: • Blasting will only occur in areas that have already been cleared of vegetation; • The construction footprint will be microsited to reduce blasting to the greatest extent possible; • No blasting will occur in wetland or open aquatic habitats; • Blast mats will be used to control debris and sound generated from blasting; • Pre-blast species searches will be completed by a qualified Biologist prior to any blasting activity that occurs during the active period for snakes (April 15 to September 30). If a snake is encountered during a pre-blast search, it will be relocated to an area of similar habitat (in the same direction that they are facing/moving) at least 50m from the area proposed for blasting; and • Follow proper drilling, explosive handling and loading procedures.	Inspections by the Environmental Monitor will include ensuring blasting is occurring in areas where vegetation has already been cleared and ensuring blast mats are used appropriately to control debris generated from blasting. Between April 15 and September 30, a qualified Biologist will conduct an area search of the proposed blasting area to ensure no SAR snakes are present. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in snake ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual identification of snakes, working under direct guidance from a qualified Biologist.	If snake SAR are encountered during a pre-blast search, work will be immediately stopped until a trained snake handler will relocate the snake to a similar habitat at least 50m, but less than 300m, from the blasting location and in the same direction that they are facing/moving. In the highly unlikely event that similar habitat is not found within those parameters, the snake will be relocated to the next closest location of similar habitat. Repair any barrier fencing/boundary delineation materials if damaged. If any accidental damage to habitat occurs, rehabilitation will be advanced, as appropriate to the type of habitat that was accidentally removed, within 1 year of the completion of the construction/ decommissioning phase.
	The following will be implemented with regards to dewatering activities: • Conduct a Detailed Water Taking Assessment based on geotechnical investigation results to determine anticipated groundwater taking quantities, groundwater quality and predicted zone of influence (ZOI) prior to dewatering. Based on this assessment site-specific mitigation measures and a monitoring program for groundwater dependent natural features within the anticipated ZOI will be provided. • In areas where Detailed Water Taking Assessment identifies connectivity between wetlands and dewatering sites, and dewatering volumes will be large enough to potentially result in wetland drawdown, dewatering will be avoided during reptile hibernation (October 15 to April 30). • To confirm the effectiveness of the above mitigation during watertaking activities, the following will occur during any dewatering activity: • Monitor surface water levels in potentially affected groundwater dependent natural features prior to and during dewatering activities and compare to site-specific thresholds and early waning indicators for water level drawdown; • If drawdown is noted, stop construction work and determine mitigation appropriate to the site (i.e. redirect water, monitor rain events, etc.) through discussions with a qualified Biologist and Hydrogeologist.	During snake hibernation period (October 15 to April 30) where dewatering activities may have an effect on hibernation habitat located within wetlands or aquatic features, water levels of wetlands or aquatic features experiencing dewatering activities will be monitored to observe any drawdown. Monitoring will include taking pre-, during and post-dewatering levels at the feature. Develop and implement a detailed monitoring program to effectively assess impacts to wetlands through monitoring wells installed as required in accordance with the Detailed Water Taking Assessment, within the predicted ZOI for changes in wetland water levels and/or water quality prior to, during, and post completion of construction.	If there is drawdown, stop construction work and confirm that the drawdown is due to dewatering. If this is confirmed, then determine mitigation appropriate to the site (e.g., redirect water or monitor rain events to see if water will be replenished) through discussions with a qualified Biologist and Hydrogeologist. In the event of a reduction in wetland water levels and/or water quantity, corrective measures will be undertaken in accordance with the recommendations of the Detailed Water Taking Assessment. Contingency measures including but not limited to the rescue of stranded wildlife will also be developed. A post-construction monitoring program will be implemented to evaluate the

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	• Monitor shallow groundwater levels and vertical hydraulic conductivity in potentially affected groundwater-dependent natural features, where installation of mini-piezometer devices is possible (eg. areas with a minimum of 40 cm soil depth). Monitor groundwater levels prior to and during dewatering and compare to site-specific thresholds for groundwater level drawdown; • Visual inspection of vegetation health during construction; and • In the event surface water levels and/or groundwater level drawdown exceeds established site-specific thresholds mitigation measures may include where appropriate the diversion of groundwater dewatering discharge to affected feature following appropriate water quality control (eg. sediment tanks, filter bags, flow diversion, soaker hoses, etc.); • Limit duration of dewatering to as short a time frame as possible; • Limit dewatering quantities by implementing targeted groundwater cut-offs (i.e., slurry trench walls) under specific conditions, which will assist in stopping the infiltration of groundwater into the excavations.		effectiveness of mitigation measures.
	Ecopassages, or designated movement corridors, will be installed to limit road mortality. A minimum of 32 ecopassages will be installed using large corrugated steel or box culverts designs. In addition, 2 clear-span bridges will also be installed within the Project Area to facilitate snake movement between habitats without crossing over a road. The locations of these ecopassages have been based on a variety of site-specific conditions, including species observations, habitat, topography and expected road use. In areas where species concentrations are more likely , higher densities of ecopassages have been proposed. Pre-construction herpetofaunal surveys, as completed in 2015, will be repeated in 2016. The completion of additional pre-construction surveys will be used to locate a number of additional ecopassages if necessary. Motion-sensor cameras will also be installed at each ecopassage to document to the use by snake SAR. Movement fencing will be installed on either side of the ecopassage, providing site-specific conditions allow for effective installation, to encourage the use of the ecopassage by Massasauga. Chain-link fencing, in combination with geotextile fabric or wire meshing will be used. Fencing will be constructed to be 60cm in height. An overhanging lip of 10-20cm on the species side should be used to prevent snakes from climbing the fence. Fences should be installed with a turn-around at the ends to assist in redirecting snakes away from any fence openings. Curving the fence inward may help to reduce access to these locations. Fencing should be buried into the ground/soil mounded along bottom edge where possible. If not	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of ecopassages/designated movement corridors and snake mortality rates. In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. Motion-sensor cameras will be checked regularly during the active period for snakes (April 15 to September 30) when construction is occurring. These surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity. All construction staff will be required to report to the Environmental Monitor any SAR snake	Any documented road mortality of a SAR snake species will trigger contingency measures and adaptive management. The selected approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species. Analysis of road mortality surveys, as well as Species Encounter Reports will determine high use areas and assist in identifying potential locations to consider installing an additional ecopassage, speed bump, or wildlife crossing sign. If road mortality is noted, consideration will be given to closing specific access road segments to all non-essential vehicular traffic. Essential vehicular traffic will include any traffic required to meet permitting obligations or maintain infrastructure in good working order. The duration of access road closure will be determined by a qualified Biologist and will be based on the

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	possible, flush to the rock so that individuals cannot fit underneath.	mortality or snake activity on roads, as per the *SRP*.	specific circumstances under which the impact has occurred. If a mortality of Eastern Foxsnake is observed, movement fencing will be increased to 200cm in height to prohibit Eastern Foxsnake from gaining access to the road. Signage will be considered to raise awareness and alert vehicle drivers that wildlife may be crossing the road using wildlife crossing signs. If implemented, signage will be placed at least 10m from the ecopassage openings to maintain the natural appearance. Additional site-specific mitigation measures may be identified through ongoing analysis of monitoring results and will be considered in an adaptive management approach in consultation with Commissioner and EC-CWS . Repair any movement fencing, if damaged or otherwise not functioning properly, as identified by the Environmental Monitor, project staff, or construction personnel.
	Install exclusionary fencing around the extent of construction footprint that is adjacent to concentrated Massasauga activity areas during construction/decommissioning (where feasible), to limit road and construction-related mortality.	Additional Environmental Monitors (e.g., Rattlesnake Monitors) will be present during key construction activities including vegetation removal, dewatering and blasting, and as required to ensure compliance with environmental requirements.	If snake SAR are encountered, work will be immediately stopped until a trained snake handler will relocate the snake to an area of similar habitat at least 50m, but less than 300m, from where the activity is occurring. In the highly unlikely event that similar habitat is not found within those parameters, the snake will be relocated to the next closest location of similar habitat. Repair any exclusionary fencing, if damaged or otherwise not functioning properly, as identified by the Environmental Monitor, project staff, or

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
			construction personnel.
	Conduct construction and decommissioning activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.	No monitoring required for this mitigation measure.	No contingency plan required for this mitigation measure.
	Clearly post speed limit signage along access roads (20km/hr), install speed bumps and post speed limits of 10km/hr within areas of concentrated snake activity (see Map 21) and instruct all staff to be vigilant for wildlife while driving on site. Restrict public use of access roads to minimize risk of road mortality and poaching (installation of electronic access gate in co-ordination with staff throughout site). Install security cameras at entrances and at any known turtle nesting sites.	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of mitigation measures and snake mortality rates. These surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity. All construction staff will be required to report to the Environmental Monitor any SAR snake mortality or snake activity on roads, as per the *SRP*.	Analysis of road mortality surveys, as well as Species Encounter Reports, will determine high use areas and assist in identifying potential locations for installation of an additional ecopassage, speed bump, or wildlife crossing sign. Reduced speed limits will be considered in any area where road mortality is apparent or in other areas identified as high-use through observations during the construction phase.
	All construction vehicles and equipment that are parked overnight or left idle for over 1 hour within the Project Area between April 1 and November 30 will be surveyed for the presence of snakes before ignition.	All construction staff will be required to report to the Environmental Monitor any SAR snake mortality or snake activity on roads, as per the Sighting Response Protocol (Schedule H, below).	No contingency required for this mitigation measure.
	Each construction crew that is completing site clearing or blasting will be accompanied by at least 1 qualified Biologist that will report directly to HIW and will be responsible for searching for, and relocating (when appropriate), SAR and ensuring all applicable environmental mitigation measures are implemented if a SAR individual or residence is encountered. Each Biologist working with a construction team will be equipped with a probe camera that will allow for more robust searches under rocks and crevices. The specific unit selected will have a minimum scope length to adequately search under and within gestation sites and surface crevices.		The presence of any SAR individual within the construction footprint that either cannot, or should not, be relocated (as per the mitigation measures contained herein), will trigger a temporary stop in local construction activity until that individual is no longer present.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	The Environmental Monitor to ensure the species	If any of the requirements or procedures related to

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		observation log is kept up to date, procedures are followed and reporting is submitted to EC, as required. All construction staff will be required to report to the Environmental Monitor any SAR snake mortality or snake activity on roads, as per the *SRP*.	staff understanding or implementation are not effective or appropriate for specific circumstances, HIW's environmental team will discuss and revise the Protocol accordingly. The environmental team is made up of the environmental specialists from HIW and its general contractor.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for this mitigation measure.	No contingency required for this mitigation measure.
	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of ecopassages/designated movement corridors and snake mortality rates. This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit still relatively low traffic is expected. Motion-sensor cameras will also be installed at each ecopassage to document the use of ecopassages by snake SAR. Periodically monitor (once in early spring after snow melt and once in summer/fall) to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high snake activity has been identified in order to limit road mortality.	Road mortality surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity. In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. All operations staff will be required to report any SAR snake mortality or snake activity on roads to the Environmental Monitor as per the SRP. Conduct inspections of ecopassages (once in early spring after snow melt and once in summer/fall) during road mortality surveys for a minimum of two years post-construction. Snake monitoring will be conducted following methodology used in pre-construction surveys unless otherwise required through consultation with the appropriate agencies.	Analysis of road mortality surveys as well as Species Encounter Reports will determine high use areas and assist in identifying potential locations to consider retrofitting an access road with an ecopassage, speed bump, or wildlife crossing sign. In the event that, after 2 years, herpetofauna surveys indicate notable changes in snake abundance and species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted. A map and directions to the nearest trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor		

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	garbage receptacles will only be installed at the Operations building and will be wildlife-proof.		
Operational	Road mortality surveys will be conducted twice a week from April 1 to October 31 for a minimum of 3 years of the operational phase to monitor the effectiveness of ecopassages/designated movement corridors and snake mortality rates. This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit relatively low traffic is expected during summer months. Motion-sensor cameras will also be installed at each ecopassage to monitor the use by snake SAR. An end of year report will be provided to Commissioner and EC/CWS, supplemented by an interim technical memo on an annual basis for the minimum 3 year post-construction road mortality surveys. Periodically monitor (once in early spring after snow melt and once in summer/fall) to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high snake activity has been identified in order to limit road mortality. Conduct the following post-construction monitoring to determine operational impacts, if any, on snake SAR: • Two years of post-construction snake behaviour surveys; • Prepare a 2-year report that will be provided to Commissioner and EC-CWS to determine if additional monitoring and/or mitigation measures are warranted; • Report confirmed SAR observed during post-construction monitoring to *Commissioner* and EC-CWS.	Road mortality surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity. These surveys will be conducted twice a week from April 1 to October 31 for a minimum of 3 years post-construction to monitor snake mortality rates and the effectiveness of mitigation measures (e.g. ecopassages, speed limits, speed bumps and wildlife crossing signs). In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. Motion-sensor cameras will be checked regularly from May 1 to October 31 for the first 3 years the Project is operational. All operations staff will be required to report any SAR snake mortality or snake activity on roads to the appropriate staff. Conduct inspections of ecopassages (once in early spring after snow melt and once in summer/fall) during road mortality surveys for a minimum of two years post-construction. Pre-construction herpetofauna surveys completed in 2015 will be repeated annually for a minimum of 3 years post-construction to ensure similar species abundance and diversity continue to be found in the areas of the HIWEC Project Area. Each created gestation or hibernacula site will be	Analysis of road mortality surveys will determine high use areas and assist in identifying potential locations to consider installation of another ecopassage, speed bump, or wildlife crossing sign. If road mortality is noted, specific access roads will be restricted to essential vehicular traffic only. Essential vehicular traffic will include any traffic required to meet permitting obligations or maintain infrastructure in good working order. The duration of access road closure will be determined by a qualified Biologist and will be based on life cycle characteristics of the species of which the impact has occurred. Analysis of motion-detector camera monitoring of ecopassages will determine whether snake SAR actively use ecopassages, and may identify locations where modification to culvert design is required. In the event that, after 2 years, herpetofauna surveys indicate notable changes in snake abundance or species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted. A map and directions to the nearest trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		a snake monitoring location and will be assessed as above. An end of year report will be provided to Commissioner and EC-CWS, supplemented by an interim technical memo, for the minimum 3 years, to determine if additional monitoring and/or mitigation measures are warranted. Snake monitoring will be conducted following methodology used in 2015 pre-construction surveys unless otherwise required through consultation with the appropriate agencies. Monitoring will determine continued use of the area by snakes and whether avoidance behaviours are being exhibited.	
	Conduct maintenance activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.	No monitoring required for this mitigation measure.	No contingency plan required for this mitigation measure.

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Maintain speed limit signage (20km/hr), speed bumps installed along access roads and posted speed limits of 10 km/hr within areas of concentrated wildlife activity and instruct all staff to be vigilant for wildlife while driving on site. During the active snake period (April 15 – September 30), all maintenance and biological crews (which will encompass the vast majority of vehicle traffic on access roads) will consist of two people, one of which will be trained to scan for SAR snakes that may be on the road. The trained wildlife spotter will use binoculars and continually scan the access road ahead of the vehicle to ensure no SAR snakes are on or near the road. If a SAR snake is identified on the road, the vehicle will immediately be stopped and will continue around the snake at a very low speed (e.g. less than 5 km/h), if there is enough room to safely proceed. All measures will be taken to ensure the safety of the snake, which may include moving the snake to a safe location off the road and keeping vehicles at a safe distance to limit influence on natural movement behaviour.	Road mortality surveys will be conducted twice a week from May 1 to October 31 for a minimum of 3 years of the operational phase to monitor the effectiveness of ecopassages/designated movement corridors and snake mortality rates. These surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity. All operations staff will be required to report any SAR snake mortality or snake activity on roads to the appropriate staff. During the active snake period (April 15 – September 30) all maintenance and biological crews will consist of two people, one of which will be trained to spot SAR snakes that may be on or near the road. The wildlife spotter will be trained to identify SAR snakes that may be on or near the road and will enforce speed limits on all access roads. The end of year report to Commissioner and EC-CWS will be supplemented by an interim technical memo on an annual basis for the minimum 3 years of post-construction road mortality surveys.	Reduced speed limits will be considered in any area where road mortality is apparent or in other areas identified as high-use through observations during the operational phase. All required permits under Section 73(2) of *SARA* will be obtained prior to handling SAR. Individuals will be handled by Qualified Biologists. In the event that, after 2 years, herpetofauna surveys indicate notable changes in snake abundance or distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted.
	Avoid maintenance of culverts where substrates at or below the frost line are disturbed during the snake winter hibernation period (October 15 to April 30) to the extent possible, where suitable snake hibernation habitat within wetlands or aquatic features has been identified. However, under emergency circumstances, a contingency mitigation strategy will be determined in consultation with EC-CWS.	A qualified Biologist will conduct an area search of the proposed maintenance area to ensure no SAR snakes are present. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in snake ecology, identification, and	In the highly unlikely case that a snake is disturbed and brought out of hibernation, Commissioner and EC-CWS will be notified and the individual will be transported immediately to the nearest herpetofauna trauma centre. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		impact assessments, or a field staff with demonstrated skills in visual identification of snakes, working under direct guidance from a qualified Biologist.	be examined.
	Restrict public use of access roads to minimize risk of road mortality and persecution through installation of access gates in coordination with operations staff throughout the site. Gates will be installed at the entrances to the Project site and patrolling will be conducted.	Ensure regulation of the site, in coordination with operations staff.	Any documented road mortality of a SAR snake species will trigger contingency measures and adaptive management. The selected approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species. If road mortality is noted, consideration will be given to closing specific access road segments to all non-essential vehicular traffic. Essential vehicular traffic will include any traffic required to meet permitting obligations or maintain infrastructure in good working order. The duration of access road closure will be determined by a qualified Biologist and will be based on the specific circumstances under which the impact has occurred.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	Operations staff to ensure the species observation log is kept up to date and that procedures are followed. All operations staff will be required to report any SAR snake mortality or snake activity on roads to the appropriate staff.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, the operations staff will discuss and revise the Protocol accordingly.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for this mitigation measure.	No contingency required for this mitigation measure.
	Road mortality surveys will be conducted twice a week from April 1 to October 31 during the construction and decommissioning phases to monitor the effectiveness of ecopassages/designated movement corridors and snake mortality rates. This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit still relatively low traffic is expected.	Road mortality surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high snake activity.	Analysis of road mortality surveys as well as Species Encounter Reports will determine high use areas and assist in identifying potential locations to consider retrofitting an access road with an ecopassage, speed bump, or wildlife

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Mitigation, Monitoring and Contingency Measures for Snake Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Motion-sensor cameras will also be installed at each ecopassage to document the use of ecopassages by snake SAR. Periodically monitor (once in early spring after snow melt and once in summer/fall) to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high snake activity has been identified in order to limit road mortality.	In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. All operations staff will be required to report any SAR snake mortality or snake activity on roads to the Environmental Monitor as per the SRP. Conduct inspections of ecopassages (once in early spring after snow melt and once in summer/fall) during road mortality surveys for a minimum of two years post-construction. Snake monitoring will be conducted following methodology used in pre-construction surveys unless otherwise required through consultation with the appropriate agencies.	crossing sign. In the event that, after 2 years, herpetofauna surveys indicate notable changes in snake abundance and species distribution, Commissioner and EC-CWS will be consulted to determine if additional mitigation measures are warranted. A map and directions to the nearest trauma centre and wildlife rehabilitation centre will be posted in all operations buildings. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.		

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
Pre-Construction Activities *Construction Activities* *Decommissioning Activities*	Preconstruction surveys will be undertaken to further identify key habitats such as hibernation, gestation, nesting areas for micrositing of *equipment* and infrastructure to avoid these areas or apply appropriate mitigation. Any trees proposed for removal, and any suitable rock crevices in areas proposed for blasting during the bat roosting season (April 30 to September 1) will be searched for signs of maternity roosts by a qualified Biologist prior to any construction activities that may affect the habitat. Searches will initially consist of visual scans of the habitat for signs of use to determine the likelihood of occupancy. If habitat assessments confirm that a site is being used, or likely being used, evening exit surveys will be completed to confirm whether individuals are actively using a particular site. If an active roost site is found within the construction footprint: • A buffer will be implemented around the site. The radius of the buffer will range depending on the species, type of roosting (bachelor or day roosting versus maternity roosting), level of disturbance and landscape context, which will be confirmed by a qualified Biologist experienced in bat ecology. The UTM of the roost location will be recorded, and the limits of the buffer area will be clearly identified. • Since roost locations regularly move within a season, the removal of trees or blasting can occur once a qualified Biologist provides confirmation that the roost site is no longer being used, providing that disturbance activities occur within 24hrs as to not allow for re-occupation of the habitat. If habitat assessments and/or exit surveys indicate a site is not being used, there is no restriction on proposed activity.	Any trees proposed for removal, and any rock crevices in areas proposed for blasting during the bat roosting season (April 30 to September 1) will be searched for signs of maternity roosts by a qualified Biologist prior to any construction activities that may affect the habitat. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in bat ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual identification and acoustic monitoring of bats, working under direct guidance from a qualified Biologist. A qualified Biologist or trained Environmental Monitor will drive along existing access roads and monitor for SAR each morning and afternoon. Should SAR be encountered, SRP will be followed. Searches may be visual or may require exit surveys at dusk where signs of occupancy are noted or habitat provides ideal roost characteristics. Removal of trees or blasting can occur once a qualified Biologist provides confirmation that the roost site is no longer actively being used.	If an active roost site is found, a buffer area will be implemented around the site. The radius of the buffer will vary depending on the species, type of roosting (bachelor or day roosting versus maternity roosting), level of disturbance and landscape context, which will be confirmed by a qualified Biologist. The buffer will have a minimum radius of 10m and will be applied only when bats are present at the roost site. The UTM of the roost location will be recorded, and the limits of the buffer area will be clearly identified. If the qualified Biologist confirms that no bats are using the roost site, then blasting and/or vegetation removal can proceed.
	Minimize vegetation removal and limit to within the construction footprint. The construction footprint will be clearly defined prior to vegetation removal. Delineation will be in the form of flagging tape, wooden stakes and/or silt fence barriers that will each provide clear identification of the construction limits. With respect to the latter (silt fence barriers), these will be implemented if sedimentation control is also required.	Regular environmental construction monitoring and routine inspections will be undertaken to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by the Environmental	Repair any barrier fencing/boundary delineation materials if damaged. Prune any perimeter tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation

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Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		or Engineering Monitor as per construction drawings.	removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS.
	The construction footprint will be microsited within the larger permitted project location to site *equipment* and infrastructure, such as roads, away from SAR habitats and residences and complex habitats. If this is not possible, appropriate timing windows and clearing restrictions will be applied (see above). To prevent the spread of white nose syndrome, construction vehicles are to remain within the existing access routes and construction areas.	Daily monitoring of areas where active vegetation removal is occurring will be conducted by the Environmental Monitor. Regular environmental construction monitoring and routine inspections will be undertaken to ensure vegetation removal occurs within the delineated construction footprint. Confirmation of delineation of the construction footprint will be completed by Environmental or Engineering Monitor as per construction drawings.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS.
	Rehabilitation of temporary work areas to be advanced (within 1 year of completion of the construction/decommissioning phase) as appropriate to the type of habitat that was removed (*eg*. replant forested areas using native stock) for these species. Although it is not possible to calculate the area of temporary disturbance associated with access roads due to micrositing and site-specific conditions, the temporary disturbance area associated with turbine construction/decommissioning is approximately 17.3ha. Prior to the construction phase, erect a minimum of 30 artificial roosting structures within the project area, with the potential for additional habitats to be created based on the micrositing process. The artificial roosting structure may include bat houses and/or artificial bark. The location of artificial roosting structures will be preferentially chosen for areas away from turbines but may include locations around the substation, along portions of the access road or other site areas away from any infrastructure. Specific locations will be determined in consultation with EC. Suitable off-site locations will be considered, such as other reserve lands or through collaboration with Ontario Parks or other conservation organizations.	Monitoring of the rehabilitation activities will be completed annually for the first 3 years to confirm vegetation has stabilized.	If, after 3 years, vegetation has not established, additional rehabilitation activities will be undertaken in areas that remain deficient of established vegetation. Specific locations of roosting structures will be determined in consultation with EC.

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Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	Blasting, where required, will adhere to the *Blasting Plan* including: • Blasting will only occur in areas that have already been cleared of vegetation; • The construction footprint will be microsited to reduce blasting to the greatest extent possible; • Blast mats will be used to control debris generated from blasting; • Prior to blasting conducted between April 30 and September 1, a qualified Biologist will conduct an area search of the proposed blasting area to ensure no SAR bats are present in rock crevices; • Follow proper drilling, explosive handling and loading procedures; • Implement safe handling and storage procedures for all materials, including soluble substances used for blasting; • Remove all blasting debris and other associated equipment/products from the blast area.	Inspections by the Environmental Monitor will include ensuring blasting is occurring in areas where vegetation has already been cleared and ensuring blast mats are used appropriately control debris generated from blasting. A qualified Biologist will conduct an area search of rock crevices proposed for blasting between April 30 to September 1 to ensure no SAR bats are present. Qualified Biologists will be considered to be a professional biologist with demonstrated experience in bat ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual identification and acoustic monitoring of bats, working under direct guidance from a qualified Biologist.	Repair any barrier fencing/boundary delineation materials if damaged. Prune any tree limbs or roots that are accidentally damaged by construction activities using proper arboricultural techniques. Accidental damage to trees, or unexpected vegetation removal, may require re-planting of similar, native species. If re-planting is required, a re-planting strategy will be provided to Commissioner and EC-CWS. If any accidental damage to habitat occurs, rehabilitation will be advanced, as appropriate to the type of habitat that was accidentally removed, within 1 year of the completion of the construction/ decommissioning phase.
	Conduct construction and decommissioning activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.	No monitoring required for these mitigation measures.	No contingency plan required for these mitigation measures.
		The Environmental Monitor to ensure the species observation log is kept up to date, procedures are followed and reporting is submitted to EC, as required.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, HIW's environmental management team will discuss and revise the Protocol accordingly. The environmental team includes HIW's environmental manager and its construction and operations managers.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	Operations staff to ensure the species observation log is kept up to date and that procedures are followed. All operations staff will be required to report any	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, the operations staff will discuss and revise the Protocol accordingly.

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Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
		SAR turtle mortality or turtle activity on roads to the appropriate staff.	
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.		
Operational	Utilize a lighting scheme that will minimize continuous lighting and the use of bright lights throughout the Project Area to minimize attraction of SAR bats to lit structures (Rydell 1991). Lighting scheme to include the following, while still fulfilling minimum Transport Canada requirements: • Implement red LED flashing lights on turbines, • Light turbines and permanent met/communication towers to the minimum federal standards, • Ground-level lights (i.e. buildings, turbine bases, etc.) will be directed downward and shall use motion or heat sensors where practical and allowed by applicable codes and the authority having jurisdiction, • Use of high-intensity lighting or spotlights, if required, will be temporary and will be kept to a minimum, • Any internal nacelle lighting will only be used when occupied.	No monitoring required for these mitigation measures.	No contingency plan required for these mitigation measures.
	Implement a proactive approach to feathering turbine blades below the manufacturer's recommended cut-in speed. Feathering refers to the act of pitching turbine blades by 90°, parallel to the wind or turning the turbine nacelle so that the blades are facing away from the wind. Feathering is an effective approach to minimize blade rotation in low wind speeds.	Conduct 3 years of post-construction bat mortality monitoring following *Bats and Bat Habitats: Guidelines for Wind Power Projects* (OMNR 2011a). An end of year report to Commissioner and EC-CWS will be supplemented by an interim technical memo on an annual basis for 3 years of bat mortality monitoring.	A report outlining the methods employed and the results of monitoring will be prepared and submitted to Commissioner and EC-CWS on an annual basis to determine if additional monitoring and/or mitigation measures are warranted. Consider changes in turbine operations (e.g., changes in cut-in speed, selective shutdown of specific turbines at key times of year or under certain weather conditions) during periods of high mortality.
	Vegetation trimming will be limited to areas that have been previously cleared during construction. Schedule trimming of any necessary vegetation removal during routine maintenance activities to occur outside of the overall bat roosting season, from April 30 to September 1. If any trees	If vegetation trimming is to occur within the bat roosting season (April 30 to September 1), a qualified Biologist will search each tree for signs of a bat roost prior to vegetation maintenance.	Prune any tree limbs or roots using proper arboricultural techniques. If an active roost site is found, a buffer area will be implemented around the site. The radius of the

SCHEDULE G

ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	must be trimmed during the bat roosting season (April 30 to September 1) during the operation of the project, each tree will be searched for signs of maternity roosts by a qualified Biologist prior to removal. If an active maternity roost is found, removal activities will be scheduled after the bat roosting season (April 30 to September 1) or once a qualified biologist has confirmed the tree is no longer being actively used as a roost. If any suitable hazard tree, such as a tree which poses an immediate safety risk to individuals and/or a risk to the functionality of project equipment, is identified, the tree may be removed at any time through consultation with Commissioner and EC-CWS. The need for additional mitigation measures or permits in these circumstances will be addressed on a site-specific basis.	Qualified Biologists will be considered to be a professional biologist with demonstrated experience in bat ecology, identification, and impact assessments, or a field staff with demonstrated skills in visual identification and acoustic monitoring of bats, working under direct guidance from a qualified Biologist. Monitoring of artificial roosting structures will take appropriate precautions before and after each monitoring event to prevent spread of white-nose syndrome.	buffer will vary depending on the species, type of roosting (bachelor or day roosting versus maternity roosting), level of disturbance and landscape context, which will be confirmed by a qualified Biologist experienced in bat ecology. The buffer will have a minimum radius of 10m and will be applied only when bats are present at the roost site. This minimum buffer is expected to provide protection of the roost site from minor work, such as vegetation clearing and general heavy machinery usage or vehicle operation. The UTM of the roost location will be recorded, and the limits of the buffer area will be clearly identified. If the qualified Biologist confirms that no bats are using the roost site, vegetation removal can proceed. If evidence of white-nose syndrome is detected during monitoring events, reporting will be made to MNRF.
	Develop and implement Sighting Response Protocol (as set out in Schedule H below).	Operations staff to ensure the species observation log is kept up to date and that procedures are followed. All operations staff will be required to report any SAR bat mortality or bat activity to the appropriate staff.	If any of the requirements or procedures related to staff understanding or implementation are not effective or appropriate for specific circumstances, the operations staff will discuss and revise the Protocol accordingly. Any selected adaptive management approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating against potential impacts to the species.
	Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.	No monitoring required for this mitigation measure.	No contingency required for this mitigation measure.
	The following mitigation measures regarding post-construction monitoring will be implemented:	Conduct 3 years of post-construction bat mortality monitoring following *Bats and Bat Habitats:*	A report outlining the methods employed and the results of monitoring will be prepared and

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ENDANGERED SPECIES MITIGATION, MONITORING AND CONTINGENCY MEASURES

Mitigation, Monitoring and Contingency Measures for Bat Species at Risk			
Physical Activity	**Mitigation**	**Monitoring**	**Contingency**
	• Develop and implement a follow-up and monitoring plan, which includes a post-construction bat mortality and disturbance monitoring program consistent with *Bats and Bat Habitats: Guidelines for Wind Power Projects* (OMNR 2011b); • Report the findings of the post-construction monitoring program to *Commissioner* and EC-CWS as required on an annual basis; • Implement adaptive management techniques, such as operational mitigation, as determined appropriate through post-construction monitoring; • Report confirmed Species at Risk mortalities during post-construction monitoring to *Commissioner* and EC-CWS within 48hrs of a confirmed species identification.	*Guidelines for Wind Power Projects* (OMNR 2011b). Pre-construction bat acoustic monitoring surveys completed in 2011 will be repeated annually for 2 years post-construction to ensure similar species abundance and diversity continue to be found in the HIWEC Project Area. The 2-year report will be provided to Commissioner and EC-CWS to determine if additional monitoring and/or mitigation measures are warranted.	submitted to Commissioner and EC-CWS on an annual basis to determine if additional monitoring and/or mitigation measures are warranted. Consider changes in turbine operations (e.g., changes in cut-in speed, selective shutdown of specific turbines at key times of year or under certain weather conditions) during periods of high mortality. Quantifying changes in local bat populations, as a result of the operation of this Project, will be difficult to determine based on the dramatic population declines of bat SAR as a result of white-nose syndrome. The effects of this disease are already evident when comparing data from 2011 to 2013. Despite this difficulty in quantifying changes that may be attributed to the operating Henvey Inlet Wind Energy Centre, 2 years of acoustic monitoring will be completed and compared to pre-construction results. Results will be discussed with Commissioner and EC-CWS to determine if additional mitigation measures are warranted through an adaptive management approach.
	Conduct maintenance activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.	No monitoring is required for these mitigation measures.	No contingency plan is required for these mitigation measures.
	To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.		

SCHEDULE H

REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning

1. General Mitigation Measures Applicable to All *Pre-Construction Activities, Construction Activities and Decommissioning Activities*:

- Prior to the commencement of any *Pre-Construction Activities*, develop and submit to the *Commissioner*, a spill prevention and response plan ("**SPRP**") prepared by a qualified professional that employs best management practices to prevent and contain any *contaminants* and to avoid and/or reduce contamination during any *Construction Activities* or *Decommissioning Activities* including:
  - In the event of a *contaminant* spill, all work will stop in the immediate area until *HIW* has done everything practicable to prevent, eliminate and ameliorate any *adverse effect*.
  - Spill control and containment equipment/materials shall be readily available on site.
  - Protocols for access to additional spill clean-up materials, if needed.
  - Contaminated materials to be handled in accordance with any relevant *Commissioner*, federal and provincial guidelines and standards.
  - Use of material safety data sheets to provide information on proper handling of chemicals readily available for the types of chemicals that will be used on-site.
  - Proper training of staff on associated emergency response and spill clean-up procedures.
  - Spills to be cleaned up as soon as reasonably possible, with contaminated soils removed to a licensed disposal site, if required.
  - Materials contained in spill clean-up kits are restocked as necessary.
  - Any soil encountered during excavation that has visual staining or odours, or contains rubble, debris, cinders or other visual evidence of impacts to be analyzed to determine its quality in order to identify the appropriate disposal method.
  - Spill reporting procedures to meet relevant *Commissioner*, federal, provincial and local requirements.
- Prior to the commencement of any *Construction Activities*, develop and submit to the *Commissioner*, an environmental protection plan ("**EPP**") prepared by a qualified professional that employs best management practices to avoid and/or reduce potential *environmental effects* during the *Construction Activities* or *Decommissioning Activities* including: traffic management plan; waste management plan; *SPRP*; blasting plan; rehabilitation plan; weed management plan; construction dewatering and discharge plan; erosion and sediment control plan; wildlife management plan; SAR Adaptive Management Plan; and archaeology and cultural resources management plan. The *EPP* will have regard to the *Regime* and the terms and conditions of this *Permit*.
- Implement the *SPRP* and the *EPP* and adhere to the requirements of all component plans.
- Apply the following general mitigation measures during the *Pre-Construction Activities*, *Construction Activities* and *Decommissioning Activities* to avoid contamination:
  - Ensure machinery is maintained free of fluid leaks.
  - Site maintenance, vehicle maintenance, vehicle washing and refuelling to be done on spill pads in specified areas at least 30 m away from wetlands and/or waterbodies.
  - Store any stockpiled materials at least 30 m away wetlands and/or waterbodies.
  - Store any *contaminants* (e.g., oil, fuels and chemicals) in designated areas using secondary containment, where necessary.
  - Equip vehicles with effective muffler and exhaust systems.
  - Avoid unnecessary idling of engines.
  - Ensure that construction equipment is frequently maintained and kept in good working condition.
  - Ensure that noise emissions from construction equipment do not exceed Ministry of the Environment and Climate Change Publication "NPC-115 Maximum Noise Emission Levels for Typical Construction Equipment" and manufacturer recommendations.
  - Use and maintain emission control devices on motorized equipment (as provided by the manufacturer of the equipment) to minimize the emissions so that they remain within industry standards. Heavy equipment and machinery to be used within operating specifications.
- Clearly define construction footprint area during any *Pre-Construction Activities*, *Construction Activities* and *Decommissioning Activities*. Delineation will be in the form of flagging tape, wooden stakes and/or silt fence barriers that will each provide clear identification of the construction limits. Silt fence barriers will be implemented if sedimentation control is required in accordance with the erosion and sediment control plan made pursuant to this *Permit*.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Vegetation removal will be minimized to the extent reasonably possible and limited to the defined construction footprint area.
• Clearly post speed limit signs along access roads (20 km/hr), install speed bumps and post speed limits of 10 km/hr within areas of concentrated wildlife activity and instruct all staff to be vigilant for wildlife while driving on site.
• Conduct all *Pre-Construction Activities*, *Construction Activities* and *Decommissioning Activities* during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum.
2. Soils/Terrain
• Strip and store topsoil (where present) from temporary work areas separately from subsoils and maintain for reclamation/rehabilitation use after construction.
• Where topsoil quality has been compromised, import topsoil for any reclamation activities in accordance with the *EPP*.
• Minimize the size of cleared areas to limit the area of exposed soil.
• Re-vegetate or stabilize exposed sites as soon as possible following disturbance using species native to the area to limit the duration of soil exposure.
• Divert access road runoff through drainage ditches directed into vegetated areas or through environmental protection measures (such as sediment traps, rock flow check dams, sediment barriers, etc.) to ensure that exposed soils or road materials are not transported into waterbodies or wetlands. Ditches >5% in slope may require lining with appropriate sized rip rap to protect against erosion and also slow the flow velocity.
• Grade disturbed/remediated slopes or stockpiles to a stable angle to avoid slope instability and reduce erosion.
• Grade soil stockpiles by mechanical means to compact the soil and limit the erosion. Tracks of machinery should be perpendicular to the slope of the pile to reduce the flow velocity of rainfall over the stockpile.
• Identify unstable rock structures and sensitive soils through field investigation prior to construction. If any areas of concern are identified, design modifications may be implemented (as required) to minimize potential erosion, settlement, slope instability, foundation failure or rock fall hazards as a result of construction.
• Keep all equipment within identified work areas to minimize disturbance of adjacent soils.
• Restrict construction equipment to designated controlled vehicle access routes to minimize the potential for soil compaction and to minimize vehicle traffic on exposed and/or sensitive soils.
• Investigate alternative rock-excavating techniques (i.e., mechanical means) to reduce blasting to the greatest extent possible..
• Identify unstable rock structures through field investigations prior to construction. If any areas of concern are identified, design modifications may be implemented (as required) to minimize potential erosion, settlement, slope instability, foundation failure or rock fall hazards as a result of construction.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
3. Groundwater
• Minimize paved surfaces and design roads to promote groundwater infiltration. • Implement groundwater infiltration techniques to the maximum extent reasonably possible including: ▪ Releasing water to vegetated areas; ▪ Lining ditches with permeable material (rather than clay, for example); and ▪ Groundwater should remain on-site and not disposed of off-site (unless contaminated). • Direct groundwater discharge water to natural infiltration systems. • Limit duration of dewatering to as short a timeframe as reasonably possible. • Conduct a Detailed Water Taking Assessment based on geotechnical investigation results to determine groundwater taking quantities, groundwater quality and predicted ZOI prior to construction. Based on this assessment, site-specific mitigation measures and monitoring program for groundwater dependent natural features within the anticipated ZOI will be provided. Measures with respect to SAR mitigation and water taking are described in Schedule G. • Limit dewatering quantities by implementing targeted groundwater cut-offs (i.e., slurry trench walls). • Construct new water supply wells according to relevant regulatory standards and be operated in a manner to conserve water (i.e., excessive water taking is avoided). • Where existing vegetation is present, leave a layer of vegetation intact between the outfall and receiving waterbody to provide additional water dispersion and entrapment of suspended solids. Where vegetation is not present, appropriate erosion and sediment control measures will be utilized. • No direct discharge of groundwater to Georgian Bay, Key River, Henvey Inlet or any surface water feature outside the *Energy Centre* will occur without acquiring any applicable approvals. • In the event an impact to a private water well is detected, the well owner will be provided with a potable supply of water and maintain the supply until water quality conditions are comparable to baseline conditions. In the event water quality does not recover to baseline conditions, the impacted well will be modified (i.e., deepened) or a new well be constructed that is sufficient to provide the resident with a potable supply of water similar in quantity and quality of baseline conditions. • In the event of a *contaminant* release that has potential to cause harm to an individual if consumed, the spill exceeds 100 L in volume and is located less than 500 m from a private water well, the potentially affected well(s) will be included in a well monitoring program that includes water quality sampling for the suspected *contaminant*. In the event an impact to a private water well is detected the well owner will be provided with a potable supply of water and maintain the supply until water quality conditions are comparable to baseline conditions. In the event water quality does not recover to baseline conditions, the impacted well will be modified (i.e., deepened) or a new well be constructed that is sufficient to provide the resident with a potable supply of water similar in quantity and quality of baseline conditions.
4. Wildlife/Wildlife Habitat
• Vegetation rehabilitation will be advanced within all temporary construction/decommissioning areas as appropriate to the type of habitat that was removed (e.g., replant forested areas using native stock) within one (1) year of the completion of the construction/decommissioning phase. In order to enhance insect prey populations preferred by bird SAR (*ie*. Canada Warbler and Olive-sided Flycatcher), planting plans for the rehabilitated areas will include flowering herbaceous plants that are known to occur within study area. Prior to removal, habitat type and conditions will be documented. • Where construction activities occur within 30 m of important wildlife habitat, install and maintain construction fencing (or similar delineation device) to clearly define the construction disturbance area and prevent accidental damage to vegetation.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning

- Fell trees toward the construction footprint area to reduce damage to adjacent vegetation being retained.

- The construction footprint will be microsited to reduce blasting to the greatest extent possible.
- Blasting will be conducted in accordance with the blasting plan made pursuant to this *Permit* including:
  - Pre-blasting searches of wildlife by a qualified biologist, and adjust activities accordingly if wildlife are encountered (i.e., delay blasting activities, relocate wildlife, etc.); and
  - Ensuring wildlife (e.g., birds flying over) is not in the blasting zone prior to detonation. If wildlife is encountered in the blasting zone, postpone detonation until the wildlife has vacated the area.

- If vegetation must be removed during the overall bird nesting season of April 1 to August 31, the following mitigation will apply, in accordance with the *Migratory Birds Convention Act*:
  - A qualified avian biologist will be on-site during clearing activities to oversee vegetation removal and conduct nest surveys as required.
  - Within complex habitats,* removal of all vegetation will occur outside the core bird nesting season of May 1 to July 28, when a minimum of 60% of nesting activity occurs in each of the 3 habitat types, as per Environment Canada's Nesting Calendar for Zone C3 (Environment Canada 2014d).
  - From April 1st to April 30th, nest and nesting activity searches will be conducted in areas defined as simple habitat* immediately prior to vegetation clearing.
  - From May 1st to July 28th, nest and nesting activity searches will be conducted in simple habitat immediately prior to vegetation clearing. Vegetation clearing will not occur within complex habitats during this period.
  - From July 29th to August 31st, nest and nesting activity searches will be conducted in simple habitat immediately prior to vegetation clearing.
  - If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity. The radius of the buffer will range depending on the species, level of disturbance and landscape context, which will be confirmed by a qualified biologist (Environment Canada 2014d), but will protect a minimum area of 10m surrounding the nest.
  - The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation; however, the outer limits of the buffer can be marked (EC, 2014b) and UTM coordinates will be taken.

**Note: Complex habitats refer to habitats that contain a variety of individual nesting sites in a range of habitats. For instance, forest and shrub-dominated communities may contain nesting spots within the canopy, sub-canopy, shrub layer and ground layer, where identification of active nests may be difficult. Simple habitats refer to habitats that contain few likely nesting spots or a homogenous community where identification of active nests can be completed with confidence. For instance, open rock barrens or other sparsely vegetated habitats may be considered simple habitats, depending on site-specific vegetation cover.*

- The construction footprint area will be microsited to construct *equipment* and infrastructure, such as roads, away from species-at-risk habitats and residences and complex habitats, by a qualified biologist.

- With respect to SAR: each construction crew completing site clearing or blasting will be accompanied by at least one qualified Biologist that will report directly to HIW and will be responsible for searching for, and relocation (when appropriate), SAR and ensuring all applicable environmental mitigation measures are implemented if a SAR individual or residence is encountered.
  - Each Biologist working with a construction team will be equipped with a probe camera for searching under rocks or in crevices.
  - The specific unit selected will have a minimum scope length to adequately search under, and within, gestation sites and surface crevices.

The presence of any SAR individual within the construction footprint that either cannot, or should not, be relocated (as per the mitigation measures in Schedule G), will trigger a temporary stop in local construction activity until no longer present.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Within those areas that provide confirmed and/or likely turtle nesting habitat (i.e., within sandy habitats, shorelines, or wetlands where turtle nesting activity has been observed or suitable habitat is within an area with concentrated turtle observations) and that are identified to be cleared of vegetation: ▪ Construction will avoid suitable nesting areas between June 1 and September 15. ▪ If areas are unavoidable, exclusionary fencing will be installed prior to the turtle nesting/hatching period of June 1 to September 15; ▪ In the rare case where construction initially avoided an area and exclusionary fencing had not been installed prior to the turtle nesting period, a qualified biologist will complete area searches immediately prior to construction to identify any potential nesting areas and nesting activity during the turtle nesting/hatching period of June 1 to September 15; ▪ If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity. The radius of the buffer will range depending on the species, level of disturbance and landscape context, which will be confirmed by a qualified biologist. The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation; however, the outer limits of the buffer can be marked and UTM coordinates will be taken; and ▪ Once the biologist has cleared the area, install turtle appropriate exclusionary fencing during construction/decommissioning within areas of concentrated turtle activity to limit road and construction-related mortality.
• Removal of natural vegetation using heavy machinery will be avoided within suitable turtle and/or snake hibernating habitat (aquatic habitats or wetlands) during the winter turtle and snake hibernation season, from October 15 to April 30. If this is not possible, the following will occur: ▪ Removal of natural vegetation within suitable turtle and snake hibernating habitat (wetland and aquatic habitat) will be completed by hand from October 15 to April 30, when feasible; ▪ If vegetation clearing must occur within suitable turtle and snake hibernating habitat (wetland and aquatic) through use of heavy machinery between October 15 and April 30, known hibernation sites (as identified through baseline and pre-construction surveys) will be avoided. Best management practices for heavy machinery usage within wetlands will be used to reduce impact on overwintering turtles (which may include but are not limited to low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths and low tire inflation pressure); and
▪ Heavy machinery will be required to cross wetlands during the turtle and snake hibernation period of October 15 to April 30. Where crossings are necessary, heavy machinery will avoid known hibernation sites as identified through baseline preconstruction surveys and cross at the most narrow crossing location (as deemed reasonable) or as close to the edge as possible within the construction footprint. Best management practices for heavy machinery use in wetlands will be applied (which may include but are not limited to low ground pressure equipment, wide tires, rubberized tracks, swamp mats, lightweight equipment, varying paths and low tire inflation pressure).
• Vegetation removal will be conducted utilizing a feller buncher where vegetation will be cut close to the root and laid down along the side of the removal area. Trees/shrubs will be de-limbed and hauled off-site on a skidder.
• Install ecopassages or designated movement corridors to limit road mortality of reptiles (as set out in Schedule G).
• Develop and implement a Sighting Response Protocol ("***SRP***") in the Wildlife Management Plan which will include: ▪ Education of all on-site staff about SAR that may be encountered and what to do if any are encountered; ▪ Details on what to do if SAR are encountered, including: immediate stop in construction activity within 10m of an observation of a Species at Risk until a qualified Biologist can confirm the species has vacated the construction disturbance footprint. In lieu of calling a Biologist, work can be resumed after a 24hr period if no evidence of the species exists within the immediate area of previous observation. If the species still exists within the immediate area after 24hrs, a qualified Biologist will be contacted to provide appropriate direction; ▪ For animals in immediate danger, handling procedures will be established for designated personnel (i.e., Environmental Monitor, qualified Biologist) in the event that a SAR needs to be moved out of potential harm; ▪ Complete Species Encounter Reports and maintain a species observation log to track species observations during the construction/decommissioning phase of the project so that adaptive management can be applied based on species concentrations; ▪ All construction staff will be required to report to the Environmental Monitor any SAR mortality; ▪ All required permits under Section 73(2) of *SARA* will be obtained prior to handling SAR; and ▪ Reporting procedures (e.g. frequency to the *Commissioner* and EC-CWS).
▪ Post SAR Fact Sheet in areas where on-site staff can become familiar with possible species encounters.
• Install movement fencing in areas of high turtle and/or snake crossing activity or wildlife mortality. Monitor locations where fencing is installed to ensure that it is in good repair.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Avoid driving on access roads in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn. Travel at night along access roads will only occur in emergency situations..
• To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the operations building and will be wildlife-proof.
5. Vegetation and Ecological Communities
• An area of disturbance will be delineated to ensure that work does not occur outside the construction footprint.
• Fell trees toward the construction footprint area to reduce damage to adjacent vegetation being retained.
• Vegetation rehabilitation will be advanced within all temporary construction/decommissioning areas as appropriate to the type of woodland or wetland that was removed (e.g., replant forested areas using native stock replant swamp areas using native stock, consider transplanting native wetland species into temporarily disturbed areas suitable for wetland planting) within one (1) year of the completion of the construction/decommissioning phase. For areas that will be temporarily disturbed during construction/decommissioning: ▪ document habitat type and conditions prior to removal; ▪ transplanting of species will occur for species that would have a high probability of survival success (ie. tree seedlings); ▪ a Biologist will ensure conditions of rehabilitated area contain suitable soil and moisture conditions for replanting/transplanting of native tree/shrub/herbaceous stock; ▪ in areas where soils are absent (ie. rock barrens), if the original habitat conditions was bare rock, no replanting will occur. Should soils be absent in areas that originally contained vegetation, grading will occur to establish moisture conditions suitable for moss mats.
• In order to enhance insect prey populations preferred by bird SAR (*ie*. Canada Warbler and Olive-sided Flycatcher), planting plans for the rehabilitated areas will include flowering herbaceous plants that are known to occur within study area.
• Where excavation for construction of access roads, wind turbine generators or collector lines is required within the rooting zone of trees (i.e., within 1 m of the dripline), implement proper root pruning measures to protect tree roots.
• Site permanent infrastructure outside of wetlands to the extent reasonably possible. Where excavation of a wetland cannot be avoided, the area of disturbance will be delineated to ensure that work does not occur outside the construction footprint area.
• Where construction activities occur within 30 m of a wetland, install and maintain construction fencing (or similar delineation device) to clearly define the construction footprint area to prevent accidental damage to vegetation.
• Use best management practices to maintain current drainage patterns, including: ▪ Minimize paved surfaces and design roads to promote infiltration; ▪ Limit changes in land contours to the maximum extent possible; and ▪ Ensure roadway culverts are designed and installed to maintain existing drainage patterns.
• Use water as a dust suppressant, as needed, along areas where construction activities are located within 5m of a wetland.
• In the event that dust accumulates on leaves of wetland plants, which may reduce photosynthesis, water will be used to wash dust off of vegetation.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
6. Surface Water
• Use temporary crossing structures or other practices to cross waterbodies with steep and highly erodible (e.g., dominated by organic materials and silts) banks and beds. • Grading and Excavation ▪ Grade disturbed/remediated slopes or stockpiles to a stable angle to avoid slope instability and reduce erosion. ▪ Where construction activities occur within 30 m of a waterbody, use standard best management practices to maintain current existing drainage patterns, including: ▪ Limit changes in land contours to the maximum extent reasonably possible. ▪ Ensure roadway culverts are designed and installed to maintain existing drainage patterns. ▪ Where installation of a flow equalizing culvert is proposed, appropriate erosion control measures (eg. rip rap, seeding) will be installed at the ends of each culvert to prevent erosion which can change land contours. • Equipment Use ▪ In order to avoid compacting or hardening of natural ground surface, and to avoid movement of machinery on sensitive slopes, restrict construction equipment to designated controlled vehicle access routes and to within identified work areas. ▪ Whenever possible, operate machinery from outside the waterbody and on land above the high water mark or on ice in a manner that minimizes disturbance to the banks and bed of the waterbody. ▪ Limit machinery fording (if required) to only the amount necessary and only outside of sensitive time periods and upon consultation with a qualified Environmental Monitor. If repeated fording of the waterbody is required, construct a temporary crossing structure (e.g., jersey bridge, swamp mats). • Water Quality ▪ Turbid water shall not be discharged to a watercourse or wetland. ▪ Vegetation management will be done using mechanical techniques rather than herbicides. ▪ Install and maintain sediment and erosion controls such as silt fence barriers, rock flow check dams, compost filter socks or approved alternative along the edge of the construction footprint area if within 30 m of a wetland to minimize potential sediment loading to the feature.
• Material Stockpiling and Handling ▪ Stabilize and store stockpiled materials (topsoil, grubbed materials) above the high water mark and 30 m away from wetlands and waterbodies. Transmission and collector poles or other structures will be placed above the normal high water mark. ▪ Soil stockpiles to be graded by mechanical means to compact the soil and limit the erosion. Tracks of machinery should be perpendicular to the slope of the pile to reduce the flow velocity of rainfall over the stockpile. ▪ Place only clean materials free of fine particulate matter in the water for temporary construction measures (e.g., coffer dams to be constructed of 'pea gravel' bags/meter bags, geotextile fabric, sheet pile or other clean material). • Rehabilitation ▪ Re-vegetate or stabilize exposed sites as soon as reasonably possible following disturbance using species native to the area to limit the duration of soil exposure. • Work Area ▪ Maintain undisturbed buffer strips greater than 30 m in width around waterbodies and wetlands, except where access roads approach waterbody and wetland crossings. Where infrastructure is closer than 30m to a watercourse, additional erosion and sediment control measures will be installed to adequately protect the watercourse. • Dewatering Activities ▪ Screen all hoses drawing water from a waterbody to prevent potential entrainment of fish and other species.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
▪ Limit water taking quantities by implementing targeted groundwater cut-offs (i.e., slurry trench walls). ▪ No direct discharge to Georgian Bay, Key River, Henvey Inlet or any surface water feature outside the HIWEC will occur without acquiring applicable approvals. ▪ See above and Schedule G regarding Detailed Water Taking Assessment.. • Water Management ▪ Where vegetation is present, leave a layer of low cover vegetation intact between the outfall and receiving waterbody to provide additional water dispersion and entrapment of suspended solids. where existing vegetation is not present, appropriate erosion and sediment control measures will be utilized. • Water Crossing Design ▪ Design water crossings to accommodate high and low flows of the watercourse.
7. Fish and Fish Habitat
• Water Crossing Design ▪ Design water crossings installed at waterbodies supporting direct fish habitat to facilitate fish passage. ▪ Design water crossings to accommodate high and low flows of the waterbody. ▪ High sensitivity waterbodies will be avoided by using clear span structures (WB-S-M39-8 and WB-N-M26-21). • Crossing Installation ▪ If streams are flowing during waterbody crossing structure installation, use appropriate work site isolation techniques (e.g., dam and pump, bypass channel, partial coffer damming) to minimize impacts on aquatic environment. If work sites are isolated during construction, fish are to be salvaged from isolated area and transferred to undisturbed habitat downstream of the work site. ▪ Phase crossing structure removal so no fording of watercourses is required following structure removal (i.e., the last activity as the road is being decommissioned). • Timing Windows ▪ Time in-water work to avoid sensitive life stages of fish species (i.e., spawning) for waterbodies, as follows: – No in-water work from October 1 to July 15 ▪ WB-N-M4-59 – No in-water work from March 15 to July 15 ▪ WEC North (WB-N-M32-14, WB-N-M6-3, WB-N-M12-12-2, WB-N-M12-12, WB-N-M26-21, WB-N-M26-31, WB-N-M28-16, WB-N-M35-1, WB-A-M3-3); ▪ WEC South (WB-S-M17-29, WB-S-M30-11, WB-S-M39-8, WB-S-M19-6, WB-S-M34-53, WB-S-M13-13)

SCHEDULE H

REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Monitoring ▪ Monitor all in-water work to ensure mitigation is applied and to identify any disturbances to fish habitat. ▪ Document any changes resulting from construction activities and obtain photographic documentation. ▪ In the event of fish mortality, stop all work and correct the cause of the mortality. Report the fish kill immediately to the *Commissioner* and any other relevant regulators
8. Land and Resources Used for Traditional Purposes by Aboriginal Persons
• Prior to the commencement of any *Construction Activities*, develop a site policy for safety and permitted access within the HIWEC regarding Aboriginal traditional uses allowed on the site during construction/decommissioning, (e.g., a firearms and/or hunting policy). • Minimize clearing widths for access roads, collector lines, transmission lines and wind turbine generator areas to the area necessary for safe construction and operation of the HIWEC. • Initiate site reclamation of temporarily disturbed areas immediately following construction. • Maintain ongoing communication with Bekanon Road residents, other *HIFN* members on *Commissioner* I.R. #2 and other affected land users about construction timelines and activities. • Maintain ongoing communication with Bekanon Road residents, other *HIFN* members on *Commissioner* I.R. #2 and other affected land users about construction/decommissioning timelines, activities and associated access limitations. • Maintain existing access Henvey Inlet throughout construction/decommissioning. • Access limitations will be confined to active construction areas. • Restricted areas to be clearly marked. • Develop access plans as part of the *EPP* for authorized users during the construction/decommissioning period. • Install signage to notify authorized road users of construction/decommissioning activities, where appropriate.
9. Cultural Resources/Heritage and Archaeological Sites
• If unanticipated archaeological resources are uncovered during the Site Preparation or the *Construction Activities*, all activities must stop until an archaeologist can evaluate the situation and carry out any required assessment to preserve the archaeological information. *Construction Activities* will not re-commence until any negative impacts to archaeological resources are mitigated either through fully excavating any archaeological sites and removing them from the ground, or by adjusting infrastructure placement to avoid archaeological sites. No archaeological resource will leave the site as it is the property of *Commissioner*. • Site infrastructure will avoid cultural heritage features. • If unanticipated cultural heritage features are discovered during construction and decommissioning all activities must stop until an archaeologist can evaluate the situation and carry out any required assessments. *Construction Activities* will not re-commence until any negative impacts are mitigated.
10. Air Quality
• Conduct dust suppression (i.e., spraying water on access roads and work areas) during dry conditions to minimize dust generation.

SCHEDULE H

REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
11. Local Residents, Cottagers and Businesses
• Maintain existing access to Henvey Inlet, throughout construction/ decommissioning. • Access limitations will be confined to active construction areas. • Work restricted areas to be clearly marked. • Develop access plans as part of the *EPP* for authorized users during the construction/decommissioning period. • Install signage to notify authorized road users of construction/decommissioning activities, where appropriate.
13. Community Services and Infrastructure
• Prohibit construction vehicles (including personal vehicles) from travelling along Bekanon Road, except to cross Bekanon Road, wherever possible. • Notify *Commissioner* in advance of construction delivery schedules and install signage to notify road users of construction activity, where appropriate.
TABLE 2: Energy Centre: Required Mitigation Measures – Operation
1. General Mitigation Measures Applicable to Operations
• Prior to commencement of operation, develop and submit to the Commissioner, a revised SPRP to include operation activities including: ▪ Store any potential contaminants (e.g., oil, fuels and chemicals) in designated areas using secondary containment, where necessary. ▪ All potentially hazardous materials to be stored in containment sites within the O&M building, within berms where possible. • Implement and adhere to the revised SPRP. • Apply the following general mitigation measures during all operation to avoid contamination: ▪ Ensure machinery is maintained free of fluid leaks. ▪ Site maintenance, vehicle maintenance, vehicle washing and refuelling to be done on spill pads in specified areas at least 30 m away from wetlands and/or waterbodies. ▪ Store any stockpiled materials at least 30 m away wetlands and/or waterbodies. ▪ Store any contaminants (e.g., oil, fuels and chemicals) in designated areas using secondary containment, where necessary. ▪ Equip vehicles with effective muffler and exhaust systems. ▪ Avoid unnecessary idling of engines. ▪ Ensure that construction equipment is frequently maintained and kept in good working condition. ▪ Ensure that noise emissions from construction equipment do not exceed Ministry of the Environment and Climate Change Publication "NPC-115 Maximum Noise Emission Levels for Typical Construction Equipment" and manufacturer recommendations. ▪ Use and maintain emission control devices on motorized equipment (as provided by the manufacturer of the equipment) to minimize the emissions so that they remain within industry standards. Heavy equipment and machinery to be used within operating specifications. • Clearly post speed limit signs along access roads (20 km/hr), install speed bumps and post speed limits of 10 km/hr within areas of concentrated wildlife activity and instruct all staff to be vigilant for wildlife while driving on site.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
2. Soils/Terrain
• Keep right-of-way for access roads, collector lines/on-Reserve transmission lines and wind turbine generators clear of garbage and debris.
3. Groundwater
• Apply applicable mitigation measures to increase groundwater infiltration, as described in Schedule G.
4. Wildlife/Wildlife Habitat
• Utilize a lighting scheme to minimize potential risks for bat and bird collisions, while fulfilling Transport Canada requirements.
• Utilize a lighting scheme to minimize disturbance to wildlife, while fulfilling Transport Canada requirements.
• Conduct maintenance activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night. In emergency circumstances where construction/decommissioning activities must occur at night from April to September, a lighting scheme will be used to minimize potential risks to wildlife and will include the following: lighting spotlights will be directed downward, temporary and kept to a minimum. • Vegetation trimming will be limited to within areas that have been previously cleared during the Construction Activities. • Schedule trimming of any necessary vegetation removal during routine maintenance activities to occur outside of the overall bird nesting season, from April 1 to August 31. If this is not reasonably possible, the following mitigation will apply, in accordance with the Migratory Birds Convention Act and the EPP's Wildlife Management Plan:
▪ Conduct nest and nesting activity surveys by a qualified avian biologist immediately prior to vegetation maintenance. ▪ If an active nest or confirmed nesting activity is found, a buffer area will be implemented around the nest or nesting activity. The radius of the buffer will range depending on the species, level of disturbance and landscape context which will be confirmed by a qualified avian biologist. The nest itself will not be marked using flagging tape or other similar material as this increases the risk of nest predation; however, the outer limits of the buffer can be marked and UTM coordinates will be taken.
• If suitable cavity trees must be removed during the bat roosting season (April 30 to September 1), each cavity tree will be searched for signs of maternity roosts by a qualified biologist prior to removal. If an active maternity roost is found, removal activities will be scheduled after the bat roosting season (April 30 to September 1). Any hazard tree, such as a tree which poses an immediate safety risk to individuals and/or a risk to the functionality of equipment, is identified, the tree may be removed at any time through consultation with Environment Canada. The need for additional mitigation measures or permits in these circumstances will be addressed on a site-specific basis. • Maintain speed limit signage (20 km/hr), speed bumps installed along access roads and posted speed limits of 10 km/hr within areas of concentrated wildlife activity and instruct all staff to be vigilant for wildlife while driving on site. • Restrict public use of access roads to minimize risk of road mortality and poaching through installation of access gate with operations staff throughout the site. • Avoid grading as part of access road maintenance during the turtle nesting/hatching period (June 1 to September 15). • Avoid maintenance of culverts where substrates at or below the frost line are disturbed during the reptile winter hibernation period (October 15 to April 30) to the extent reasonably possible where suitable hibernation habitat within wetlands or aquatic features has been identified for reptiles. However, under emergency circumstances, a contingency mitigation strategy in the wildlife management plan implemented under the EPA will be developed which will include: ▪ A qualified biologist will be on site monitoring emergency maintenance activities should any hibernating snakes or turtles be found; and ▪ In the unlikely case that a reptile is disturbed and brought out of hibernation, Commissioner and EC-CWS will be notified and the individual will be transported immediately to the nearest trauma centre. Alternative wildlife trauma centres and/or rehabilitation centres closer to Project Area will be examined. A map and directions to the nearest turtle trauma center and wildlife rehabilitation centre will be posted in all operations buildings.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Avoid driving on access roads in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn. Travel at night along access roads will only occur in emergency situations. • During the sensitive wildlife period (April 1 to September 30), all maintenance and biological crews (which will encompass the vast majority of vehicle traffic on access roads) will consist of two people, one of which will be trained to scan for wildlife that may be on the road, and will use binoculars (when appropriate). The trained wildlife spotter will continually scan the access road ahead of the vehicle to ensure no wildlife (eg. birds roosting or nesting on the ground) are near or on the road. If wildlife is identified, on the road, the vehicle will immediately stop and will continue around the animal at a very slow speed (eg. less than 5 km/h), if here is enough room to safely proceed. • Bird diverters/anti-perching devices will be implemented in areas of concentrated bird nests (i.e., Osprey and other raptor nests) along the on-Reserve transmission line to minimize potential collisions. • To prevent predation, minimize potential attractants (ie. garbage) by preparing and implementing anti-littering policy. Such policy shall be followed by all on-site staff. Outdoor garbage receptacles will only be installed at the Operations building and will be wildlife-proof. • Develop and implement a Sighting Response Protocol ("SRP"), which will include: ▪ All on-site staff will receive formal training about SAR that may be encountered within the HIWEC, including how to recognize each SAR and the proper procedure to follow if SAR is encountered; ▪ For animals in immediate danger, handling procedures will be established for site personnel in the event that a SAR needs to be moved out of potential harm (i.e., off a road); ▪ Maintain a species observation log to track species observations during the operational phase of the HIWEC so that adaptive management can be applied based on species concentrations; ▪ All operations staff will be required to report any turtle SAR mortality or turtle activity on roads to the appropriate staff; and • All required permits under Section 73(2) of SARA will be obtained prior to handling SAR.
5. Vegetation and Ecological Communities
• If encroachment of invasive species is detected, management recommendations will be determined by a qualified biologist in accordance with the EPP's weed management plan. • Vegetation trimming will be limited to within areas that have been previously cleared during the Construction Activities.
6. Surface Water
• Equipment Use ▪ In order to avoid compacting or hardening of natural ground surface, and to avoid movement of machinery on sensitive slopes, restrict equipment to designated controlled vehicle access routes and to within identified work areas. • Water Quality ▪ Turbid water will not be discharged to a waterbody or wetland. ▪ Vegetation management will be done using mechanical techniques rather than herbicides. ▪ Whenever possible, operate machinery from outside the waterbody and on land above the high water mark or on ice in a manner that minimizes disturbance to the banks and bed of the waterbody. ▪ Limit machinery fording (if required) to only the amount necessary and only outside of sensitive time periods and upon consultation with a qualified Environmental Monitor. If repeated fording of the watercourse is required, construct a temporary crossing structure (e.g., jersey bridge, swamp mats). ▪ Dust will be suppressed using water as a suppressant, if required.

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REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• Water Crossing Maintenance ▪ Regular inspection of water crossing structures to confirm high and low flow of waterbody are accommodated. ▪ Regular inspection for debris buildup and/or obstruction of flow, and maintenance of such if required.
7. Fish and Fish Habitat
To replace or maintain culverts at road crossings: • Water Crossing Design ▪ Design culverts installed at waterbodies supporting direct fish habitat to facilitate fish passage. ▪ Design culverts to accommodate high and low flows of the watercourse. • Timing Windows ▪ Time in-water work to avoid sensitive life stages of fish species (i.e., spawning), as follows: ▪ No in-water work from October 1 to July 15 ▪ WB-N-M4-59 ▪ No in-water work from March 15 to July 15 ▪ WEC North (WB-N-M32-14, WB-N-M6-3, WB-N-M12-12-2, WB-N-M12-12, WB-N-M26-21, WB-N-M26-31, WB-N-M28-16, WB-N-M35-1, WB-A-M3-3); ▪ WEC South (WB-S-M17-29, WB-S-M30-11, WB-S-M39-8, WB-S-M19-6, WB-S-M34-53, WB-S-M13-13) • Monitoring ▪ Monitor all in-water work to ensure mitigation is applied and to identify any disturbances to fish habitat. ▪ Document any changes resulting from Construction Activities and obtain photographic documentation.
8. Land and Resources Used for Traditional Purposes by Aboriginal Persons
• Prior to operation, develop, implement and adhere to a site policy for safety and permitted access within the HIWEC on Commissioner I.R. #2 regarding Aboriginal traditional uses allowed on the site during operations (e.g., a firearms and/or hunting policy). • Ensure maintenance activity is limited to pre-determined work areas.
• Maintain ongoing communication with Bekanon Road residents, other Commissioner members on Commissioner I.R. #2 and other affected land users about maintenance timelines and activities.
9. Cultural Resources/Heritage and Archaeological Sites
• Should any archaeological sites or material be identified during operations, all maintenance activities must stop until an archaeologist can evaluate the situation and carry out any required assessment to preserve the archaeological information. Maintenance activities will not re-commence until any negative impacts to archaeological resources are mitigated either through fully excavating any archaeological sites and removing them from the ground, or by adjusting infrastructure placement to avoid archaeological sites. • Prior to operation, an archaeology and cultural resources management plan for discovery of unknown archaeological sites during operations will be prepared and implemented as part of the EPP.
• Infrastructure will be sited to avoid direct and indirect effects to cultural heritage resources.

SCHEDULE H

REQUIRED MITIGATION MEASURES

TABLE 1: Energy Centre: Required Mitigation Measures – Construction/Decommissioning
• In addition, an archaeology and cultural resources management plan for discovery of unknown cultural heritage features during operations will be prepared and implemented as part of the EPP.
10. Air Quality
• Conduct dust suppression (i.e., spraying water on access roads and work areas) during dry conditions to minimize dust generation.
11. Local Residents, Cottagers and Businesses
• Prior to operation, develop access plans as part of the EPA for authorized users during the operations phase. • Maintain ongoing communication with authorized users of Commissioner I.R. #2 and other affected adjacent land users about maintenance activities and associated access limitations. • Maintain existing access to primary use areas including Henvey Inlet throughout operations. • Access limitations will be confined to active maintenance areas. Work restricted areas to be clearly marked.
12. Community Services and Infrastructure
• No vegetation clearing within 120 m of Georgian Bay, Henvey Inlet and Key River shoreline areas to preserve the shoreline landscape where reasonably possible. • Limit wind turbine generator markings to manufacturer/company markings/logos. • Wind turbine generator lighting beam angle will be adjusted to minimize lighting observed from ground level. • Avoid white obstruction lighting. • Ensure that all lights flash simultaneously. • Use minimum amount of lighting required to meet Transport Canada requirements.
• Prohibit maintenance vehicles (including personal vehicles) from travelling along Bekanon Road, except to cross Bekanon Road.

SCHEDULE I

ENVIRONMENTAL EFFECTS MONITORING PLAN

http://www.henveyinletwind.com/index.php/download_file/view/282/135/

SCHEDULE J

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