



APPENDIX S. WESP-AC SUMMARY OF RESULTS

Table 1: WESP-AC Results - Specific Function Scores for All Assessed Freshwater Wetlands

Wetland ID	6		7		13		23		25		28		32 ¹		38		40		41 ²		42 ²		43 ²		44 ²		
	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	Function Score	Benefits Score	
Water Storage & Delay (WS)	9.84	1.58	8.58	3.21	8.30	2.93	1.42	3.38	9.00	2.54	9.00	2.71	1.56	2.93	9.67	3.38	0.92	1.97	1.74	6.54	2.69	4.68	8.84	6.54	8.35	2.90	
Stream Flow Support (SFS)	0.00	0.00	0.00	0.00	0.00	0.00	6.55	5.85	0.00	0.00	0.00	0.00	4.48	5.11	0.00	0.00	9.31	3.94	2.62	6.98	2.79	3.79	0.00	0.00	0.00	0.00	
Water Cooling (WC)	0.00	0.00	0.00	0.00	0.00	0.00	6.29	3.28	0.00	0.00	0.00	0.00	3.67	1.24	0.00	0.00	6.58	2.70	3.88	2.45	3.67	1.52	0.00	0.00	0.00	0.00	
Sediment & Toxicant Retention & Stabilization (SR)	9.29	0.00	5.02	1.36	4.30	1.36	3.13	1.21	6.44	0.91	6.44	0.91	0.97	0.91	7.86	0.68	2.06	0.76	1.03	1.46	2.20	2.09	5.02	1.36	6.11	0.67	
Phosphorus Retention (PR)	2.89	0.00	2.29	1.29	2.00	1.29	1.46	0.86	2.67	0.86	2.49	0.86	2.10	1.50	3.22	0.43	2.46	1.50	1.11	1.34	1.55	1.52	1.64	1.29	4.44	1.00	
Nitrate Removal & Retention (NR)	10.00	2.50	10.00	3.33	10.00	3.33	2.50	10.00	2.50	10.00	2.22	2.96	2.50	10.00	7.50	2.02	4.17	2.33	5.33	2.98	10.00	10.00	3.33	10.00	3.33	10.00	3.33
Carbon Sequestration (CS)	7.06	N/A	7.72	N/A	7.50	N/A	3.70	N/A	8.15	N/A	7.75	N/A	2.57	N/A	7.76	N/A	4.16	N/A	2.88	N/A	3.17	N/A	6.84	N/A	8.75	N/A	
Organic Nutrient Export (OE)	8.41	N/A	8.41	N/A	8.20	N/A	8.59	N/A	8.41	N/A	7.56	N/A	8.09	N/A	8.20	N/A	8.50	N/A	7.48	N/A	8.83	N/A	6.63	N/A	4.40	N/A	
Anadromous Fish Habitat (FA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57	8.67	0.00	0.00	0.00	0.00	0.00	0.00	
Resident & Other Fish Habitat (FR)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	8.33	0.00	0.00	0.00	0.00	0.00	0.00	
Aquatic Invertebrate Habitat (INV)	6.85	0.61	8.46	0.64	7.09	0.53	4.56	5.07	7.49	0.31	4.23	0.34	3.24	4.14	7.92	1.08	4.30	4.58	2.67	4.76	4.26	3.77	6.72	0.79	6.92	1.65	
Amphibian & Turtle Habitat (AM)	2.37	3.96	2.50	3.96	2.26	3.88	6.19	3.98	2.02	3.64	0.57	1.96	5.44	4.40	3.12	1.38	6.35	3.73	5.30	4.20	4.95	6.16	2.51	4.17	4.36	5.18	
Waterbird Feeding Habitat (WBF)	0.00	0.00	0.00	0.00	0.00	0.00	6.95	2.50	0.00	0.00	0.00	0.00	4.84	5.00	0.00	0.00	5.87	2.50	4.36	5.00	4.42	10.00	0.00	0.00	0.00	0.00	
Waterbird Nesting Habitat (WBN)	0.00	0.00	0.00	0.00	0.00	0.00	6.67	2.50	0.00	0.00	0.00	0.00	5.12	5.00	0.00	0.00	5.26	2.50	3.87	5.00	4.71	10.00	0.00	0.00	0.00	0.00	
Songbird, Raptor, & Mammal Habitat (SBM)	5.84	10.00	5.84	10.00	5.61	10.00	8.43	2.50	4.92	10.00	5.90	5.00	8.60	5.00	7.12	2.50	8.66	2.50	8.44	5.00	8.22	10.00	6.43	10.00	5.53	10.00	
Pollinator Habitat (POL)	6.54	0.00	7.61	0.00	6.39	0.00	7.77	0.00	7.19	0.00	7.53	0.00	8.89	0.00	7.45	0.00	8.89	0.00	9.65	3.33	7.88	3.33	7.40	3.33	6.35	3.33	
Native Plant Habitat (PH)	4.04	3.50	4.62	3.80	3.02	3.39	3.86	4.59	3.75	3.41	0.64	3.79	4.39	4.95	4.97	4.12	4.15	4.97	2.97	6.22	2.83	5.67	4.02	5.02	5.32	5.07	
Public Use & Recognition (PU)	N/A	0.54	N/A	2.05	N/A	0.54	N/A	2.13	N/A	0.43	N/A	0.51	N/A	0.65	N/A	0.60	N/A	2.27	N/A	2.79	N/A	3.25	N/A	0.60	N/A	0.81	
Wetland Sensivity (Sens)	N/A	8.42	N/A	8.07	N/A	7.08	N/A	3.37	N/A	8.68	N/A	10.00	N/A	5.14	N/A	7.69	N/A	4.40	N/A	9.15	N/A	5.56	N/A	10.00	N/A	5.38	
Wetland Ecological Condition (EC)	N/A	4.78	N/A	8.26	N/A	4.78	N/A	0.43	N/A	7.39	N/A	4.78	N/A	8.26	N/A	8.26	N/A	8.26	N/A	8.26	N/A	5.65	N/A	4.78	N/A	9.17	
Wetland Stressors (STR) (higher score means more)	N/A	4.34	N/A	4.42	N/A	4.34	N/A	4.48	N/A	4.34	N/A	4.40	N/A	4.47	N/A	4.93	N/A	4.55	N/A	8.91	N/A	10.00	N/A	4.17	N/A	2.22	
Average Function/Benefit	4.30	2.12	4.18	2.65	3.80	2.29	4.59	2.56	4.12	2.37	3.65	1.97	3.94	3.22	4.55	2.24	4.68	2.91	3.89	5.46	3.83	5.11	3.88	2.92	4.15	2.67	

¹ Wetland extends beyond Project Area boundary.

² Wetlands completed in November 2022 out of growing season

NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.

Table 2: WESP-AC Results - Grouped Function Scores for All Assessed Freshwater Wetlands

WL ID	HYDROLOGIC Group		WATER Quality Group		AQUATIC SUPPORT Group		AQUATIC Habitat Group		TRANSITIONAL Habitat		WETLAND CONDITION		WETLAND RISK		Average Function	Average Benefits
	Function	Benefits	Function	Benefits	Function	Benefits	Function	Benefits	Function	Benefits	Function	Benefits	Function	Benefits		
6	9.84	1.58	8.65	1.67	6.11	0.41	1.42	2.38	6.01	7.25	N/A	4.78	N/A	6.38	6.41	3.49
7	8.58	3.21	8.13	2.66	6.34	0.42	1.50	2.38	6.82	7.30	N/A	8.26	N/A	6.25	6.27	4.36
13	8.30	2.93	7.97	2.66	6.01	0.36	1.36	2.33	5.69	7.23	N/A	4.78	N/A	5.71	5.87	3.72
23	1.42	3.38	3.20	2.01	7.54	5.29	5.45	2.89	7.56	3.48	N/A	0.43	N/A	3.93	5.04	3.06
25	9.00	2.54	8.41	1.96	6.19	0.21	1.21	2.18	6.24	7.24	N/A	7.39	N/A	6.51	6.21	4.00
28	9.00	2.71	8.33	1.78	5.25	0.22	0.34	1.18	6.11	3.97	N/A	4.78	N/A	7.20	5.81	3.12
32	1.56	2.93	2.55	2.07	6.48	4.31	4.26	3.94	8.09	4.16	N/A	8.26	N/A	4.80	4.59	4.35
38	9.67	3.38	8.61	5.18	6.11	0.72	1.87	0.83	6.98	3.17	N/A	8.26	N/A	6.31	6.65	3.98
40	0.92	1.97	3.42	3.15	8.24	4.16	4.92	2.74	8.06	3.73	N/A	8.26	N/A	4.48	5.11	4.07
41	1.74	6.54	2.36	4.02	5.82	5.86	4.59	7.45	8.33	5.54	N/A	8.26	N/A	9.03	4.57	6.67
42	2.69	4.68	2.83	7.27	6.86	3.41	3.88	7.62	7.27	8.17	N/A	5.65	N/A	7.78	4.71	6.37
43	8.84	6.54	7.94	2.66	5.03	0.53	1.50	2.50	6.67	8.06	N/A	4.78	N/A	7.09	6.00	4.59
44	8.58	6.54	7.95	2.66	6.10	0.50	1.41	2.49	6.76	8.07	N/A	8.26	N/A	7.12	6.16	5.09
Average Score	6.48	2.74	6.59	2.57	6.48	1.79	2.48	2.32	6.84	5.28	-	6.14	-	5.73	5.60	4.32
Average Rating*	Moderate	Lower	Higher	Lower	Higher	Lower	Lower	Moderate	Higher	Lower	-	Moderate	-	Moderate		

*Average group rating calculated based on the Nova Scotia normalized reference values in the WESP-AC tool.

Higher
Moderate
Lower

Table 3: WESP-AC Results - WSS Interpretation Tool Results

Wetland ID	Function-Benefit Product (FBP)										Conclusion
	Support Supergroup – Hydrologic		Support Supergroup – Water Quality Support		Support Supergroup – Aquatic Support		Habitat Supergroup – Aquatic Habitat		Habitat Supergroup – Transition Habitat		
	FBP Score	FBP Score Category	FBP Score	FBP Score Category	FBP Score	FBP Score Category	FBP Score	FBP Score Category	FBP Score	FBP Score Category	
6	15.54	Low	14.42	Low	2.5	Low	3.39	Low	43.56	Low	Not a WSS
7	27.6	Low	21.65	Low	2.68	Low	3.56	Low	49.78	Low	Not a WSS
13	24.36	Low	21.24	Low	2.14	Low	3.16	Low	41.18	Low	Not a WSS
23	4.81	Low	5.62	Low	34.18	Low	14.07	Low	24.99	Low	Not a WSS
25	22.85	Low	16.49	Low	1.28	Low	2.64	Low	45.14	Low	Not a WSS
28	24.37	Low	14.8	Low	1.18	Low	0.4	Low	24.23	Low	Not a WSS
32 ¹	4.58	Low	5.28	Low	27.89	Low	16.77	Low	33.65	Low	Not a WSS
38	32.73	Low	44.62	Low	4.4	Low	1.55	Low	22.09	Low	Not a WSS
40	1.82	Low	10.77	Low	34.3	Low	13.47	Low	30.07	Low	Not a WSS
41 ¹²	11.39	Low	9.48	Low	34.08	Low	34.22	Low	46.13	Low	Not a WSS
42 ¹²	12.59	Low	20.53	Low	23.38	Low	29.56	Low	59.34	Low	Not a WSS
43 ²	57.8	High	21.14	Low	2.66	Low	3.76	Low	53.77	Low	Not a WSS
44 ²	56.15	Moderate	21.18	Low	3.04	Low	3.51	Low	54.53	Low	Not a WSS

¹Wetland extends beyond Study Area boundary.

²Wetland surveyed in November 2022, out of growing season



APPENDIX T. ENVIRONMENTAL PROTECTION PLAN

Wedgeport Wind Farm Project

Environmental Protection Plan

November 20, 2022

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1.0 INTRODUCTION

This Environmental Protection Plan (EPP) has been prepared by Wedgeport Wind Farm LP (Wedgeport Wind) to guide the design and installation of the physical components of the Wedgeport Wind Farm Project (Project).

The purpose of the EPP is to establish procedures and methods to be used in the construction and operation of the project that reduce impacts on the environment. The EPP applies provincial and, where appropriate, federal regulations & guidelines for construction activities and procedures.

The EPP includes an Emergency Response Plan (ERP) to address environmental emergencies, an Environmental Management Plan which lays out the procedures to be followed during the conduct of the work and a Site Restoration Plan (SRP). This ERP will be harmonized with the contractor's ERP and will be made available to all site personnel.

The EPP incorporates approved design methods for erosion and sediment control, defines setbacks from streams and wetlands and areas of environmental or heritage significance. It provides guidance for appropriate engineering designs for surface water management and stream crossings. The EPP also designates the timeframes for seasonally sensitive activities and establishes prohibitions for the project design and construction activities.

This document may be amended from time to time. Amendments will be issued by Wedgeport Wind and the project manager will ensure that all copies will receive amendments.

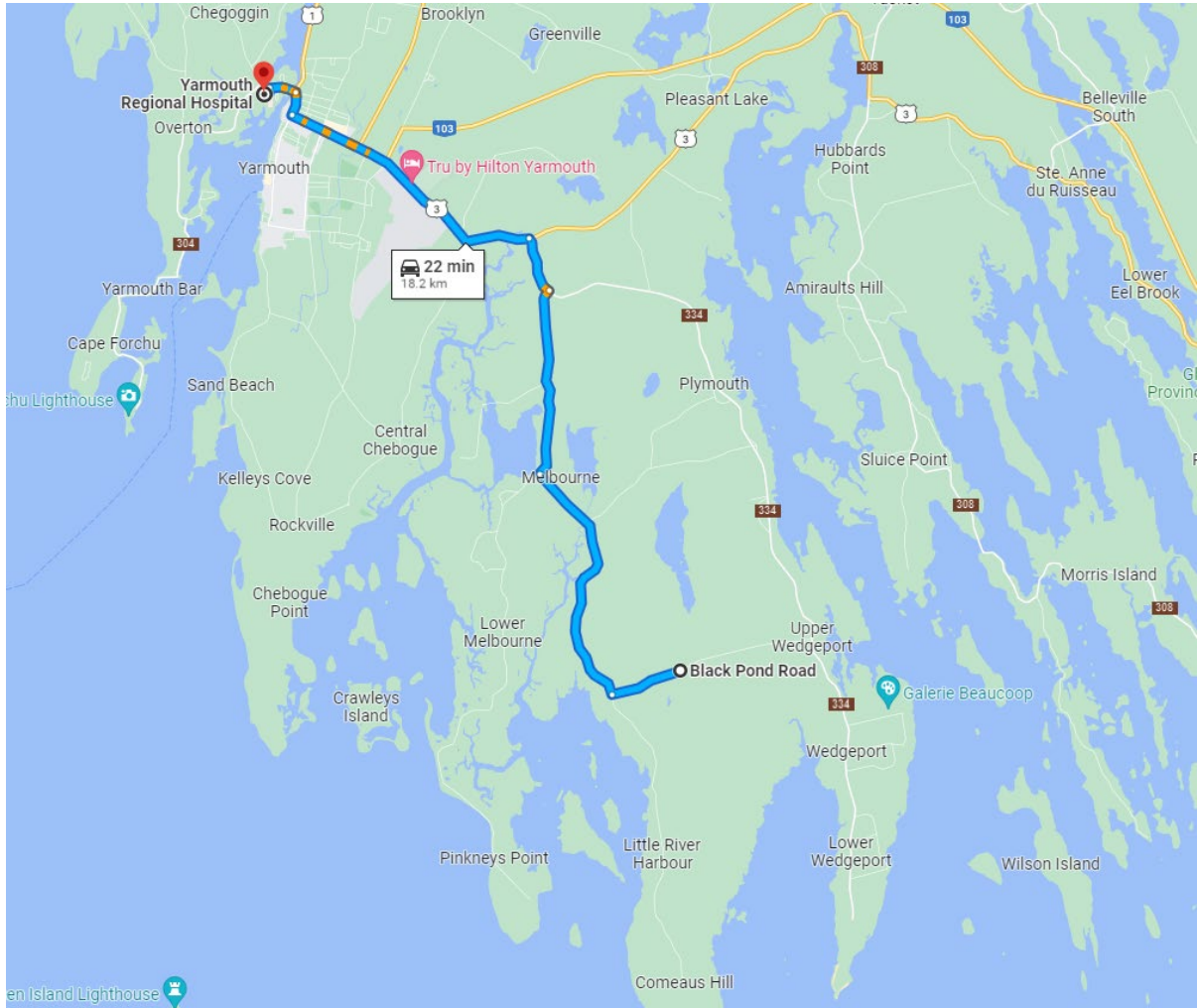
2.0 EMERGENCY RESPONSE

The following provides contact numbers in the case of emergencies involving: worker safety, public safety, and emergency response to address environmental emergencies.

2.1 Emergency Contact List

Organization	Contact Name	Contact Number
Fire Department	-	911
Ambulance	-	911
RCMP Police	-	911
Hospital Yarmouth Regional Hospital	60 Vancouver St, Yarmouth, NS B5A 2P5	(902) 742-3541
Poison Control	-	1-800-565-8161
Chief Operations Officer, Wedgeport Wind Farm LP	TBD	
Project Manager Wedgeport Wind Farm LP	TBD	
Health and Safety Officer, Wedgeport Wind Farm LP	TBD	
Nova Scotia Environment and Climate CHange	Emergency Measures Office	1-800-565-1633
Nova Scotia Environment and Climate Change Yarmouth		(902) 742-8985
Nova Scotia Department of Labour	Health and Safety - 24 hour Response	1 -800-952-2687
NS Department of Natural Resources and Renewables, Tusket		902-648-3540
Environment and Climate Change Canada	Environmental Protection Emergency Response	1-800-426-6200
Environmental Advisor Wedgeport Wind Farm LP	Robert McCallum	(902) 292-0514

2.2 Guide Map to Regional Hospital



3.0 ENVIRONMENTAL MANAGEMENT PLAN GENERAL PROVISIONS

The Environmental Management Plan (EMP) has been developed to guide site specific construction activities and procedures. The purpose of the EMP is:

1. To manage and minimize risks and potential environmental impacts from construction activities.
2. To ensure that Wedgeport Wind commitments to minimizing environmental effects are met.
3. To ensure development activities meet all provincial, federal and municipal requirements.
4. To provide mitigation of the potential environmental impacts due to construction activities.
5. To provide a reference document for planning and/or conducting construction activities that may have an impact on the environment.

This EMP was developed by Wedgeport Wind to describe the protection measures to be followed by Wedgeport Wind personnel and all contractors required for activities associated with development of the Project. Wedgeport Wind's appointed project manager will be responsible for the enforcement of these procedures.

3.1 Construction Environmental Mitigation Measures

A. Design Specifications

- 1) Construction specifications will be completed to turbine manufacturer's technical specifications for:
 - 1) Access Roads and Crane Platforms
 - 2) Civil works, Crane and Road Requirements
 - 3) Other engineering design specifications pertaining to the Project as specified by Wedgeport Wind and their project engineers;

If a conflict arises between technical specifications and regulatory requirements, regulatory requirements shall prevail, unless amendments are approved by the appropriate regulatory body.

B. Work Areas

- 1) All construction activities will be restricted, as much as practically possible, to approved work spaces, designated access roads and turbine sites;
- 2) During tower foundation construction, the crane platform areas may also serve as storage areas for material (e.g. reinforced steel) and machinery.

C. Runoff Control and Prevention of Sedimentation

Wedgeport Wind Farm Project

Environmental Protection Plan

- 1) When possible, the contractor will avoid grading immediately before or after heavy rain events, which would further loosen the road surface and promote runoff of graded material;
- 2) Aggregate which is to be used in or near watercourses will be washed quarried material;
- 3) For construction activities near watercourses, erosion and sediment control measures will be used to minimize erosion and ensure silt containment. The contractor will be responsible for maintaining these erosion and sedimentation control systems to ensure their effectiveness.
- 4) All silt fences will maintain a minimum setback distance from water courses and wetlands of 10 m;
- 5) Any water which intrudes into excavations that will be removed by pumping will not be discharged directly into any wetland or watercourse. If discharge water from pumping operations contains Total Suspended Solids (TSS) which exceeds 25 mg/l above the background condition of the watercourse at the site, discharge water from excavation will be pumped to a designated area up-gradient and downstream of the excavation. The discharge may be either be allowed to spill onto the ground and return to the watercourse following the natural topography, providing that the discharge is greater than 100 metres from a natural drainage course. Sedimentation bags, or containers with washed gravel will be used to dissipate flow and reduce erosion;
- 6) Following completion of construction and once vegetation has established non biodegradable erosion and sediment barriers will be removed from those areas which may be flooded by watercourses under high flow seasonal conditions to prevent these materials from being entrained in the watercourses;
- 7) Material placed in or adjacent to the watercourses for the temporary diversion will be removed as soon as possible by the contractor after the construction of work is completed;
- 8) Wedgeport Wind will conduct visual assessments, both quarterly and after severe storm events, of the site to ensure the effectiveness of erosion and sedimentation control measures, unless otherwise approved by NSECC.
- 9) Wedgeport Wind and the Contractor will follow the *Nova Scotia Erosion and Sediment Control Manual* and/or follow the erosion and sediment control plan as outlined in this document (Section 4.4);
- 10) Any loss of containment or release of sediments will be reported immediately to the project manager and to NSECC.

D. Bedrock Removal and Blasting

- 1) Where possible, rock excavation will be performed by ripping rather than blasting. Should blasting be required, no blasting will occur unless otherwise approved by NSECC;

E. Pits

- 1) All aggregate sources will be approved by the project engineer;
- 2) The slopes of all excavation pits will be constructed to a 3:1 slope;
- 3) If a pit is inconspicuous and poses a perceived safety hazard, the area will be marked with signs and/or fencing, depending on its location;
- 4) Pits may be backfilled with native material, and seeded with non-invasive, native, herbaceous plant species. Alternatively, pits may sloped to 3:1, stabilized, erosion controlled, and reclaimed to allow water to naturally collect within the pits to provide wetland habitat. In compliance with Section 6 of the Migratory Bird Regulations (MBR), this activity may not be conducted during the breeding season if birds which may use embankments for nesting sites are identified in the pit(s), typically between May 1st and August 31st for most species;
- 5) If adequate borrow pits and/or disposal sites are not available within the project area, offsite sources of fill will be used.

F. Vehicle and Equipment Operation and Fueling

- 1) All personnel, vehicles, equipment, etc...will follow all applicable traffic regulations and posted site speed limits and traffic controls;
- 2) Appropriate dust suppression measures will be used as required. Water will be used for dust suppression. The use of any other substance for dust is to be avoided;
- 3) Storage of petroleum, oil and lubricants (POL) on site during the construction phase will be in designated areas and will be done in compliance with applicable provincial and federal regulations, codes and guidelines;
- 4) The contractor will maintain an onsite emergency spill containment kit to adequately control any loss of fuel or lubricant by equipment;
- 5) Waste petroleum products, oils and lubricants (POL) will be properly contained and not released into the environment. Waste POL and all spent containers will be contained and removed from the site for proper disposal at an approved disposal facility;
- 6) Vehicles will be fueled at designated sites away from wetlands and watercourses (minimum distance 30 m);
- 7) The transportation of dangerous goods will be conducted in compliance with the Transportation of Dangerous Goods Act;

- 8) The construction site will have restricted access signage to prevent trespassing or inadvertent entrance by public vehicles. "Restricted Access" signs will be posted at the entrance of primary access roads which leave private property and enter onto public right-of-ways;
- 9) Equipment and vehicles will yield the right-of-way to wildlife;

G. Construction Waste

- 1) Construction waste will be removed from the project area and disposed of at an approved location or facility;
- 2) Disposal of waste materials from construction activity will be in accordance with NSDTC's Standard Specifications (1980 and revisions) for Access Road Construction;
- 3) Unless otherwise directed by the project manager, limbs and timber will be chipped at the site, in accordance with the Nova Scotia Forest Fire Protection Act. Non-combustible material, overburden and rock will be disposed of where their use as fill material is impractical;
- 4) Waste disposal areas will be located where they do not negatively impact rivers, wetlands or any watercourse.
- 5) Portable toilets will be used at the construction site so that no untreated sewage is disposed of in the watercourses or on site;

H. Species of Concern, Rare and Endangered Species, and Historic Artifacts

- 1) A buffer area of 30 m will be established around rare plants using surveying ribbon and signs to prevent unauthorized intrusion;
- 2) Should excavation uncover historic artifacts, work at the excavation site will cease and the project engineer will be contacted immediately. The project manager will contact the appropriate authorities from the Department of Tourism, Culture and Heritage and First Nations. Work on site will re-commence work following regulatory clearance;

I. Surface Water, Wetlands, Watercourses

- 1) No construction will occur within 30 metres of a wetland or watercourse unless otherwise authorized by NSECC;
- 2) Culverts will be installed as per the requirements of NSECC;
- 3) The design of all water crossings and culverts will be approved by an individual who has successfully completed Nova Scotia Watercourse Alteration training;
- 4) Disposal of any agent, either directly or indirectly, will not be permitted into any watercourse or wetland;
- 5) Prior to construction, watercourses will be inspected at locations upstream, adjacent to, and downstream of the site. The conditions of these areas will be photographed as

background information on the riparian zone and stream features at each water crossing.

J. Wildlife Encounters

- 1) Garbage disposal will occur at designated disposal locations throughout the project for removal;
- 2) Harassment of any wildlife by site personnel will not be permitted;
- 3) Wildlife sightings will be reported to the project engineer or designate;
- 4) Any disruption or injury to wildlife will be reported to the local Provincial Wildlife Officer;
- 5) In the event of encounters with injured wildlife at the worksite, the project engineer or designate will contact the local Provincial Wildlife Officer. No attempt will be made to move the animal and no person at the worksite will come into direct contact with the animal;
- 6) Dead animals will be reported, as soon as possible, to the project engineer or designate who will notify the local Provincial Wildlife Officer. The locations of animals will be marked and reported to the project engineer or designate. The project engineer or designate will record the date and time it was found; state of decomposition; injury sustained (if identifiable); and species. This information will be kept on file with Wedgeport Wind for incorporation into the post-construction monitoring program;

K. Fires / Medical Emergencies

- 1) All site personnel will be responsible for fire prevention and will conduct their work in a safe manner to prevent fires;
- 2) Flammable waste will not be disposed of on site but will be removed for disposal in an appropriate manner;
- 3) Smoking will be prohibited within 50 m of flammable products;
- 4) Some personnel will have taken the training course for dealing with energy industry fires but not for wildland fires. In the event of a wildfire, the workers will follow the Contractor Emergency Response Plan;
- 5) In the event of a fire on or near the turbine site, onsite personnel will attempt to put out the fire if it is safe to do so, using the onsite firefighting equipment. The fire will be reported immediately to the project engineer or designate. If the fire cannot be contained, the nearest fire department (Barney's River Volunteer Fire Department) will be contacted at 9-1-1.
- 6) In case of medical emergencies, the Contractor Emergency Response Plan will be adhered to;
- 7) Wedgeport Wind will provide members of the nearest fire departments and medical rescue personnel with project plans and access road layouts for the project area. GPS

coordinates for the road alignments and turbine locations will be provided to emergency responders for their reference;

4.0 ENVIRONMENTAL PROTECTION PLAN

The following are general guidelines that promote environmental protection:

- Plan operations from “cradle to grave”;
- Report unsafe acts and/or acts that could result in harm to the environment;
- Address the issues if they are known, do not turn a blind eye;
- Conserve soil;
- Protect water resources;
- Control emissions;
- Prepare emergency response plans;
- Manage waste;
- Do not litter;
- Conduct HSE inspections;
- Regulatory inspections may be conducted at any time and participation and cooperation is required;
- If an incident occurs follow proper procedures;
- Practice good housekeeping at all times;
- Report HSE issues internally and externally as required;
- Maintain records as required;

4.1 Access Road Construction

4.1.1 Clearing and Grubbing

- Any merchantable timber present on the road alignment will be cut, decked and removed for sale or reuse;
- Only the areas required for the road alignment, construction work areas and laydown areas will be cleared and grubbed;
- Burning of cleared and grubbed material is not permitted. Excess brush and cleared materials will be chipped and the chips distributed over the site unless otherwise directed.
- In consultation with the environmental advisor brush piles may be created around cleared areas as wildlife habitat. The locations and size of such brush pile will be determined by the requirements of individual sites and the discretion of the environmental advisor;

Road Specifications

- The specifications for the road characteristics will be provided by the wind turbine provider and the contractor providing the heavy lift crane. However, road side slopes will be designed to achieve a maximum 2:1 slope (horizontal:vertical).
- Prior to construction, the final road specifications will be reviewed by the project manager, project engineer (civil) and environmental advisor for compliance with applicable provincial

standards and environmental guidelines who will advise the Turbine provider and the contractor on any required amendments.

4.1.2 Construction Methods

- The access road will be logged and all timber skidded to appropriate log decks;
- All stumps will be stripped by bulldozer and piled along the boundary of the cleared right-of-way;
- Surface soils will be stripped to both sides of the access road;
- Subsoils will be stripped to the underlying parent material layer and piled on both sides of the access road, adjacent to surface soil piles;
- Subsoils will be stripped from the ditchline and placed in the middle of the road to build up the road traveling surface;
- During road construction, a trench will be dug with a backhoe, running parallel to the road. The ditch will be filled with stripped non-salvageable materials, and ultimately filled in;
- Previously piled subsoils will be feathered back into the ditchline;
- Previously piled topsoils will be feathered back into the ditchline over the subsoils;
- Where steep hills, small hills or knolls are encountered, the tops of the hills will be cut and pushed down the road to reduce the slopes required for travel;

4.2 Water Crossings

For the sizing of the culverts and bridges, *the Design Flow Formula Map for Nova Scotia for 1:100 Year Storm Event (Permanent Structures)* [updated in 2008] will be consulted.

The drainage area will be delineated using a combination of applied methods (Watercourse Alteration Guidelines) and computer programming. Basically, the area will be mapped with both the 5m contour data as well as recent aerial photographs. The zones of delineation were set out making sure to cross the contour lines at 90 degrees. Instead of overlaying a dot grid and counting, the GIS program is able to give precise calculated area measurements in hectares.

4.3 *TURBINE SITES*

The preparation and construction of turbine sites will follow the applicable requirements of Section 3.1 *a* through *k*. In addition, the following requirements will apply.

4.3.1 Clearing and Grubbing

- Any merchantable timber present on the turbine sites will be cut, decked and removed for sale or reuse.
- Only the areas required for the turbine layout, construction pad and crane will be cleared and grubbed;
- Burning of cleared and grubbed material is not permitted. Excess brush and cleared materials will be chipped and the chips distributed over the site unless otherwise directed;
- In consultation with the environmental advisor, brush piles may be created around cleared areas as wildlife habitat. The locations and size of such brush piles will be determined by the requirements of individual sites on the advice and discretion of NSDNR and the wildlife advisor;
- Two lift stripping of soils may occur if subsoils are suitable to do so;
- Surface soils will be stripped and pushed to the boundary of the cleared site;
- A second stripping of subsoils may occur if possible, and will be pushed to the boundary of the turbine sites;
- Subsoils will be leveled to provide a suitable working surface;

4.4 *Project Erosion & Sediment Control Options*

Wedgeport Wind would like to emphasize that it recognizes that successful erosion / sedimentation control requires correct installation of controls specific to site conditions, while also recognizing that ongoing maintenance is essential for successful outcome.

The planning strategies and structural components presented in this document are as equally important as the conceptual understanding of the principles of their implementation to ensure good construction performance and protection of the environment.

As such Wedgeport Wind is providing what it perceives to be Best Management Practices for the project. Within the project, at the field level, any of these practices may be installed. Each area within the project will require specific control plans to be developed on-site using the principles and guidelines presented in conjunction with the lead Contractor (TBD).

The difference between erosion and sediment control methods is defined and summarized for the purposes of this document and all related activities on at construction projects as follows:

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- Erosion Control is the process whereby the potential for erosion is minimized and is the primary means in preventing the degradation of downstream aquatic resources;
- Sedimentation Control is the process whereby the potential for eroded soil being transported and/or deposited beyond the limits of the construction site is minimized and is, for all intents and purposes, a contingency plan.

Both erosion and sedimentation control measures are dynamic and need to respond to requirements encountered throughout construction. Therefore, both temporary and permanent erosion and sedimentation control measures should be expected to evolve throughout construction to varying degrees based on site conditions and field performance of implemented measures.

Wedgeport Wind will install erosion controls immediately after a disturbance resulting from a project in an erosion prone area. Erosion controls will be properly maintained, reinstalled as necessary and/or replaced until restoration is complete.

Erosion and sedimentation control measures required can be classified into two categories:

1. Temporary Measures: Those measures during the construction phase that may be completely removed to facilitate further construction that has other erosion control measures associated with it; and
2. Permanent Measures: Incorporated into the overall design of the development to address long-term post construction erosion and sedimentation control.

Temporary erosion and sedimentation control measures will be constructed at the start of the construction phase. However, additional measures will likely need to be constructed throughout construction. Permanent erosion and sedimentation control measures can be constructed during or at the end of the construction phase.

Examples of temporary measures include:

- Seeding;
- Slope texturing;
- Synthetic permeable barrier,
- Mulching;
- Hydroseeding;
- Biodegradable coverings;
- Filter fence;
- Fibre rolls and wattles;

Examples of permanent measures include:

- Offtake ditches;
- Energy dissipater;
- Earth dyke
- Gabion;

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- Rock check;
- Sediment pond/basin;

Dependent on site conditions, some temporary measures will be retained for a longer duration to render its life span more permanent. With both temporary and permanent measures, the functional longevity of the method to be used will be taken into account prior to implementation.

This is not limited to the duration of the project, but to return to pre-disturbance conditions. The Construction Consultant/Environmental Monitor will consult with construction personnel on the appropriate measures to be taken. The measures outlined in the following tables discuss various erosion and sedimentation control locations of ideal use, advantages and limitations.

Table 1. Methods for Protection of Exposed Surfaces

Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Topsoiling	X	X	X	X	Placing topsoil provides excellent medium for vegetation root structure to develop in; organic content promotes plant growth, reuse organics (topsoil or peat) stripped from the site at start of grading; absorb raindrop energy to minimize erosion potential	Cannot be effective without seeding and allowing time for plant growth; not appropriate for slopes steeper than 2H:1V (steep slopes will require soil covering over topsoil and specialized design); dry topsoil susceptible to wind erosion, susceptible to erosion prior to establishment of vegetation
Seeding	X	X	X	X	Inexpensive and relatively effective erosion control measure, effectiveness increases with time as vegetation develops, aesthetically pleasing, enhances terrestrial and aquatic habitat	Must be applied over prepared surface (topsoiled), grasses may require periodic maintenance (mowing), uncut dry grass may be a fire hazard, seeding for steep slopes may be difficult, seasonal limitations on seeding effectiveness may not coincide with construction schedule, freshly seeded areas are susceptible to runoff erosion until vegetation is established, reseeding may be required for areas of low growth
Mulching	X	X	X	X	Used alone to protect exposed areas for short periods, protects soil from rainsplash erosion, preserves soil moisture and protects germinating seed from temperature extremes, relatively inexpensive measure of promoting plant growth and slope protection	Application of mulch on steep slopes may be difficult, may require additional specialized equipment not commonly used.
Hydroseeding-Hydromulching	X	X	X	X	Economical and effective on large areas, mulch tackifier may be used to provide immediate protection until seed germination and vegetation is established, allows re-vegetation of steep slopes where	Site must be accessible to Hydroseeding Hydromulching equipment (usually mounted on trucks with a maximum hose range of approximately 150 m), may require subsequent

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Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
					conventional seeding/mulching techniques are very difficult, relatively efficient operation, also provides dust and wind erosion control	application in areas of low growth as part of maintenance program
Riprap Armoring	X	X			Most applicable as channel lining with geotextile underlay, used for soils where vegetation not easily established, effective for high velocities or concentrations, permits infiltration, dissipates energy of flow from culvert inlets/outlets, easy to install and repair, very durable and virtually maintenance free, flexible lining for ditches with ice build-up	Expensive, may require heavy equipment to transport rock to site and place rock, may not be feasible in areas of the province where appropriate rock is not readily available, may be labour intensive to install (hand installation); generally thickness of riprap is higher when compared to gabion mattress
Gravel Blankets	X	X			Stabilizes soil surface with rock lining thus minimizing erosion, permits construction traffic in adverse weather, may be used as part of permanent base construction of paved areas, easily constructed and implemented, can be used to stabilize seepage piping erosion of slope	Must be designed by qualified geotechnical personnel, expensive, may not be feasible in areas of the province where gravel is not readily available, areas of high groundwater seepage may require placement of non-woven geotextile underlay and additional drainage measures
Biodegradable Erosion Control Products	X	X			Provides a protective covering to bare soil or topsoiled surface where degree of erosion protection is high, can be more uniform and longer lasting than mulch, wide range of commercially available products	Use must be based on design need of site, certification of physical properties and performance criteria (tractive resistance) is required, labour intensive to install, temporary blankets may require removal prior to restarting construction activities, not suitable for rocky slopes, proper site preparation is required to seat onto soil correctly; high performance is tied to successful vegetation growth

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Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Cellular Confinement System	X	X		X	Lightweight cellular system and easily installed, uses locally available soils or grout for fill to reduce costs	Not readily used in construction, expensive, installation is labour intensive (hand installation), not suitable for slopes steeper than 1H:1V
Planting Trees and Shrubs	X		X	X	Establishes vegetative cover and root mat, reduces flow velocities on vegetative surface, traps sediment laden runoff, aesthetically pleasing once established, grows stronger with time as root structure develops, usually has deeper root structure than grass	Expensive, revegetated areas are subject to erosion until plants are established, plants may be damaged by wildlife, watering is usually required until plants are established
Riparian Zone Preservation	X	X	X	X	Preserve a native vegetation buffer to filter and slow runoff before entering sensitive (high risk) areas, most effective natural sediment control measure, slows runoff velocity, filters sediment from runoff, reduces volume of runoff on slopes	Stipulate construction activities with careful planning to include preservation areas, freshly planted vegetation for newly created riparian zones requires substantial periods of time before they are as effective as established vegetation at controlling sediment
Slope Texturing	X			X	Roughens slope surface to reduce erosion potential and sediment yield; suitable for clayey soils	Additional cost; not suitable for silty and sandy soils; not practical for slope length <8 m for dozer operation up/down slope

Table 2. Methods for Runoff Control

Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Slope Texturing	X		X	X	Contouring and roughening (tracking) of slope face reduces runoff velocity and increases infiltration rates; collects sediment; holds water, seed and mulch better than smooth surfaces; promotes development of vegetation, provides loss of soil reduction in soil erosion compared with untracked slopes	May increase grading costs, may cause sloughing in sensitive (wet) soils, tracking may compact soil, provides limited sediment and erosion control and should not be used as primary control measure
Offtake Ditch	X		X	X	Collects and diverts sheet flow or runoff water at the top of a slope to reduce down slope erosion potential, incorporated with permanent project drainage systems	Channel must be sized appropriately to accommodate anticipated flow volumes and velocities, lining may be required, may require design by qualified personnel, must be graded to maintain positive drainage to outlets to minimize ponding
Energy Dissipater	X	X			Rip rap or sandbags slow runoff velocity and dissipate flow energy to non-erosive level in relatively short distances, permits sediment collection from runoff	Small diameter rocks/stones can be dislodged; grouted rip-rap armouring may breakup due to hydrostatic pressures, frost heaves, or settlement; may be expensive, may be labour intensive to install; may require design by qualified personnel for extreme flow volumes and velocities
Gabions		X			Relatively maintenance free, permanent drop structure, long lasting (robust), less expensive and thickness than rip-rap, allows smaller diameter rock/stones to be used, relatively flexible, suitable for resisting high flow velocity	Construction may be labour intensive (hand installation), extra costs associated with gabion basket materials, synthetic liner required underneath to prevent undercutting

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Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Log Check Dam		X			Equally effective as silt fences for sediment trapping and straw bale barriers as drop structure, may include timber salvaged from site during clearing operations, most applicable at clearing/grubbing stages of construction	May be expensive, not commonly used after stripping stage, not appropriate for channels draining areas larger than 4 ha (10 acres), labour intensive to construct, gaps between logs may allow sediment laden runoff to escape, logs/timbers will rot over time (not permanent)
Synthetic Permeable Barriers		X			Reusable/moveable, reduces flow velocities and dissipate flow energy; retains some sediments; used as grade breaks in grades	Not to be used as check structures, must be installed by hand in conjunction with Biodegradable components, become brittle in winter and are easily damaged by construction. Only partially effective in retaining some sediment, primarily used for reducing flow velocities and energy dissipation
Fibre Rolls and Wattles	X				Function well in freeze-thaw conditions, low cost solution to sheet flow and rill erosion on slopes, low to medium cost flow retarder and silt trap, can be used on slopes too steep for silt fences or straw bale barriers, biodegradable	Labour intensive to install (hand installation), designed for slope surfaces with low flow velocities, designed for short slope lengths with a maximum slope of 2:1

Table 3. Methods for Sediment Control

Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Riparian Zone Preservation	X	X	X	X	Preserve a native vegetation buffer to filter and slow runoff before entering sensitive (high risk) areas, most effective natural sediment control measure, slows runoff velocity, filters sediment from runoff, reduces volume of runoff on slopes	Stipulate construction activities with careful planning to include preservation areas, freshly planted vegetation for newly created riparian zones requires substantial periods of time before they are as effective as established vegetation at controlling sediment
Brush or Rock Filter Berm	X	X	X	X	More effective than silt fences, uses timber and materials salvaged from site during clearing and grubbing, can be wrapped and anchored with geotextile fabric envelope	More expensive than silt fences, temporary measure only, not effective for diverting runoff, expensive to remove, not to be used in channels or ditches with high flows
Fibre Rolls and Wattles	X				Function well in freeze-thaw conditions, low cost solution to sheet flow and rill erosion on slopes, low to medium cost flow retarder and silt trap, can be used on slopes too steep for silt fences or straw bale barriers, biodegradable	Labour intensive to install (hand installation), designed for slope surfaces with low flow velocities, designed for short slope lengths with a maximum slope of 2:1
Pumped Silt Control Systems (Silt Bag)		X			Filter bag is lightweight and portable, simple set up and disposal, sediment-laden water is pumped into and contained within filter bag for disposal, different aperture opening sizes (AOS) available from several manufacturers; for emergency use only under overflow conditions	May be expensive, requires special design needs, requires a pump and power source for pump, suitable for only short periods of time and small volumes of sediment laden water, can only remove particles larger than aperture opening size (AOS)

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Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
Silt Fence	X		X	X	Economical, most commonly used sediment control measure, filters sediment from runoff and allows water to pond and settle out coarse grained sediment, more effective than straw bale barriers	May fail under high runoff events, applicable for sheet flow erosion only, limited to locations where adequate space is available to pond collected runoff, sediment build up needs to be removed on a regular basis, damage to filter fence may occur during sediment removal, usable life of approximately one year
Earth Dyke/Barrier			X	X	Easy to construct, relatively inexpensive as local soil and material is used; can be easily converted to Sediment Pond/Basin	Geotechnical design required for fill heights in excess of 3 m, may not be suitable for all soil types or sites; riprap spillway and/or permeable outlet may be required
Gabions		X			Relatively maintenance free, permanent drop structure, long lasting (robust), less expensive and thickness than rip-rap, allows smaller diameter rock/stones to be used, relatively flexible, suitable for resisting high flow velocity	Construction may be labour intensive (hand installation), extra costs associated with gabion basket materials, synthetic liner required underneath to prevent undercutting
Rock Check Dam		X		X	Permanent drop structure with some filtering capability, cheaper than gabion and armouring entire channel, easily constructed	Can be expensive in areas of limited rock source, not appropriate for channels draining areas larger than 10 ha (4 acres), requires extensive maintenance after high flow storm events, susceptible to failure if water undermines or outflanks structure
Log Check Dam		X			Equally effective as silt fences for sediment trapping and straw bale barriers as drop structure, may include timber salvaged from site during clearing operations, most applicable at clearing/grubbing stages of construction	May be expensive, not commonly used after stripping stage, not appropriate for channels draining areas larger than 4 ha (10 acres), labour intensive to construct, gaps between logs may allow sediment laden runoff to

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Method	Slopes	Ditches & Channels	Large Flat Surface Areas	Borrow & Stockpile Areas	Advantages	Limitations
						escape, logs/timbers will rot over time (not permanent)
Synthetic Permeable Barriers		X			Reusable/moveable, reduces flow velocities and dissipate flow energy; retains some sediments; used as grade breaks in grades	Not to be used as check structures, must be installed by hand in conjunction with Biodegradable components, become brittle in winter and are easily damaged by construction. Only partially effective in retaining some sediment, primarily used for reducing flow velocities and energy dissipation

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Table 4. Control Methods and Appropriate Construction Activity.

METHOD	Clearing & Grubbing	Stripping	Borrow Sources	Sub Excavation	Stockpiles	Cut Slope	Fill Slope	Ditches / Channels	Culverts	Temporary Haul Roads
Silt Fence	X	X	X		X	X	X	**	X*	X
Gabions								X	X	
Brush or Rock Filter Berm	X	X	X		X	X	X			
Continuous Berm	X	X	X		X	X	X			X
Earth Dyke Barrier	X	X	X		X	X	X			X
Inlet Protection								X	X	
Rock Check Structure								X		
Log Check Structure								X		
Synthetic Permeable Barrier								X		
Straw Bale Check								X		
Straw Bale Barrier			X		X	X	X			X
Biodegradable Erosion Products					X	X	X	X		
Rip Rap Armouring								X	X	
Cellular Confinement System						X	X	X		
Gravel Blankets						X	X	X		
Energy Dissipaters								X	X	
Sediment Ponds and Basins		X						X		
Slope Drains						X	X			
Offtake Ditches		X	X	X		X	X			
Seeding			X		X	X	X	X		
Mulching			X		X	X	X	X		
Hydroseeding			X		X	X	X	X		
Topsoiling			X		X	X	X	X		
Planting Trees and Shrubs						X	X	X		
Fibre Rolls			X		X	X	X			
Riparian Zone Preservation	X	X	X	X	X	X	X	X		X
Pumped Silt Control Systems								X	X	
Slope Texturing			X	X	X	X	X			X

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METHOD	Clearing & Grubbing	Stripping	Borrow Sources	Sub Excavation	Stockpiles	Cut Slope	Fill Slope	Ditches / Channels	Culverts	Temporary Haul Roads
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Notes:

* Suitable for spilling basin at culvert inlet

** May be suitable for trapezoid bottom channels (minimum 2 m bottom) with anticipated low flow (<0.03 m³/s)

Personnel associated with this project will adhere to the following generic guidelines:

- Maintain existing vegetation cover whenever possible and minimize the area of disturbance by minimizing travel. Maintaining existing vegetation cover is the best and most cost-effective erosion control practice;
- Retain and protect vegetation layer to reduce erosion potential;
- All vehicular traffic must stay within designated accesses. All suspected off RoW travel must be reported immediately to the Environmental Monitor/Construction Consultant;
- Install all erosion and sediment control practices prior to any soil disturbing activities, when applicable;
- Avoid frequent or unnecessary travel over erosion prone areas;
- Install silt fence on the down-slope perimeter of all steep (3:1 or greater slope) disturbed areas according to the attached installation instructions;
- Add mulch, straw crimping or silage along with native vegetation seed to all disturbed areas as required;
- Upon final abandonment, areas that have erosion potential may be straw crimped and or matted and seeded to return the area to pre-disturbance conditions in a timely fashion.

Inspection & Maintenance

Continued inspection and maintenance of erosion and sedimentation control measures may be required after completion of construction. Regular inspections should be conducted on a weekly basis or as required with respect to storm events and snow melt.

The contractor will be responsible for maintenance of the erosion control works installed under this EPP during construction. During operations, Wedgeport Wind will be responsible for maintenance.

Inspection and maintenance will continue until the erosion control is no longer required. The following circumstances and conditions will determine this outcome:

- a. Revegetation of bare soil was successful;
- b. No obvious erosion scour is observed;
- c. No obvious bedload of silt and sediment laden runoff is observed;
- d. Inspection and maintenance report indicates satisfactory performance;

All maintenance performed on erosion and sediment control measures will be recorded.

4.5 *Vegetation Management Program*

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Wedgeport Wind recognizes that each operational region is unique and that weed management that is effective in one area, may not be effective in another. However, Wedgeport Wind's policy to control vegetation will be based upon the species identified during discussions with landowners, regulators and field assessments.

Wedgeport Wind will take the following approach to vegetation management:

- Prevention
- Chain of Custody
- Procedures for Vegetation Control
- Monitoring
- Identification

4.5.1 Prevention

- Prevention is paramount to an effective weed management program;
- Wedgeport Wind will attempt to minimize the potential for weed introduction/invasion by seeding all disturbed areas with landowner approved seed mixes.

4.5.2 Seeding

- Use a certified native seed mix. Purchase only certified seed from a recognized member of the Canadian Seed Growers Association (CSGA). Obtain a certificate of analysis that identifies weeds found in samples of analyzed by a seed lab;
- Broadcast versus seed drills shall be utilized. If the area has minimal disturbance then broadcast the seed but use a packing wheel attachment or covered chains dragged over the seed to enhance contact with the soil;

4.5.3 Operational Considerations

- Avoid driving vehicles across infestations. Fence off areas of infestation if necessary;
- Ensure imported materials (gravel, clay) are free of vegetative matter and soil. Avoid importing straw because it is very difficult to assess for weeds;
- Ensure equipment used during treatment programs is clean and free of any weed debris before entering the area that has been treated.

4.5.4 Chain of Custody

Successful implementation of the weed management program is dependent on awareness and participation by all parties active in the pasture and immediate surrounding area. It requires commitment from management, planning, communication, training, reporting and follow-up.

Wedgeport Wind's Vegetation Management Policy guidelines will include:

- If landowners manage or implement a vegetation control program on surrounding lands, during the planning process Wedgeport Wind will solicit their participation in a cooperative weed management program;
- Only licensed applicators licensed in the jurisdiction in which the lands are located may enter upon and treat vegetation on a Wedgeport Wind site;
- The Senior/Lead Operator, in consultation with the Environmental Co-coordinator and licensed contractor, shall specify the herbicide (mixture) to be used on the access roads, turbine leases, transmission RoWs, or other facilities;
- The Senior/Lead Operator shall insure that the contractor complies with all Workplace Hazardous Material Information System requirements, and that the contractor has a spill response plan and appropriate spill response equipment in place;
- The Senior/Lead Operator shall review site-specific environmental sensitivities with the contractor as part of the required project Pre-Job Meeting;
- Wedgeport Wind employees will fulfill the day-to-day components of the weed management program.

4.5.5 Procedures for Vegetation Control

Wedgeport Wind will use information collected in prior seasons to evaluate the infestation of noxious and invasive species over time and prepare a weed treatment plan for operations in the upcoming year.

As no one method of vegetation control may be effective, the following procedures will be implemented in a synergistic manner for all Wedgeport Wind operations on project lands:

- The most effective and least costly method of weed control is to prevent their establishment;
- Integrated weed management may combine chemical, mechanical and natural controls with each measure implemented as needed. Treatments should not be employed on a scheduled basis but used in response to a situation identified during past monitoring;
- After a site has been cleared, prepared and seeded, regular monitoring and weed pulling is necessary in order to keep the site from being overrun by undesirable plant species. This prevents extensive root systems from forming. Once established, these root systems become extremely difficult and costly to remove completely;

- Preventative control must be incorporated for all operations. Construction machinery used in decommissioning is to be washed before entering work areas. This is to help prevent spread of nuisance, restricted or noxious weeds;
- Monitoring of the areas over a 2-5 year period (if location undergoing reclamation) or during the lifetime of a facility, is required to alleviate problems as they occur or until weeds are controlled and vegetation is established as appropriate. As monitoring occurs, disturbed areas will also be checked for new occurrences of weeds, and appropriate control methods will be applied to any outbreaks;

4.5.5.1 MOWING

- Wedgeport Wind may rely on mowing as an effective form of weed control in the area;
- Repeated mowing controls perennial weeds by depleting root reserves. It will also prevent seed production of annual and biennial weeds;
- If only one mowing is planned, it should be completed during the budding stage of perennial weeds;
- Mowing must be completed early in the season, before vegetation sets seeds and multiple mowing treatments may be utilized;
- Mower selection will also be considered. Rotary mowers with one or more horizontal blades will cut plants at the highest setting above ground level to reduce potential impacts to nesting species. Lightweight mowers may be used to cut herbaceous weeds;
- Mowing will be completed during the construction phase and may be ongoing through operations as part of the Weed Management Program;
- To prevent conflicts with nesting birds, the *Migratory Birds Act* and *Species at Risk Act*, and still maintain effective weed control, mowing will not be completed during the critical breeding season and will be completed after July 15 unless vegetation characteristics dictate mowing within the time frame. Where weed control requires earlier intervention, field surveys will be done to identify active nests or other conflicts so that these may be avoided during the mowing operations;
- Direct impacts to vegetation will be limited to within the surveyed boundaries of the access and lease boundaries. Mowers will travel off trails while mowing but otherwise will utilize existing access roads, minimizing additional soil disturbance.

4.5.5.2 HAND PULLING

- Hand pulling may be effective for small patches of perennial weeds however it is most effective for annual and biennial weeds. Pulling of annual weeds prevents seed production. If weeds are in flower, bag and dispose of them at an approved garbage facility to prevent seed spread;
- Hand pulling is most effective when you are trying to prevent the establishment of new species;
- Pulling and digging individual plants may be used to eradicate very small-scale infestations;

4.5.5.3 CHEMICAL CONTROLS

- Herbicide application that results in soil sterilization is strictly prohibited;
- Always notify adjacent landowners/occupants prior to the application of herbicides;
- If required permits will be obtained from regulatory bodies for the application of herbicides within 30 metres of an open water body. Pesticides must not be stored, mixed or equipment cleaned within 30 metres of an open body of water;
- Herbicide drift is a concern for ground application. Contractors are responsible for ensuring that any herbicide applications conducted are done so in a safe and responsible manner. The choice of chemical should be made with adjacent land uses in mind;
- Herbicides should not be sprayed when winds are excessive (winds over 16 km/hr are considered a drift hazard). Applications should occur only when winds are blowing away from water bodies, sensitive sites, or areas of concern (as identified by regulators and/or landowners). Conditions of temperature inversions should also be avoided;
- Presently, chemical control on leases is accomplished through low-volume application of approved herbicides directed specifically toward weed species. The herbicide application is performed primarily with backpack sprayers, although some applications have been completed with hand-held nozzles attached to hydraulic truck-mounted sprayers via a rubber hose. Regardless of the specific spray equipment, reasonable efforts must be made to minimize impacts to desirable low-growing shrub and herbaceous species present. Low-volume applications entail lightly wetting of the foliage of undesirable woody species. The herbicide is then transferred throughout the plant, including into the roots, resulting in the death of the plant. Since foliar herbicide application requires leaves on the target plant, this method of herbicide treatment is performed only during the summer months when the vegetation is actively growing. There is very little impact to adjacent vegetation or the environment due to the limited amount of herbicide applied, the selected application to only undesirable weeds, and the careful selection of the herbicide mixture;
- During rainfall, herbicides are moved from land into waterbodies by runoff. The occurrence of herbicides in the waterbodies depends on the intensity and timing of the rainfall and location and timing of herbicide applications. Herbicide application requires extra care and caution to ensure water quality, and aquatic and riparian habitats will not be affected by the application. Natural vegetation should be left along natural water bodies to ensure bank stability and to provide a natural buffer and filter for chemicals;

4.5.6 Monitoring

Monitoring of locations is required to alleviate problems as they occur or until weeds are controlled and vegetation established as appropriate;

4.5.7 Protection of Flora & Fauna SARA Species during Vegetation Management

- In order to comply with the SARA and MBCA, as a requirement of the regulatory approval process, Wedgeport Wind has already conducted flora and fauna assessments on the affected lands;
- The data collected during those assessments will be used to identify known, probable, or other habitat types, species at risk locations, and the likelihood of species at risk occurring within a specific area (i.e. LSD, section, etc...). The information collected in the preliminary stages will be used to create effective vegetation management strategies that avoid or protect species at risk, and ultimately comply with SARA and MBCA;
- For example, vegetation requiring control may require mowing but occur within a setback distance identified in assessments. In that instance, hand spraying or tillage, or weed pulling may be an appropriate response;
- As with any effective management strategy, Wedgeport Wind's vegetation management strategy will be dynamic and require thoughtful execution.

4.6 Culvert Maintenance

All maintenance will be carried out in accordance with the *Nova Scotia Watercourse Alteration Specifications (2006)* or updated versions thereof.

- 4.6.1 Inspect them regularly during the course of construction and make all necessary repairs if any damage occurs;
- 4.6.2 Limit the removal of accumulated material (i.e., branches, stumps, other woody materials, garbage, etc) to the area within the culvert, immediately upstream of the culvert and to that which is necessary to maintain culvert function;
- 4.6.3 Remove accumulated material and debris slowly to allow clean water to pass, to prevent downstream flooding and reduce the amount of sediment-laden water going downstream.

5.0 SITE RESTORATION PLAN (SRP)

The objective of the SRP is to remove all garbage from site, control erosion as may be necessary, restore soil capability, and reclaim the project areas and associated disturbed portions to a land capability which is equivalent to pre-disturbance characteristics.

Reclamation will take place once construction equipment has left the location or as soon as soil and weather conditions permit. The landowners will be notified prior to the initiation of the reclamation activities and again upon completion. Reclamation success is dependent good landowner communication and upon favourable conditions in the root zone for optimum crop growth. The key soil factors that determine root zone quality include the water holding capacity, organic content, structure and consistence, salinity, nutrient balance and soil regime.

5.1 *Interim Reclamation*

Wedgeport Wind shall attempt to reclaim all disturbed land surfaces within 2 growing seasons. Interim reclamation, including site and debris clean-up, slope stabilization and re-contouring with subsoil, and spreading of topsoil shall be done progressively and concurrently with operations.

Reclamation of the sites during production requires re-contouring the non-use portion of each surveyed lease.

The subsoil will be used to re-contour each site to allow natural drainage patterns to exist without creating slopes that have the potential for erosion.

Any unexpected disturbances that occur outside the immediate working area of the sites will be reclaimed to pre-development conditions immediately.

6.0 Monitoring Program for Surface Water Impacts

6.1.1 Wedgeport Wind's Commitments

As part of its environmental program, Wedgeport Wind has made the following commitments regarding monitoring the project for surface water impacts during construction; operations; and maintenance:

- Wedgeport Wind will conduct visual inspections, both quarterly, and after severe storm events, on the site to ensure the effectiveness of erosion and sedimentation controls;
- If issues are noted during these assessments, Wedgeport Wind will take the necessary steps to ensure erosion and sedimentation controls are repaired, replaced, upgraded, or installed as necessary;

- Wedgeport Wind will provide summaries of the monitoring program to NSECC on a quarterly basis, and reports will be submitted to NSECC within 30 days from the last day of the preceeding quarter;
- If an immediate or large scale impact is noted following a severe storm event, updates may be provided to NSECC at that time;

7.0 Spill Response

Wedgeport Wind recognizes its responsibility for its operations and the effects that these operations have on employees, landowners, the public and the environment. Although facilities and operating procedures are designed to prevent upsets that could result in a spill, spills may occur.

To a large extent, effective spill response is dependent on the amount of planning that is undertaken before a spill occurs. Sound planning will help reduce the number of spills, improve the success of response activities, reduce environmental impact, decrease conflict with regulatory agencies and the public, and lower spill response costs. Spill planning is a continuous process that requires commitment, cooperation and input. Components of planning include:

- Company policy and spill strategy;
- Spill prevention;
- Contingency plans;
- Equipment readiness (know local contractors);

Wedgeport Wind will take immediate action to control a spill including:

- Shut in the source of the spill and start documentation;
- Assess the spill;
- Initiate containment and recovery;
- Protect the public and worker safety;
- Supervise the spill clean-up;
- Prepare status reports;
- Remediate and reclaim the affected area; and
- Conduct a de-briefing session to help prevent a similar incident.

Wedgeport Wind's policy in regard to spill planning and control operations involves:

- Authority to initiate emergency actions;
- Reporting structures for notification and approvals;

- Authority for expenditures related to spill activities;
- Authority to activate additional resources as needed;
- Authority to respond to unidentified spills.

If a spill occurs, a single authority will immediately assume overall responsibility for coordination of response actions. For small spills one individual can oversee the entire operation, especially if that individual can obtain advice and support from internal resources, spill specials, regulatory staff and others.

7.1.1 Containment and Recovery

Once a spill has occurred, it is important for Wedgeport Wind to initiate a well-organized response that includes shutting in the source, initiating containment and recovery, clean-up and reclamation. As no two spills are alike, it is impossible to provide a rigid set of instructions. Trained personnel must adapt to the unique circumstances of the spill and use available resources. If one technique fails, a new approach or improvisation of existing methods must be attempted. In general, spill response should be approached as follows:

- **Spill notification** - is the starting point for initial response. Documentation starts at this stage and must be continued until the site is reclaimed. Activate the spill contingency plan, mobilize resources, confirm spill and shut-in the spill source;
- **Assessment of incident factors** - includes the identification of hazards associated with the incident (hazard assessment), the site assessment and security of the impact.
- **Set objectives** – following the site assessment, the response team should develop an action plan that includes clear and concise objectives. The priorities are to protect human life, property and the environment. An action plan that outlines objectives will likely be developed by company personnel with input from regulatory agencies;
- **Incident control** – includes containment, recovery and spill management with a focus on communication. Control is accomplished by having a defined incident commander with authority and availability to resources;
- **Evaluation** – the spill response must be evaluated on a continuous basis and changes made to the action plan if necessary. The entire response team must be briefed when changes occur.

7.1.2 Containment and Recovery Techniques

- **Dikes, bellholes, trenches** – the most common method of containing a land spill is to use a combination of dikes, bellholes and trenches around the spill perimeter, with feeder trenches inside the spill itself to move fluids towards a recovery area. Feeder trenches can be constructed by hand or mechanical

excavation only when the area has been deemed safe and continuous monitoring is undertaken.

- **Inverted weirs** – this technique is used when it is necessary to allow the natural movement of water to leave the spill site. An inverted weir consists of an earthen berm supported with sand bags or a plastic liner and the appropriate-sized culverts on an angle to contain oil inside the spill perimeter.
- **Filter fences** – can be constructed with pins and chicken wire or snow fence and bales (straw or hay). Filter fences can be effective to contain spills without severely affecting the natural movement of water.
- **Sorbent** – It may be appropriate to use a combination of natural sorbents (like straw or hay) with commercial synthetic sorbents. The overuse of sorbents can create a disposal problem and generate unnecessary waste.
- **Ice-slots** – in general, oil spilled under solid ice will flow with the current, with significant portions becoming trapped in pockets under the ice. The containment and recovery technique involves creating an opening in the ice (ice-slot) downstream of the spill and then recovering accumulations or removing ice from the opening, back to the source point of the spill. In using this technique it is important to follow the following steps:
 - Assess the weight-bearing capacity of the ice, water depths and current patterns;
 - Locate the ice-slot such that it is at an angle to the current (30 degree maximum) with a slight “J” into the main current to promote the movement of oil towards the recovery area;
 - Construct the ice-slot using backhoes, chain-saws or ice-augers providing the ice weight-bearing capacity is adequate and there are no flammable vapours under the ice. The ice slot should be approximately .75m or 2ft wide;
 - Place a skimmer or vacuum unit in the ice-slot;
 - Recover accumulations or pockets of oil and contaminated ice. Consider in-situ burning as an alternative;
 - If there are natural openings in the ice it may be possible to use booms and skimmers. Caution should be taken when working in these natural conditions with respect to weight-bearing capacity.

7.1.3 Spill Waste Disposal

- Waste materials that are generated from a spill should be minimized and managed so that there are no long-term problems with disposal. The following are some of the common waste materials associated with spills and some options for disposal:

- **Contaminated fresh water** – removal and hauling by vacuum truck to an approved disposal facility;
- **Contaminated soil** – excavation by machinery or hand, loading, hauling, and disposal at an approved disposal facility
- **Vegetation/sorbents** – incineration, approved landfill;
- **Garbage** – incineration, approved landfill;
- **Construction materials** – clean and reuse, approved landfill, incineration;
- **Contaminated ice and snow** – store in secure containment until ice melts and recover spilled product for disposal.

8.0 Training/Contingency Planning/HSE

Wedgeport Wind will develop a Corporate Health Safety & Environment Program which will be followed during construction, operations, and maintenance. The HSE Program outlines procedures for training, reporting and contingency planning and is summarized below:

8.1 ORIENTATION FOR NEW EMPLOYEES

Each new employee and contractor will have an orientation familiarizing him/her with *Wedgeport Wind* Safety Policy, Probationary Period, Terms of Employment-plus work instructions and process sheets pertinent to the job. Every reasonable attempt will be made to ensure these are understood before contractors and employee signs acceptance and begins work.

PROJECT SITE SPECIFIC ORIENTATION: Contractors & Employees **(Conducted by Site Manager or Supervisor)**

Items Covered:

- Wedgeport Wind Safety Policy and Expectations
- Contractors (manager, supervisor and employee) responsibility
- Hazard identification specific to the project and site
- Environmental protection requirements
- Personal Protective Equipment (PPE) as required
- Equipment, machinery safety
- Training and training documentation required
- Tailgate meetings conducted and documented
- Near-Miss, Incident, Accident reporting and documentation
- Emergency plan and procedures
- List of all hazardous chemicals to be brought on site (MSDS)

- Safe work procedures required

TRAINING: Contractors & Employees

- Job, equipment specific training (is each employee trained, competent to do the job – is that training documented)
- Safe work procedures are in place and employees trained on the procedures
- First Aid training as required
- Training for employees on Rights and Responsibilities (OH&S Act.)
- WHMIS Training (chemical identification, safe handling procedures, MSDS knowledge and location)
- Transportation of Dangerous Goods (TDG)

TRAINING SCHEDULE

- Job specific training updated as required
- WHMIS training (review yearly)
- First Aid (up-dated as required)
- TDG (every 3 years)

8.2 SAFE WORK PROCEDURES

- Job specific, safe work procedures prepared and employees trained
- All employees are encouraged to recognize, identify, and suggest improvements to the safety work procedures.

8.3 HAZARD IDENTIFICATION

JOH&S Representative or JOH&S Committee:

The JOH&S Representative or the individual members of the JOH&S Committee, will conduct informal audits on a daily basis.

The JOH&SC will conduct a formal audit / inspection once a month prior to the regular meeting.

Employees:

Each and every employee, contractor and contract employees are expected to conduct an informal audit / inspection of their work area to identify hazards daily before starting work. (How can I get hurt here today and how can I prevent that from happening)

PROCEDURE FOR CONTROLLING IDENTIFIED HAZARDS

Eliminate:

Where possible the hazard will be eliminated.

Guard and/or control:

Where elimination is not possible the identified hazard will be guarded and/or controlled using recognized engineering methods and/or safe work procedures.

Personal Protective Equipment (PPE):

Where the identified hazard cannot be eliminated or controlled with engineering methods Personal Protective Equipment will be required.

TRACKING & MONITORING THE RESULTS:

Worker's Compensation figures will be monitored to track the results of our safety program.

Hazard / Near - miss / Incident / Accident and Solution reports will be tracked and monitored.

NOTE: This OH&S Program will be developed in co-operation with the Occupational Health and Safety Representative.

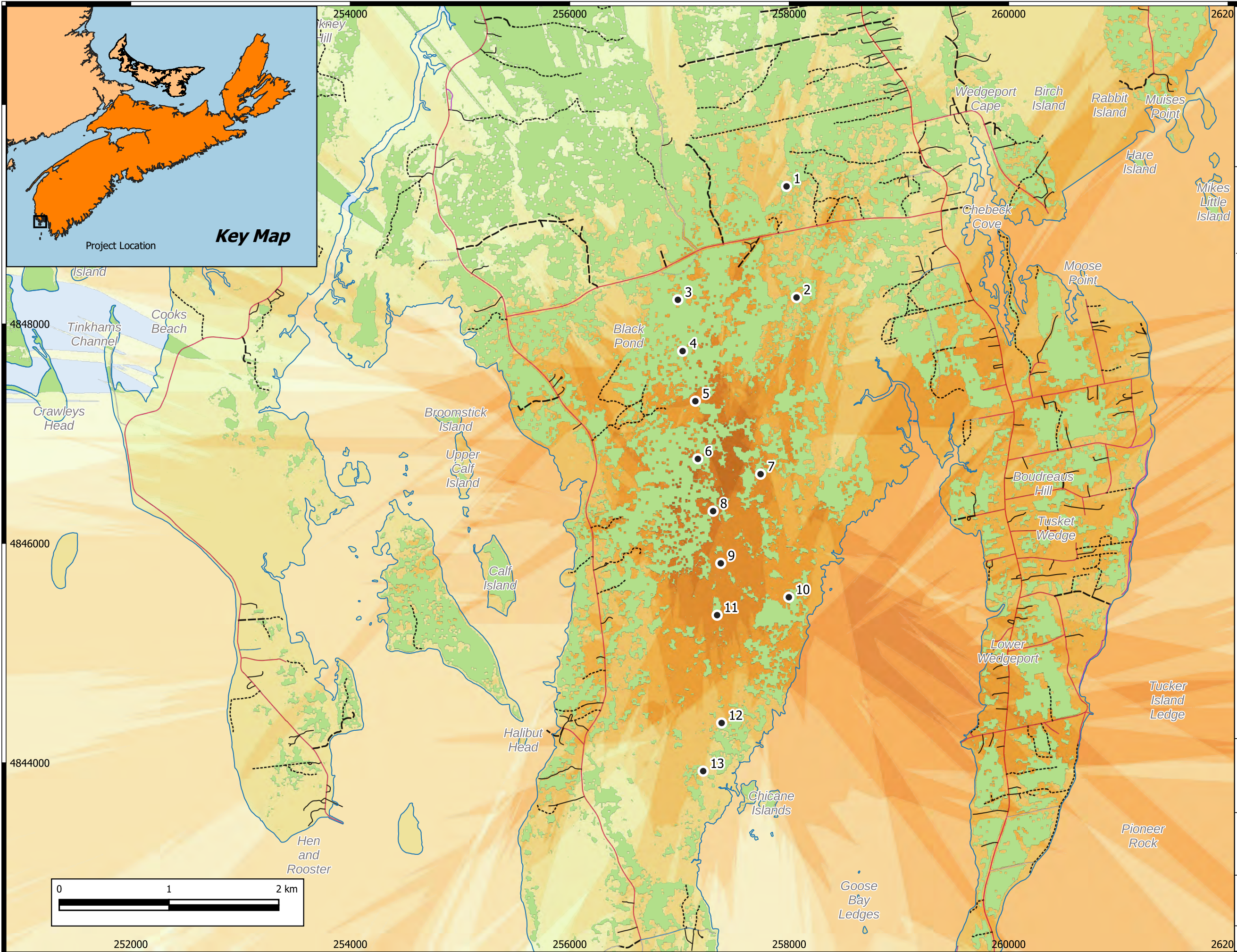
Appendix I: Inquiry & Complaint Reporting Procedures - TBD

Appendix II: Spill Report Form - TBD

Appendix III: Erosion & Sedimentation Control Plans - TBD



APPENDIX U. VISUAL IMPACT ASSESSMENT



Wedgeport Farm Wind Project

Zone of Visual Influence

Legend:

Turbines

- Proposed Turbines

Number of Visible Turbines

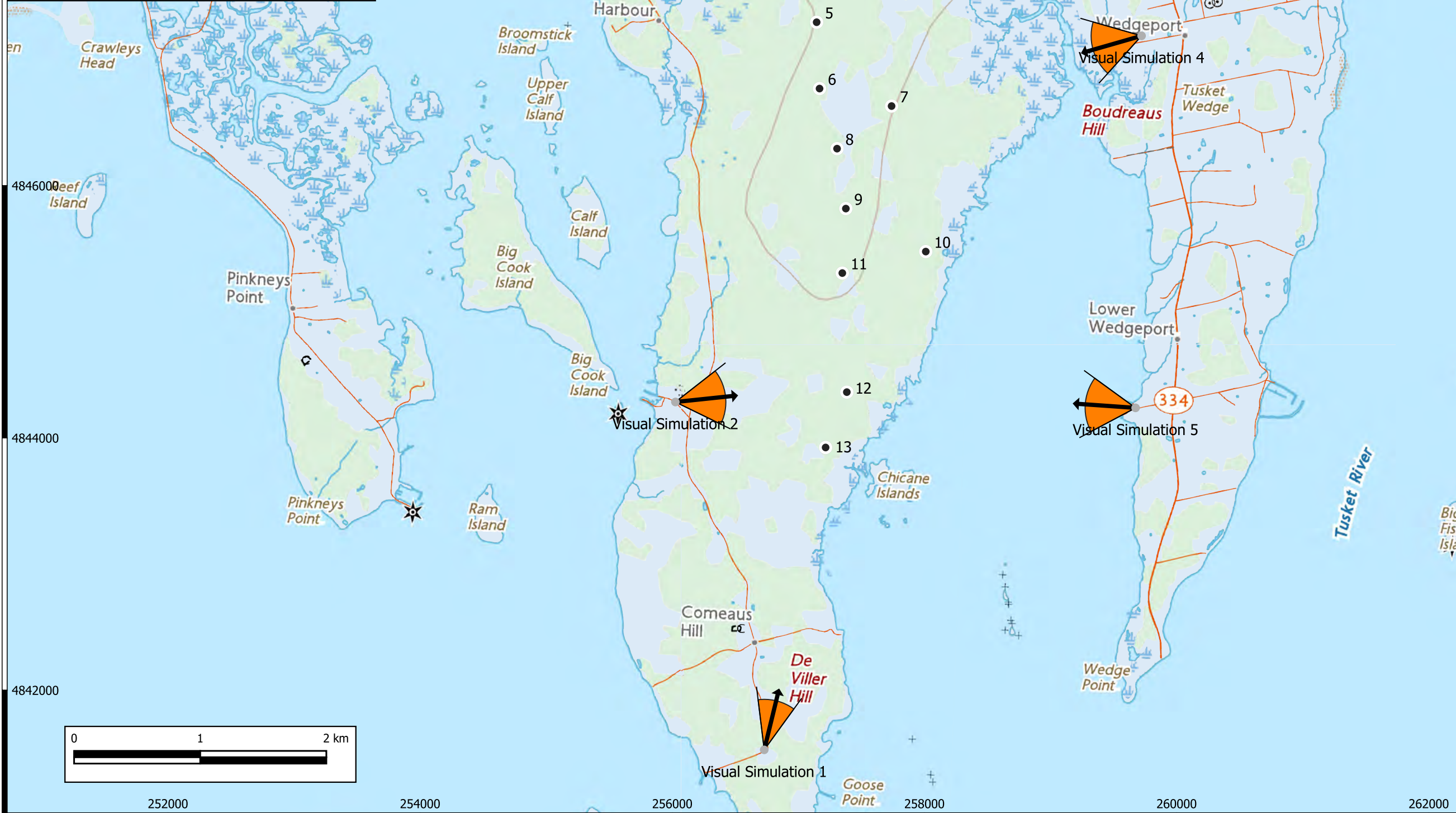
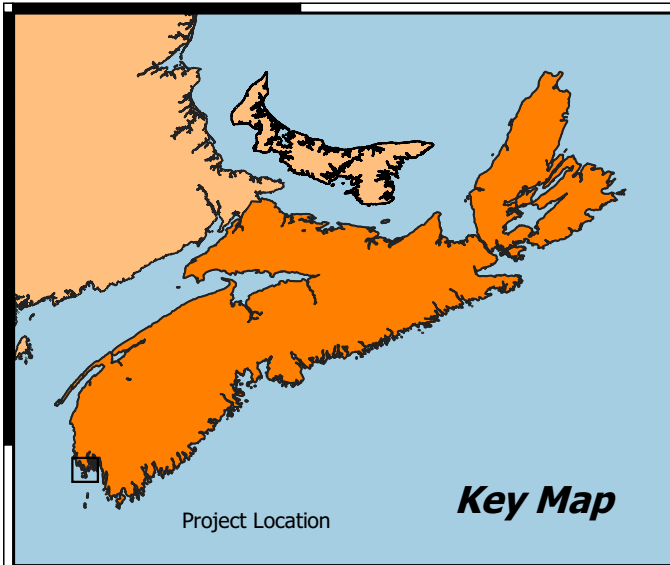


Map Data: Digital Topographic Mapping by the Nova Scotia Geomatics Center

Turbine Model: Siemens Gamesa SG 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Modeled Using:
 Lidar Derived Digital Surface Model
 Hub Height
 Observation Height:
 1.6 m Above Ground

Nortek Resource Solutions Inc.



Wedgeport Farm Wind Project

Visual Simulation Locations

Legend:

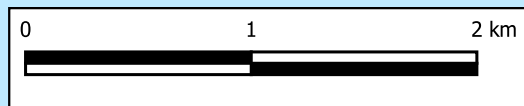
- Existing Turbine
- Proposed Turbine
- Existing Turbine
- Field of View
- Image Orientation
- Image Direction
- FOV Extent

Map Data: Digital Topographic Mapping by the Nova Scotai Geomatics Center

Turbine Model: Siemens Gamesa SG 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Modeled Using:
 DIN ISO 9613-2

Nortek Resource Solutions Inc.





Original Photograph

Wedgeport Wind Farm Project

Visual Simulation 1 Comeau's Hill

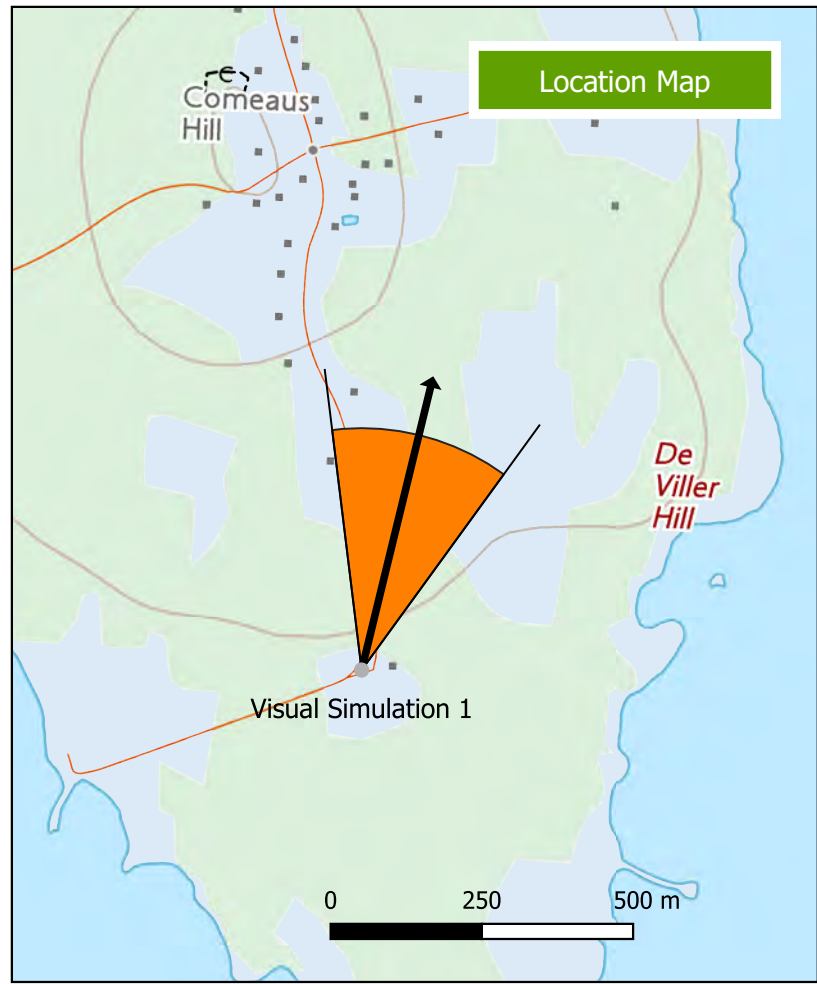
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 Northing: 4,841,526
 Photograph Date: November 4, 2022
 View Angle: 14 Degrees

Turbine Manufacturer: Siemens Gamesa
 Model: 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Coordinate System	UTM, NAD83, Zone 20	January 16, 2023
Analysis By: Nortek Resource Solutions Inc.		



Visual Simulation






Original Photograph

Wedgeport Wind Project

Visual Simulation 2 Little Harbour

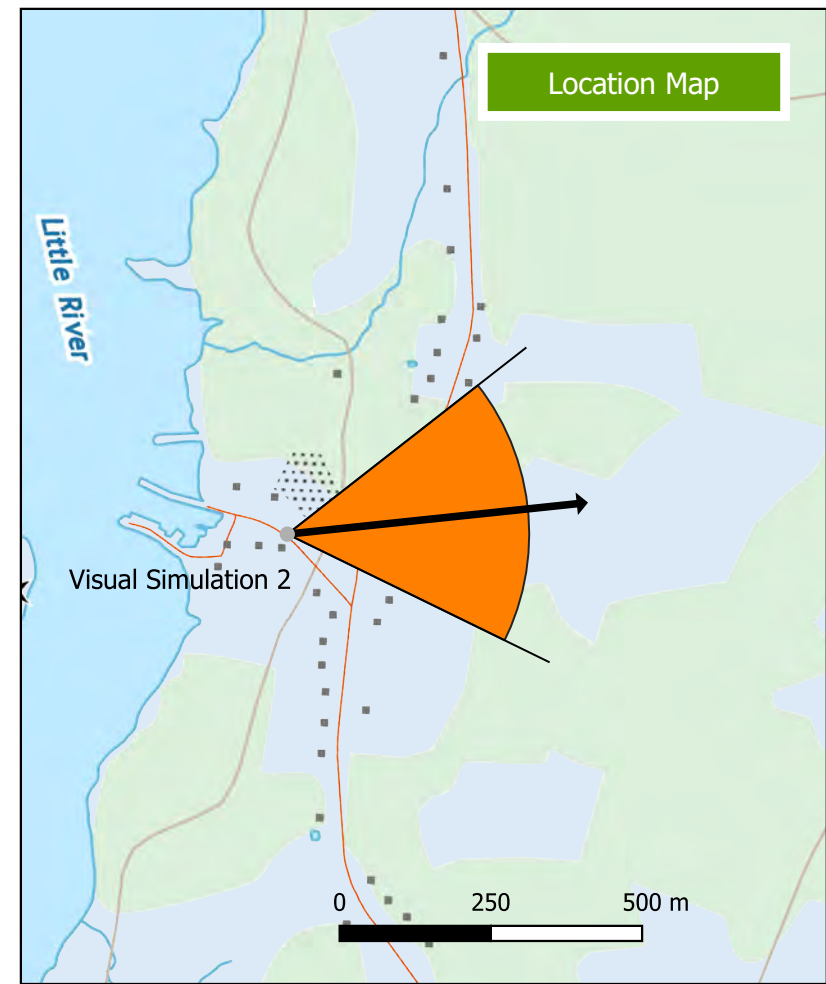
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 Photograph Date: November 8, 2022
 View Angle: 84 Degrees

Turbine Manufacturer: Siemens Gamesa
 Model: 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Coordinate System	UTM, NAD83, Zone 20	January 16, 2023
Analysis By: Nortek Resource Solutions Inc.		



Visual Simulation



Location Map



Original Photograph

Wedgeport Wind Project

Visual Simulation 3 Upper Wedgeport

Image: Easting: 258,914
 Northing: 4,849,000
 Photograph Date: November 4, 2022
 View Angle: 224 Degrees

Turbine Manufacturer: Siemens Gamesa
 Model: 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Coordinate System

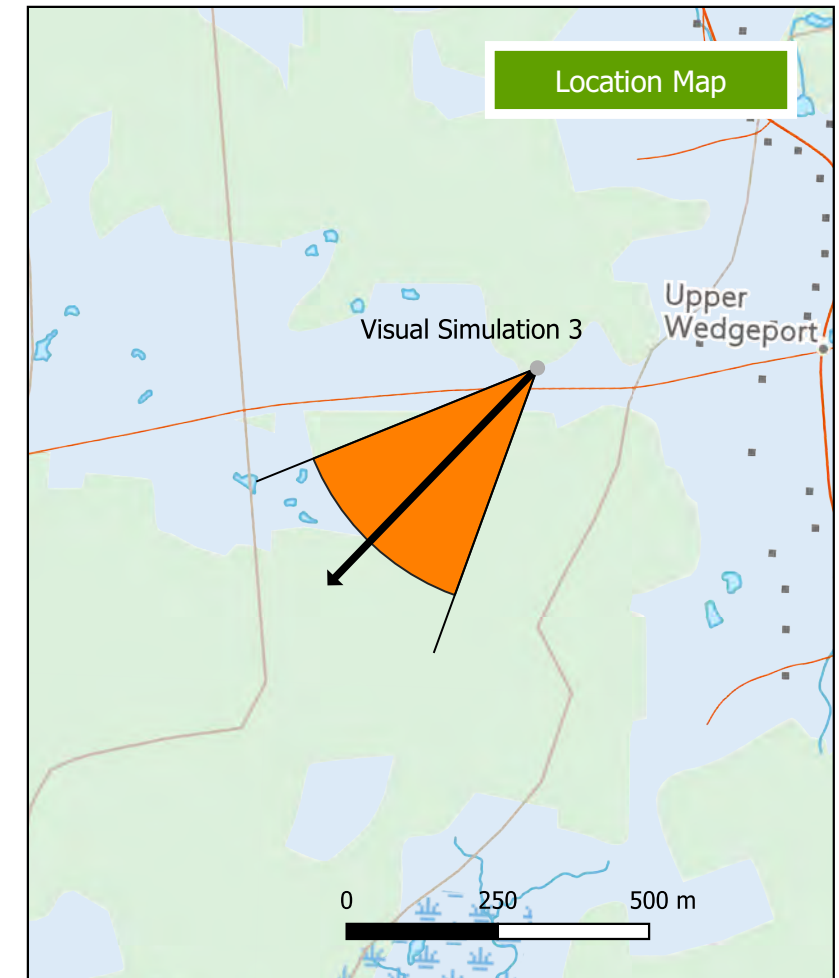
UTM, NAD83, Zone 20

January 16, 2023

Analysis By: Nortek Resource Solutions Inc.



Visual Simulation



Location Map



Original Photograph

Wedgeport Wind Project

Visual Simulation 4 Wedgeport

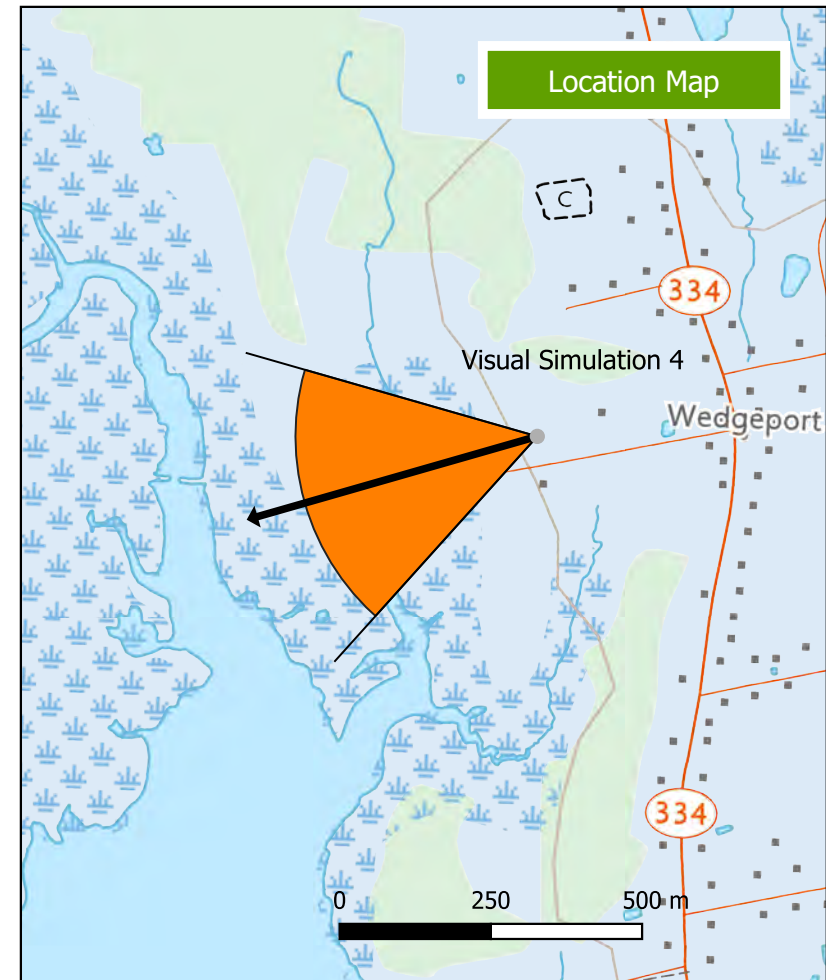
Image: Easting: 259,721
 Northing: 4,847,188
 Photograph Date: November 5, 2022
 View Angle: 254 Degrees

Turbine Manufacturer: Siemens Gamesa
 Model: 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Coordinate System	UTM, NAD83, Zone 20	January 16, 2023
Analysis By: Nortek Resource Solutions Inc.		



Visual Simulation





Original Photograph

Wedgeport Wind Project

Visual Simulation 5 Lower Wedgeport

Image: Easting: 259,674
 Northing: 4,844,238
 Photograph Date: November 5, 2022
 View Angle: 274 Degrees

Turbine Manufacturer: Siemens Gamesa
 Model: 6.6-170
 Hub Height: 110.5 m
 Rotor Diameter: 170 m
 Rated Power: 6,600 kW

Coordinate System	UTM, NAD83, Zone 20	January 16, 2023
Analysis By: Nortek Resource Solutions Inc.		



Visual Simulation

