

Minas Basin Pulp and Power

Volume 1: Environmental Assessment

Fundy Tidal Energy Demonstration Facility

AECOM Canada Ltd., June 10, 2009

Table Error! No text of specified style in document.-1 Summary of Mitigation, Follow-Up and Monitoring by VEC

VEC	Proposed Mitigation	Follow-up and Monitoring
Marine Benthos	<ul style="list-style-type: none"> • Use biodegradable lubricants. • Obtain HADD Authorization, if required, for loss of fish habitat and complete compensation as required/negotiated. 	<ul style="list-style-type: none"> • Monitor changes to benthos at the turbine sites through follow up video surveys • Develop and undertake noise monitoring for each turbine as well as for potential cumulative effects of all three turbines together.
Marine Fish and Water Quality	<ul style="list-style-type: none"> • Use of anti-fouling paints so as to minimize reef effect which can attract fish. • Limit use of artificial lighting to only what is required for safe operations. • Use biodegradable lubricants. 	<ul style="list-style-type: none"> • Develop and undertake noise monitoring for each turbine as well as for potential cumulative effects of all three turbines together.
Marine Mammals	<ul style="list-style-type: none"> • As much as possible, marine vessels will travel at slow constant speeds while in transit to minimize potential for collisions with mammals. • Use of anti-fouling paints so as to minimize reef effect which can attract fish (food supply for mammals). 	<ul style="list-style-type: none"> • Develop and undertake noise monitoring for each turbine as well as for potential cumulative effects of all three turbines together. • Collect additional information related to the presence of marine mammals in the Project area in conjunction with other monitoring and vessel activities.
Marine Birds	<ul style="list-style-type: none"> • Reduce potential for collision by maintaining low and constant speeds. • Limit use of artificial lighting to only what is required for safe operations. 	<ul style="list-style-type: none"> • Collect additional information related to the presence of marine mammals in the Project area in conjunction with other monitoring and vessel activities. • Monitor vessel decks and water for evidence of bird collisions.
Marine Species at Risk	<ul style="list-style-type: none"> • Maintain constant course and vessel speed under 14 knots. • Do not approach whales nearer than 100 m, nor by greater than 2 vessels at one time. • Use of anti-fouling paints so as to minimize reef effect which can attract marine species at risk. 	<ul style="list-style-type: none"> • Develop and implement a monitoring plan to gather information related to noise levels associated with project. • Develop and implement a monitoring plan to collect information related to the presence of marine species at risk in the project area.
Intertidal Environment	<ul style="list-style-type: none"> • Obtain and comply with all required permits and authorizations. • Avoid construction activity during sensitive period for birds. 	<ul style="list-style-type: none"> • Conduct spring and summer 2009 wildlife and vegetation surveys and, if required, develop additional mitigative measures in consultation

VEC	Proposed Mitigation	Follow-up and Monitoring
	<ul style="list-style-type: none"> • Limit equipment travel and repair any damage caused by equipment travel. • Place cable on stilts during cable pull to minimize disruption of habitat. • Install free spanning temporary bridge across small stream. • Trench, install cables, and backfill at low tide in one day. • Use dam and pump to cross small stream under dry conditions. • Conduct fish rescue as required. • Restore to pre-construction conditions to the extent possible. • Install appropriate erosion and sediment control measures for on-land construction. 	<ul style="list-style-type: none"> • with regulatory agencies. • Monitor success/effectiveness of wetland compensation project, if required.
Terrestrial Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> • Minimize footprint/area of disturbance. • Allow regrowth of low growing species. • Preserve and reuse topsoil. • Undertake clearing activities outside breeding season for most birds (<i>i.e.</i>, April 1 to Aug. 15) to the extent possible. Otherwise conduct pre-clearing survey for nesting birds and establish a vegetated buffer zone around active nests until young have naturally fledged. • Limit use of artificial lighting to only what is required for safe operations. • Use only mechanical vegetation control (<i>i.e.</i>, no herbicides). 	<ul style="list-style-type: none"> • Conduct spring and summer 2009 wildlife and vegetation surveys and, if required, develop additional mitigative measures in consultation with regulatory agencies.
Terrestrial Species at Risk	<ul style="list-style-type: none"> • Avoid construction activities in the salt marsh during spring and summer months where possible since soils and vegetation are exposed and more susceptible to disturbance • Avoid terrestrial excavation during heavy precipitation to prevent sediment transport. • Implement and maintain structures for erosion and sediment control and stabilize erodible soil as soon as possible. • Minimize corridor width where feasible to mitigate habitat fragmentation. • Replace topsoil to retain native seedbank. • Allow natural regeneration of low growing shrubs and herbs on corridor to preserve ecological function. 	<ul style="list-style-type: none"> • Conduct spring and summer 2009 wildlife and vegetation surveys and, if required, develop additional mitigative measures in consultation with regulatory agencies. Mitigation may include alteration of site footprint where economically and practically feasible to avoid terrestrial species at risk; transplantation of individuals; and/or the temporary removal of species.

VEC	Proposed Mitigation	Follow-up and Monitoring
	<ul style="list-style-type: none"> Clearing and corridor construction should take place after August 15th to avoid nesting season of birds. Where clearing or maintenance cleaning is required prior to this day, conduct a nest survey no more than one week prior to event, and leave 30 m buffer zone surrounding nests should they be located. 	
Recreational and Commercial Fishing	<ul style="list-style-type: none"> Establish a 300 m exclusion zone around each of the turbines. Undertake installation and removal activities outside of lobster fishing season to the extent possible. Undertake maintenance activities outside of lobster season to the extent possible. Where activities are required during the lobster season, inform fishers of vessel movements, timing and locations. Operate vessels in specified routes and locations. Provide fishers with coordinates of subsea cable and turbines. 	<ul style="list-style-type: none"> Design and implement lobster catchability studies in cooperation with fishers to identify any changes in catch size.
Archaeological and Heritage Resources	<ul style="list-style-type: none"> Stop work and contact the Nova Scotia Museum in the event that archaeological or heritage resources are found. 	<ul style="list-style-type: none"> Undertake archaeological monitoring during ground disturbance and trenching/excavating.
Tourism and Recreation	<ul style="list-style-type: none"> Project to include construction and operation of an interpretative centre at the landfall location. 	<ul style="list-style-type: none"> N/A