

7 SUMMARY OF PROPOSED MITIGATION

GENERAL

- All necessary permits and approvals will be obtained and on-site.
- Pre-project surveys will be completed to identify locations for avoidance.
- Prior to construction a Grading Plan, Storm Drainage Plan, and an Erosion and Sedimentation Control Plan will be developed, approved, and implemented for the Project.
- The Erosion and Sediment Control Plan will be designed so that landscape features outside of the Project footprint will not be altered.

SOILS, UNSTABLE TERRAIN, AND EROSION

- Pre-project geotechnical surveys are being completed to identify locations for avoidance or mitigation.
- When feasible, transporting equipment and material will be postponed during adverse weather or wet ground conditions to mitigate rutting, admixing, and compaction.
- Upper soil materials and organic material (containing seed bank and propagules) will be salvaged for replacement during reclamation.
- Upper soil materials and organic material will be stripped carefully to a selected depth to reduce admixing.
- Stripped soil materials will be stored separate from excavated or graded subsoils to mitigate admixing, loss, and changes to soil quality.
- Soil material replacement will be completed when the soil condition is suitable (i.e., dry condition) to be evenly spread over disturbed areas.
- During reclamation, if soil compaction has occurred, the areas may be deep ripped to alleviate compacted soils.
- Salvaged materials will be stored away from waterbodies and watercourses above the high water mark.
- Erosion and sediment control measures including silt fence, straw bale check dams and diversion channels will be installed in accordance with manufacturer's specifications, as appropriate.
- Erosion and sediment control measures shall be inspected and maintained during construction
- Remove silt and other accumulated debris from site drainage ditches in order to keep them free-flowing at all times. Dispose of removed sediment as per an Erosion and Sedimentation Control Plan
- Erosion and sediment control measures will not be removed until there is unlikely to be further erosion
- Dust control methods (i.e., watering roads) will be employed during construction of the Project to limit wind erosion
- Weather forecasts shall be regularly monitored for extreme weather conditions during the construction period when exposed soils have not been fully stabilized
- A visual inspection of the worksite shall be conducted, during and after each significant rainfall event, for signs of erosion, and implement appropriate mitigation measures if required
- Additional sediment control and erosion control materials must be on-site and readily available in the event of a sudden and significant rainfall event or the forecast of such event
- Construction activities will be reduced or stopped during heavy precipitation events. Heavy precipitation events are those considered hindering access and clearing activities, causing rutting and compaction of soils and those which may cause a threat of local flooding.

SURFACE DRAINAGE AND WATERCOURSES

- It is anticipated that most of the water will come from water trucks, however if required, an on-site water supply may be used. If an on-site water supply is determined to be required for the Project, a WAWA will be obtained prior to withdrawing any on-site water during Project construction.
- To the extent practical, existing surface drainage patterns will be maintained in the Project area.
- Access roads that cross watercourses and wetlands will follow the guidelines from the Watercourse and Wetland Alteration Technical Guidelines and the conditions as listed on the WAWA.
- Any extra workspace required near drainage edges will be separated from the top of bank by a minimum of 30 m.
- Culverts will be installed, as necessary, to maintain drainage
- Use temporary diversion berms or other methods, as required, to regulate drainage from construction areas

WETLANDS

- If alteration is required for the wetland that runs along the existing Crown Land Access road near WTGs 3 and 4, then a WAWA Permit application will be submitted.
- Disturbances to wetland and drainage edges will be minimized to the extent possible.
- To the extent practical, construction in wetlands will be scheduled to occur under dry or frozen ground conditions.
- Siting and construction of the Project has been planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plant species, wetlands, waterbodies, and watercourses, and other identified key habitat areas for bats, other SOCC, or sensitive wildlife species).

VEGETATION AND WILDLIFE HABITAT

- Pre-project surveys will be completed to identify sensitive habitat locations for avoidance or mitigation including a spring ephemeral and habitat survey will be completed in May/June 2018.
- Siting and construction of the Project has been planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plant species, wetlands, waterbodies, and watercourses, and other identified key habitat areas for bats, other SOCC, or sensitive wildlife species).
- The majority of the Project crosses existing roads and forest that is currently disturbed by harvesting activities, thereby minimizing the need to disturb new areas
- Disturbed areas not required for Project operation will be revegetated with an approved, weed free mix, as soon as practical following construction.

WILDLIFE IN GENERAL

- Project personnel will be instructed to keep a clean work area and to not harass animals encountered.
- Firearms and dogs are prohibited on the Project.
- Drivers instructed to be aware of wildlife and slow speed limits will be enforced on the Project, where appropriate.
- Equipment and vehicles will yield to wildlife
- Food wastes will be collected in suitable receptacles that limit attraction or impact to wildlife
- Littering and feeding of wildlife will be prohibited
- Construction activities will follow activity restriction guidelines and set-back distances for wildlife

SPECIES OF CONSERVATION CONCERN

- Siting and construction of the Project has been planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plant species, wetlands, waterbodies, and watercourses, and other identified key habitat areas for bats, other SOCC, or sensitive wildlife species).
- Construction will be scheduled to occur during periods of lowest sensitivity to wildlife, birds, bats and SOCC, where practical.
- If a plant SOCC is encountered that was not expected, appropriate mitigation will be applied prior to further construction activities.
- If a wildlife SOCC is encountered that was not expected, appropriate mitigation will be applied prior to further construction activities.

BIRDS AND BATS

- Clearing of vegetation will be completed outside of the breeding and nesting season for birds (i.e., April to August) where possible. If vegetation removal is proposed within the nesting season, a pre-construction nesting bird survey and mitigation plan would be required in order to avoid the inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs.
- Siting and construction of the Project has been planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plant species, wetlands, waterbodies, and watercourses, and other identified key habitat areas for bats, other SOCC, or sensitive wildlife species).
- Construction will be scheduled to occur during periods of lowest sensitivity to wildlife, birds, bats and SOCC, where practical.
- Powerlines will avoid travelling over top of any high use habitat areas, such as wetlands and waterbodies, as much as practical. If these areas are unavoidable and risk of collisions is identified as high, collision mitigation (e.g., bird diverters) will be installed at and along these areas.
- Because fog hinders the ability of birds to avoid collisions with obstacles, WTGs may cease operating under foggy conditions during periods of bird and bat migration throughout the Project area.
- Prior to the dismantling of a building or other installation, an inspection will be completed to determine use as a maternity or a roosting site by bats. If necessary, protective measures will be taken to avoid disruption to the survival of bats.
- Spring bird migrations surveys are being completed in April/May 2018
- A Post-construction Monitoring program for birds and bats will be implemented (Section 8). If the Project is found to be causing significant mortality during post-construction monitoring, additional mitigation will be evaluated.

BLASTING

- If blasting is required for construction, a detailed Blasting Plan will be developed for the Project and will describe the type of explosives used and the method of detonation and follow activity restriction guidelines
- The Project will follow industry standard Best Management Practices and applicable federal regulations for use of explosives
- Surface blasting will be suspended temporarily if large mammals are observed within the danger zone identified by the blast supervisor
- If blasting near fish bearing waterbodies, the approved Blasting Plan will follow Fisheries and Oceans Canada (DFO's) Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters to limit the potential for residual blasting interactions with downstream water quality

NOISE

- The Project will conform to existing municipal, local, and regional by-laws and regulatory requirements
- Construction will be scheduled to occur during daytime hours.

- Machines will be kept in good working order and comply with applicable provincial and federal requirements
- Heavy equipment will be outfitted with mufflers to dampen noise
- Work will be conducted in a respectful manner using necessary notifications and communications regarding temporary and intermittent increases in noise during project construction

WASTE MANAGEMENT

- Recyclable and waste hazardous materials will be stored on-site in appropriate containers to prevent exposure and shipped off-site to an approved facility
- All litter, garbage, and other debris generated by the Project will be collected and transported to approved disposal locations or facilities.

ACCIDENTS AND UNPLANNED EVENTS

- A Fuel and/or Hazardous Materials Spills Contingency Plan will be developed
- Dangerous goods will be stored, handled, and transported according to the NB *Clean Environment Act* and the *Transportation of Dangerous Goods Act*
- Appropriately sized spill kits will be available on-site for clean-up efforts
- All work-site activities will be conducted in a manner that minimizes the potential for spills or leaks, including the regular inspection and maintenance of machinery and equipment, and providing spill containment structures for onsite fuel and oil storage, if applicable
- No fueling and servicing of equipment will be completed within 50 m of any watercourse or wetland
- In case of a spill, the Fuel and/or Hazardous Materials Spills Contingency Plan will be followed.

TRAFFIC

- Appropriate signage will be erected and traffic directing personnel will be used where required
- Good housekeeping practices will be employed and maintained through the duration of the Project activities.
- A traffic management program will be developed for the Project and will include a detailed schedule, detailing the volume, timing and density of construction traffic
- Project activities will follow applicable local and provincial traffic regulations
- Road cones may be placed at designated areas and warning signs posted in roadways as required
- Heavy goods vehicles will not arrive or leave the Project except between agreed hours.
- During construction, the approved traffic route will be kept free of mud and debris resulting from construction and operation of the Project.
- A wheel wash system will be provided on the internal access road to remove debris from vehicles before they leave site.
- Debris found on the local roads will be removed regularly using road brushes and vacuum road sweepers.

LOCAL ECONOMY

- Local communities will benefit greatly from the development, construction, and operation of the Project as outlined in SWEB's Social and Economic Benefit Plan.
- Local and regional business communities and labour organizations will be informed of the opportunities arising from the construction, operation and maintenance of the Project.

LAND USE

- Early and meaningful engagement with First Nations communities and all potential stakeholders was completed for the Project and will continue during the Project.

- If discovery in regards to settlement or land use occurs during the Project, activities will cease in the immediate area and the appropriate regulatory agencies will be contacted, as appropriate.
- Disturbed areas will be recontoured and reclaimed to a stable profile to permit existing land uses.

HERITAGE RESOURCES

- None of the areas near the WTGs and the substation location are of high archaeological potential and archaeological monitoring during construction for these areas is not recommended.
- New Ireland Road, crosses a number of high potential archaeological areas, therefore archaeological monitoring of ground disturbing activities within 80 m of a current or former watercourse location will be undertaken.
- Archaeological monitoring for utility pole installation within 200 m of the location of the Anglican Church and cemetery (BkDf-2) will be undertaken.
- If accidental discovery of heritage resources and/or archaeological materials are encountered, ASNB will be notified and any ASNB protocols related to accidental discovery will be followed.