23. MONITORING, COMMITMENTS AND ENVIRONMENTAL PROTECTION PLANNING

This section describes the programs and practices that NextBridge will implement prior to and throughout the construction and operation phases of the Project.

23.1 Monitoring

The Project has been designed to incorporate mitigation measures to minimize the potential for environmental effects. An effective monitoring program provides results to indicate if the assumptions used in the assessment were correct and if mitigation measures are effective. An effective monitoring program also identifies unforeseen problems so they can be addressed in a timely manner.

The preliminary monitoring program for the Project is presented in Table 23-1. Details will be finalized during permitting processes. Monitoring programs are presented according to the environmental components considered in the assessment.

Table 23-1: Preliminary Monitoring Program

Environmental Component	Proposed Monitoring
Geology, Terrain and Soils	Post-construction monitoring will be used to determine the success of reclamation activities, and provide feedback for additional mitigation, if necessary
Surface Water	Monitoring of surface water quantity and quality will include the following: ■ Monitoring/inspections of erosion and sediment management measures, bank stabilization features and coffer dams during construction to verify effectiveness. ■ Monitoring of turbidity and/or Total Suspended Solids (TSS), streamflow rates and/or water levels, at water body crossings in accordance with the requirements of regulatory permits and approvals. ■ Monitoring of one or more surface water quantity and quality parameters at water taking or discharge locations to satisfy the conditions/requirements of applicable PTTWs, ECAs or EASR-related water discharge plans. ■ Monitoring/inspections of new permanent water body crossing structures and roadside drainage features (on a bi-annual basis for the first two years following post-construction and then annually thereafter) for physical function and condition. ■ Monitoring of Total Suspended Solids (TSS) and streamflow rates at new, permanent, major water body crossings on a bi-annual basis during the first two years of the operation phase (to verify the effectiveness of reclamation measures). The monitoring program may be discontinued thereafter if conditions are observed to have stabilized.
Groundwater	No monitoring programs are proposed or required
Air Quality	No monitoring programs are proposed or required
Greenhouse Gases	No monitoring programs are proposed or required
Acoustic Environment	No monitoring programs are proposed or required

Table 23-1: Preliminary Monitoring Program

Environmental Component	Proposed Monitoring
Vegetation and Wetlands	Monitoring activities relevant to the protection of upland, wetland and riparian ecosystems include the following: ■ NextBridge will monitor the Project footprint during construction for incidental sensitive features (e.g., rare plants and rare vegetation communities) that have not previously been identified on or near the Project footprint. In the event that a sensitive feature is suspected, the Rare Plant Discovery Contingency and Wildlife Features of Concern Discovery Contingency plans will be implemented. ■ Erosion and sedimentation control measures will be monitored to avoid and minimize sediment mobilization from disturbed areas to drainages, wetlands or watercourses. ■ Soil topsoil piles will be monitored for weeds. The Weed Management Plan will be implement, when required. ■ Reclamation concerns would be monitored and managed, and include soil erosion, re-vegetation and slope stability.
Fish and Fish Habitat	Monitoring will be conducted during any instream construction (e.g., installation and removal of culverts) by a qualified Environmental monitor to oversee implementation and report on the effectiveness of the construction procedures and mitigation measures for minimizing potential effects to fish and fish habitat. Turbidity and total suspended solids monitoring will be conducted according to permit requirements. The implementation of post-construction monitoring programs will be used to provide feedback on the effectiveness of design features and mitigation. Post-construction monitoring will be conducted at water body crossings to verify that erosion and sediment control measures have been successful (e.g., bank restoration and re-vegetation). The integrity of the crossing structures will be inspected regularly and during periods of high run-off, such as the spring freshet. Any changes to the morphology of the water body channel will be identified and addressed, as needed. At culverts, regular monitoring will be conducted to identify and remove blockages (e.g., ice, woody debris), as needed, that would otherwise lead to scouring and effects to channel morphology and fish habitat, and potentially interfere with fish passage. Using monitoring and adaptive management, mitigation may be modified or additional mitigation may be implemented to reduce unexpected impacts to fish and fish habitat.
Wildlife and Wildlife Habitat	Monitoring activities relevant to the protection of wildlife and wildlife habitat include the following: ■ NextBridge will monitor the Project footprint during construction for incidental sensitive features (e.g., rare vegetation communities, Significant Wildlife Habitat, and bat hibernacula) that have not previously been identified on or near the Project footprint. In the event that a sensitive feature is suspected, the Rare Plant Discovery Contingency and Wildlife Features of Concern Discovery Contingency plans will be implemented. ■ Erosion and sedimentation control measures will be monitored to avoid and minimize sediment mobilization from disturbed areas to drainages, wetlands or watercourses. ■ Soil piles (including topsoil) will be monitored for weeds. The Weed Management Plan will be implement, when required. ■ Reclamation concerns would be monitored and managed, and include soil erosion, re-vegetation and slope stability.
Archaeological Resources	Monitoring programs may be required if archaeological resources are identified and mitigation by avoidance and protection is undertaken.
Cultural Heritage Resources	Monitoring programs may be required if cultural heritage resources are identified and mitigation by avoidance and protection is undertaken.

Table 23-1: Preliminary Monitoring Program

Environmental Component	Proposed Monitoring
Traditional Land and Resource Use	Monitoring programs will be established to confirm the effectiveness of mitigation measures relevant to the resources relied on for Indigenous current use of lands and resources (i.e., vegetation and wetlands, fish and fish habitat, and wildlife and wildlife habitat). In addition, if archaeological or cultural heritage resources, including Indigenous land and resource use sites, are identified and mitigation by avoidance and protection is undertaken, monitoring programs may be required to confirm the effectiveness of mitigation.
Socio-Economics	No monitoring programs are proposed or required
Non-Traditional Land and Resource Use	No monitoring programs are proposed or required
Visual Environment	No monitoring programs are proposed or required
Human Health	No monitoring programs are proposed or required

23.2 Commitments

Appendix 1-II identifies where commitments made in the ToR are addressed in the EA Report. A plan for how and when commitments made in the EA Report will be fulfilled, and how NextBridge will report to the MOECC regarding compliance is provided in Appendix 23-I. NextBridge will retain at its head office in Toronto the results of the compliance self-assessment, including detailed monitoring data. This information will be made available in a timely manner to the MOECC on request.

23.3 Environmental Protection Planning

The objective of all environmental protection and mitigation measures in this EA Report, the EPP (Appendix 4-II) and the Environmental Alignment Sheets (Appendix 5-I) is to anticipate, prevent, minimize or manage conditions resulting over the life of the Project that could potentially adversely affect the physical, biological or socio-economic environment.

The purpose of the EPP is to provide guidance to NextBridge's employees and contractors for environmentally responsible working procedures and standards. The EPP is a compilation of environmental protection and contingency measures intended to address known and anticipated environmental conditions that could occur during Project construction.

23.3.1 Orientation and Training

NextBridge will develop an environmental and safety training program, to be implemented by the Contractor. NextBridge will also develop and deliver advanced environmental training to relevant Project personnel (e.g., inspectors, Contractor managers and Contractor supervisors). Construction Contractor staff who show neglect for the environment or disregard for the EPP may be removed from the Project footprint by NextBridge.

23.3.2 Environmental Inspection

NextBridge will appoint Environmental Inspectors to oversee implementation of the environmental protection measures and mitigation described in the EPP during Project construction.

23.3.3 Compliance Reporting

Permits typically require submission of compliance reports at specified intervals during the Project and upon Project completion. These records will be retained with other appropriate Project documentation in Project files.

A compliance self-assessment will be carried out to document compliance with the commitments made in the EA Report, including implementation of mitigation (impact management measures), and conditions of approval. The compliance self-assessment will be conducted both during and after construction, and the MOECC will be updated regarding compliance at regular (e.g., quarterly) intervals during construction and annually or otherwise post-construction, depending on the post-construction monitoring reporting requirements specified in approval conditions. Details regarding the plan for compliance are provided in Appendix 23-I.

23.4 Flexibility to Accommodate New Circumstances

This EA Report has been prepared in accordance with the approved ToR (Appendix 1-I) and MOECC guidance, including the *Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario* (MOECC 2014). Detailed design and consultation and engagement for the Project are ongoing. There may be scenarios in which commitments made in this EA Report and in the ToR cannot or should not be completely met in response to new or changed circumstances that may arise through consultation and engagement or detailed design. NextBridge will discuss the circumstances with the MOECC and other applicable regulatory agencies if a scenario occurs in which NextBridge seeks to deviate from a commitment prior to proceeding with planning for the alternate scenario or implementing the scenario before or during construction or operation.