

23. MONITORING, COMMITMENTS AND ENVIRONMENTAL PROTECTION PLANNING

This section describes the programs and practices that NextBridge Infrastructure LP (NextBridge) will implement prior to and throughout the construction and operation phases of the East-West Tie Transmission Project (the Project).

23.1 Monitoring

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 Project has been designed to incorporate mitigation measures to minimize the potential for and magnitude of environmental effects.

The Project monitoring program includes both construction and post-construction monitoring. This section focusses on the construction monitoring commitments made in the Environmental Assessment (EA) to monitor the effectiveness of the mitigation to be implemented during construction and the framework for the post-construction monitoring plan that will be developed based on the EA and permit approval conditions.

23.1.1 Construction Monitoring Plan

NextBridge has committed to clean-up and reclamation environmental protection measures during construction (Section 5.8 and Appendix 4-II). NextBridge will have Environmental Inspectors (EI) on-site during construction to monitor the implementation of the environmental protection measures and construction monitoring program.

The preliminary construction monitoring program for the Project is presented in Table 23-1. Details will be finalized during permitting processes, and the construction monitoring program will be developed based on the EA and permit approval conditions. Preliminary construction monitoring programs are presented according to the environmental components considered in the assessment.

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Table 23-1: Preliminary Construction Monitoring Program

Environmental Component	Proposed Monitoring
Geology, Terrain, and Soils	No monitoring programs are proposed or required
Surface Water	<p>Monitoring of surface water quantity and quality will include the following:</p> <ul style="list-style-type: none"> ■ 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 Permits to Take Water (PTTWs), Environmental Compliance Approvals (ECAs), or Environmental Activity and Sector Registry (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; and, ■ monitoring of TSS and streamflow rates during a construction activity at waterbodies that include greater sensitivity or implication to change from the standpoint of fish habitat, species at risk, channel stability, drainage pattern, or other environmental considerations. The specific monitoring locations will be determined during the permitting and design phases of the project; however, it is expected that water bodies of varying size (small, medium, large) would be captured, recognizing that this would allow the performance/effectiveness of mitigation measures to be evaluated at a range of scales. Monitoring of total suspended solids and streamflow rates will be carried out on a bi-annual basis during the early stages of the operation and maintenance stage (to verify the effectiveness of reclamation measures). The monitoring program may be discontinued thereafter if conditions are observed to have stabilized and applicable water quality standards are met <p>Additional site-specific data will be obtained during the permitting and final design stages of the project to provide further details on the selection, siting and implementation of mitigation measures. The planned mitigation measures will be adjusted/augmented as needed to address any unexpected deficiencies.</p>
Groundwater	<ul style="list-style-type: none"> ■ A survey of private water wells located within the estimated 100 m radius of influence of dewatering activities will be undertaken as part of the process for obtaining a Permit To Take Water. Where landowner permission is granted, the private well survey will include completion of a questionnaire to obtain details about the well, measurement of water levels and collection of a water quality sample. In accordance with Ontario Regulation 903, the survey will be conducted by a licensed water well technician. ■ A pre-blast survey of wells located within a 250 m radius of blast locations identified by Nextbridge will be conducted. The survey will include the completion of a survey form that provides details about the well and its uses. In accordance with Ontario Regulation 903, a licensed water well technician will also obtain a static water level measurement if permission is granted by the landowner.
Air Quality	<ul style="list-style-type: none"> ■ No follow-up or inspection programs will be required for air quality for receptors greater than 100 m from the project centreline. ■ Where residences are confirmed within 100 m of construction, administrative controls will be undertaken to minimize simultaneous construction activities within a 5 km radius, where practicable. Additionally, as part of the EPP a construction monitoring plan will be implemented at confirmed residences located within 100 m of construction. Handheld portable monitors will be used by the Environmental monitors within approximately 10 m of confirmed residences to provide real-time concentrations that can be compared to ambient air quality criteria. If the monitoring indicates potential for an exceedance, the construction scheduling will be reviewed and amended as possible.
Greenhouse Gases	No monitoring programs are proposed or required
Acoustic Environment	No monitoring programs are proposed or required

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Table 23-1: Preliminary Construction Monitoring Program

Environmental Component	Proposed Monitoring
Vegetation and Wetlands	<p>Monitoring activities relevant to the protection of upland, wetland, and riparian ecosystems include the following:</p> <ul style="list-style-type: none"> ■ 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 water bodies. ■ Soil topsoil piles will be monitored for weeds. The Weed Management Plan will be implemented when required. ■ Reclamation concerns would be monitored and managed, and include soil erosion, re-vegetation and slope stability. ■ NextBridge will conduct a weed monitoring program to identify and prioritize weeds for removal.
Fish and Fish Habitat	<ul style="list-style-type: none"> ■ Field surveys will be conducted at a subset of proposed water body crossings to support the permitting process. Depending on the type of crossing structure proposed and timing of construction, this subset of proposed water body crossings will include water body crossings with unknown fish habitat potential. The water body crossing list will be updated to take into account adjustments to crossing methods and to incorporate any previously unidentified water bodies. The water body crossing methods will be refined as necessary after the field surveys and as detailed construction planning continues. This information will be included in the permit applications to the regulatory agencies. ■ 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 TSS 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	<p>Monitoring activities relevant to the protection of wildlife and wildlife habitat include the following:</p> <ul style="list-style-type: none"> ■ 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 water bodies. ■ Soil piles (including topsoil) will be monitored for weeds. The Weed Management Plan will be implemented when required. ■ Reclamation concerns would be monitored and managed, and include soil erosion, re-vegetation, and slope stability. ■ NextBridge will conduct a weed monitoring program to identify and prioritize weeds for removal.
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.
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

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Table 23-1: Preliminary Construction Monitoring Program

Environmental Component	Proposed Monitoring
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
Environmental Protection Plan	General environmental protection measures listed in the EPP, that were not included in specific EA discipline sections will be monitored by NextBridge during construction.

EASR = Environmental Activity and Sector Registry; ECA = Environmental Compliance Approval; EPP = Environmental Protection Plan; PTTW = Permit to Take Water; TSS = total suspended solids.

23.1.2 Post-Construction Monitoring Plan Framework

The goal of post-construction monitoring is to continue monitoring the effectiveness of implementation of mitigation after the construction phase is complete for all Project components. The post-construction monitoring plan will be developed prior to the start of construction based on EA and permit approval conditions. The post-construction monitoring plan will also include a plan to address outstanding environmental issues or areas that require further reclamation or monitoring of reclamation efforts, as identified during and following construction.

Typical post-construction monitoring plan tasks include monitoring for sedimentation or erosion at water body crossings, assessing the progress of re-vegetation, and following any site specific monitoring requirements from the EA, permit approval conditions and conditions of agreements with land stakeholders (property owners, Crown interest holders and third parties).

The post-construction monitoring plan will include the detailed monitoring methods and frequency of the monitoring tasks.

23.2 Commitments

Commitments made in the Terms of Reference (ToR) and how these are addressed in the EA Report are provided in Appendix 1-II. A plan for how and when commitments made in the EA Report will be fulfilled, and how NextBridge will report to the Ministry of the Environment and Climate Change (MOECC) regarding compliance is provided in Appendix 23-I. NextBridge will retain the results of the compliance self-assessment, including detailed monitoring data, at its head office in Toronto. 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 Environmental Protection Plan (EPP; Appendix 4-II) and the Environmental Alignment Sheets and Access and Construction Environmental Maps (Appendices 5-I-A and 5-I-B) 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 can 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 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.