

Mitigation of Environmental Effects During Initial Construction

The initial construction contract will include measures to mitigate impacts in accordance with the commitments in the Environmental Assessment Report. Construction will proceed only if Environmental Assessment approval is received. The measures that will be used are proven “best practices” that have been successful in mitigating impacts during construction of projects across Ontario.

Noise

The following measures will be employed to address possible construction noise effects:

- using construction equipment in good repair, fitted with functioning mufflers, and in compliance with the noise emission standards outlined in the Ministry of the Environment guidelines
- limiting the noisiest construction activities to daytime hours to the greatest extent possible
- building permanent noise barriers during the early phases of construction (where construction sequencing allows) in order to reduce noise levels.

Dust

The following requirements and best management practices will be included in the contract to limit dust:

- periodic watering of unpaved (unvegetated) areas
- periodic watering of stockpiles
- limiting speed of vehicular travel
- using water sprays during the loading and unloading of materials
- sweeping and/or water flushing of the entrances to construction zones
- using calcium chloride to suppress dust.

The construction contract will dictate standard dust limiting best practices including:

- avoiding site preparation, excavation and construction during windy and prolonged dry periods
- minimizing vehicle traffic on exposed soils
- stabilizing soil and other material storage piles against wind erosion
- covering and containing fine particulate materials during transportation to and from the site
- using new or well-maintained heavy equipment and machinery, fitted with fully functional emission control systems/muffler/exhaust system baffles and engine covers.

Wildlife and Vegetation

Effects to wildlife and vegetation will be addressed through the following:

- using erosion and sedimentation control to prevent the migration of sediments beyond the work zone
- using construction fencing to prevent access to areas located beyond the work zone
- conducting site preparation activities, including vegetation removals, outside of the breeding season for wildlife, including migratory birds, to meet the requirements of the *Migratory Birds Convention Act*
- restoring areas following construction.

No impacts to vegetation, fisheries or wildlife are anticipated at Bridge Site No. 14 or along the noise barrier. It is anticipated that site preparation activities at Bridge Site No. 13 will result in the loss of one cultural meadow vegetation community (CUM1-1) that supports several prairie species including a small population of one species at risk. An

application for a permit under the *Ontario Endangered Species Act* (2007) has been submitted to the Ministry of Natural Resources. Impacts to the species at risk will be addressed through the permitting process.

Human Health

The construction of the two bridges and noise barrier will not result in risks to the neighbouring communities that are any different from those associated with any other highway construction project in Ontario.

- An assessment of human health risk will be undertaken for the construction activities associated with the two bridges and noise barriers.
- The assessment will evaluate the exposure of nearby residents to fine particular matter and emission associated with construction activities.

Groundwater

Possible effects to groundwater will be addressed through the application for a *Permit to Take Water* as required by the Ministry of the Environment. The permit will address:

- quantity of groundwater removal required during construction period
- location of water release points
- requirements, if any, for water treatment prior to release to a municipal drain.

Fisheries/Erosion and Sediment Control

There are no direct impacts to fish and fish habitat in the receiving municipal drain or to wetlands under this contract; however proper erosion and sediment control practices are still required to ensure that there are no indirect effects.

Measures and practices for erosion and sediment control will be developed on the basis of the MTO document "*Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects*." Regular inspections will be undertaken during construction to ensure that controls are effective and are properly maintained.

Archaeology Features

For the construction phase, any unexpected archaeological finds will be reported to the appropriate agencies.

Communication During Construction

The Ministry of Transportation is committed to ensuring that communication with the public is maintained during construction so that any community concerns are resolved as quickly as possible. Residents will receive written notification concerning the start of construction, regular progress updates, and a telephone number for reporting any concerns.