

Is it possible to focus (or target) the mitigation efforts?

The IEC decided that it would be better to identify certain areas for topsoil removal in order to make the work more feasible, improve safety and reduce the potential for unwanted side-effects that might actually stimulate methylmercury production.

The IEC struck a Reservoir Subcommittee tasked with examining the characteristics of the future reservoir including its physical geography, ecological land classifications, soil types and organic carbon pools with the goal of informing options for targeted mitigation. An examination of the environmental risks associated with carrying out large-scale soil disturbances was also undertaken, which is detailed in the memo “Effects of forestry practices and similar soil disturbance on environmental mercury concentrations.” (Jansen, W., September 27, 2017.)

The committee agreed that an emphasis would be placed on practical considerations such as existing roads/tracks, slopes less than 30% etc., to reduce slope hazards, erosion and runoff (Jansen, Sept 27, 2018). In January 2018, the Subcommittee completed draft specifications for two Targeted Mitigation Scenarios, which were finalized in cooperation with Nalcor and its contractor SNC Lavalin, forming the basis of a new Statement of Work for Nalcor and its contractor SNC Lavalin. These two scenarios are summarized here:

Scenario A (Capping):

- Cap all fen and low shrub bog (but not marsh) wetlands ELC areas between 23.5 and 39 m asl with sediments that are low in total organic carbon, locally available and that will be stable (resistant to erosion from water flow) on the reservoir bed.
- Stability of sediment cap is more important than thickness, but assume 50 cm thick for this scenario. Cap should isolate the organic wetland soils, particularly peat accumulations, from the water column.
- Conduct work during frozen ground conditions to minimize ground disturbance.

Scenario B (Targeted Soil Removal):

- Remove soil from areas that have been previously cleared of trees and vegetation and are accessible by existing roads, between the 23.5 masl contour and the 39 masl contour.
- Exclude areas of slopes greater than 30% and other areas that would require re-profiling.
- Exclude areas that potentially contain sensitive clays (glaciofluvial and glaciomarine)
- Exclude riparian areas.
- Prioritize work on steeper slopes during frozen ground conditions, moving towards flatter areas during thawed ground conditions (to limit runoff from clearance activities).

On February 26, SNC Lavalin provided a brief summary of the preliminary information regarding the feasibility of the 2 Targeted Mitigation Scenarios, and provided costing estimates (SNC Lavalin, Feb 26, 2018 – 3 documents). The conclusions are summarized as follows:

- Both Scenarios A and B were considered feasible within the current July 2019 impoundment schedule
- Scenario B was described as a challenging undertaking to complete within the current July 2019 impoundment schedule.

(Note: on March 22, 2018 Nalcor distributed a report that described this information in greater detail - Muskrat Falls- Soil and Vegetation Removal from the Future Reservoir Area - Targeted Scenarios, 2018)