

Chedoke Creek Workplan Summary

The Chedoke Creek Workplan, as required by the third Order and approved by the MECP, identifies the remedial strategy for targeted dredging in Chedoke Creek. Construction mobilization was initiated in July 2022, with the plan for targeted dredging to start the week of August 22, 2022. Operations would be conducted seven days a week, 8am to 6pm. Dredging was scheduled to be completed by December 31, 2022 or sooner, which aligned with the revised Order deadline.

The targeted dredging, which starts at the north end of Chedoke Creek and will move southwards toward the Kay Drage Park access road, is guided by an on-board GPS system used on the hydraulic suction dredger. The average combined dredge depth is approximately 1.0 metres which is expected to remove an estimated 11,300 cubic metres of sediment from the bottom of the creek.

Prior to the in-water dredging activities, each work area in the creek is isolated from the surrounding water environment using a turbidity/silt curtain that includes a weighted line to maintain bottom contact, and a floating line to isolate the work area at the surface. Fish and wildlife are excluded from the work area prior to the dredging activities by a qualified aquatic biologist, mitigating potential interaction with the dredging operations. The turbidity/silt curtains also isolate the work area in order to contain sediment and debris within the immediate zone of dredging and prevent contaminant transport downstream.

To support the transportation of the sediment/water slurry, a floating pipeline was assembled on shore in sections and floated into position. The floating pipeline is connected to the hydraulic suction dredger and the land-based pipeline leading to the Dredge Material Management Area located in Kay Drage Park. The maximum pipeline length from the north dredge area to the Dredge Material Management Area is approximately 850 metres. This will be shortened in length as the project progresses to the south.

The Dredge Material Management Area consists of an automated polymer injection system, two Geotube dewatering cells, a temporary holding pond and piping to the sewer discharge point. Dewatering cell one will have eight (8) Geotubes while cell two is designed with an additional three (3) Geotubes. The dewatering cells are constructed with one (1) metre high perimeter berms and lined with an impermeable membrane prior to setting up the Geotubes.

The dewatering process begins with pumping the dredged sediment/water slurry from the hydraulic suction dredger into the polymer injection system to help bind the solids together. The slurry then moves into the appropriate Geotube dewatering cell. The water then drains by gravity from the Geotubes while the sediment remains inside.

The separated water leaving the Geotubes enters a collection trench and subsequently flows into the temporary holding pond, both of which are also lined with an impermeable membrane. Water from the holding pond is discharged continuously over a 24 hour period through the approved sewer discharge location. The contractor will stop the water discharge to the sewer during heavy rain events as outlined in the Construction Dewatering Permit. However, dredging and dewatering operations are not required to stop during rainfall because the temporary holding pond will be able to handle excess Geotube filtrate water. Only if the temporary holding pond nears its 1,000m³ capacity during a rainfall event will dredging and dewatering operations be required to cease. The sediment, remaining in the Geotubes, is planned to be transported to a non-hazardous waste disposal facility.

The disposal timeline will depend on the dredging completion date and the dewatering rate of the sediments. The contractor will monitor the dewatered sediment prior to disposal to ensure the material is classified as solid non-hazardous waste, fully dewatered, dry and passes a slump test. Once the sediment is fully removed from site, the dewatering cells and temporary holding pond will be decommissioned with restoration work will then take place to return affected areas of Kay Drage Park back to its preconstruction state.