

AquaBlok® Installation Profile



Site Location: *US EPA Region*
Brampton, Ontario Canada

Project Status: *Completed 2021*

Objective: Establish a chemical isolation barrier between impacted sediments and the overlying water column.

Setting/Purpose: The site was a component of a larger development project where the parcel of land has approximately 80% of its surface area occupied by a water body designated as a provincially significant wetland (PSW). The site was a historic gun club and the pond sediment had been impacted by lead as the primary contaminant.

Contaminant(s) of Concern: Metals, primarily lead, antimony, arsenic, and from the spent ammunition, plus polycyclic aromatic hydrocarbons (PAHs) from the clay pigeons from former gun club activities.

AquaBlok Cap Design / Site Area: The pond was segmented into two areas for purposes of remediation. In the permeant pool, A 15 cm hydrated thickness of AquaBlok material provided an effective chemical barrier that prevented diffusion of lead from the underlying sediments up into the surface water. In this area, AquaBlok 2080FW material was applied in two 5cm thick dry lifts which was allowed 24 hours for hydration of each dry layer. Within the Cattail zone, the AquaBlok material layer thickness was lower due to existing root mat that was determined to provide a physical barrier to underlying sediment. In this zone, AquaBlok was applied based on a 3.2 cm dry later for a targeted 6.4 cm thick hydrated layer. A mulch layer was applied over the AquaBlok to act as a benthic restoration layer.



Method of Placement: AquaBlok was placed through standing water using a truck mounted Telebelt® conveyor system with a placement ranges of 36 meters. The Telebelt was fed via two stone slinger trucks to maximize the placement rate. An access road constructed around the perimeter of the PSW that provided suitable access for the Telebelt conveyor system to facilitate installation of a sediment cap.

Current Status: Monitoring of the capping zones is planned, but the areas addressed have been deemed successful in accomplishing the objectives outlined.

Site Owner: VANDYK Group of Companies / **Engineering Firm:** WSP Canada

