

STORM FACILITY RETROFIT PROJECT PROFILE

Dewatering-Erosion Control-Sediment Binding



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TSS REDUCTION



STORM POND SEDIMENTATION

LOCATION:

Storm Pond 53, Waterloo, Ontario, Canada

CLIENT NEEDS:

The municipal client was searching for an innovative method to safely dewater and transport sediment sludge from a stormwater management facility SMWF (storm pond). One of the proper objectives was to remove many years of accumulated sediment from the storm pond (approx. 3,000 m³) to reinstate the original design capacity and functional effectiveness.

CHALLENGE:

Provide an environmentally safe, effective and efficient operational treatment methodology to dewater, and bind the sludge to reduce transportation costs.

SOLUTION:

The City of Waterloo required an integrated design & solution team, and engaged both Greenland Engineering and Clearflow Group to develop the optimum solution.

The storm pond was dewatered and treated for safe release using Clearflow's Patented Water Lynx™ flocculation treatment system. The Water Lynx™ Reactors were strategically located to treat the sediment laden water (high TSS – Total Suspended Solids) to accelerate colloidal sedimentation. The flow then passively travelled over Clearflow's Treated GeoJute™ for final water polishing, capturing and removing the TSS for fish safe water release to the environment. This innovative process significantly highlighted the effectiveness and benefits using Water Lynx™ and Lynx Ultrabind™ for SWMF retrofits/cleanouts.

EQUIPMENT:

Soil Lynx™ – stabilization and erosion control

Lynx Ultrabind™ – sediment binding

Water Lynx™ Pipe Reactor - dewatering



DEWATERING AND TSS CAPTURE



SEDIMENT BINDING



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