

SWM SHIELD

TAKE
CONTROL OF
SWM POND
MAINTENANCE



EASY MAINTENANCE



A SWM SHIELD CAN BE MAINTAINED IN A DAY OR TWO WITH A VACUUM TRUCK. PERHAPS JUST A LINE ITEM IN YOUR CATCH BASIN CLEANING TENDER EVERY SIX TO TEN YEARS. **THATS EASY!**

NO POND DEWATERING



INSTALLING A SWM SHIELD MEANS DELAYING ALL THE HASSLES OF POND DEWATERING. **FOR MANY YEARS.**

SEDIMENT DISPOSAL



SEDIMENT HARVESTED FROM A SWM SHIELD IS CONSIDERED EQUAL TO CATCH BASIN SEDIMENT. **LESS HASSLE FOR DISPOSAL.**

CANADIAN OWNED & MANUFACTURED



CB SHIELD INC. IS 100% CANADIAN OWNED AND MANUFACTURES **ALL ITEMS IN CANADA.**

CONTACT US



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WHAT IS SWM SHIELD?

A SWM Shield™ is a stormwater management forebay enhancer. It functions to:

- 1 Collect sediment from storm runoff in an easy-to-access location for maintenance.
- 2 Allow pond maintenance without dewatering.
Significantly delay full pond cleanouts.
- 3 By capturing approximately 50% of incoming sediment, the time between full pond maintenance and dewatering will double.

SIZING

Sizing of the SWM Shield™ is completed in-house with our experienced engineering team collaborating with the pond designers.

Every SWM pond is just a little bit different, and each one requires a custom approach. We work with you to ensure good engineering design and documentation.

A rough guide for preliminary sizing:

Every 4 ha of upstream drainage area (55% imperviousness) requires a 2400 x 3000 box.



Sediment capture measured at **415 kg/ha/yr***
Phosphorus capture measured at **0.32 kg/ha/yr***

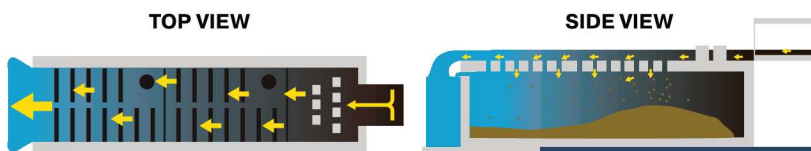
STANDARDIZED CONSTRUCTION AND FUNCTION

SWM Shields™ are constructed from OPSD-type box culverts (2400 mm high x 3000 mm wide) with specially designed grates on the top that allow sediment to settle by gravity. Once sediment is captured inside the sump it stays there until a vacuum truck gets it out.



All precast parts can be assembled quickly as part of a pond retrofit or for new SWM pond construction.

The top grate of a SWM Shield is located just above the permanent water level in a pond. The guide wall on the “pond side” is shorter than the wall on the maintenance road side. This provides larger infrequent flows a direct route to the pond.



Conceptual SWM Shield Installation at the Forebay Inlet

EASY MAINTENANCE

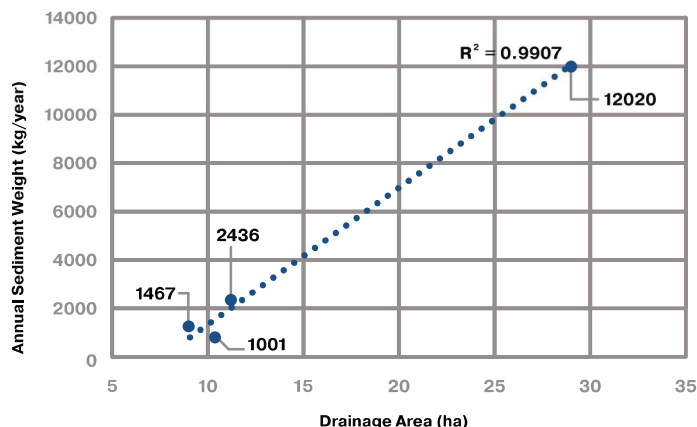
SWM Shields™ are cleaned by decanting water from the sump first, then cleaning out with a vacuum truck.

The sediment that is captured within a SWM Shield has not yet made it to the SWM pond. This captured sediment can be treated just like catch basin waste.

A typical wet-type stormwater management (SWM) pond is equipped with a pretreatment area called a forebay. A forebay can be as hard to clean as the rest of a SWM pond, which usually means the entire pond is cleaned at once. Instead of dewatering an entire pond or trying to scoop sediment out of a forebay - a better way is cleaning a SWM Shield.

* Monitoring report available upon request

ANNUAL SEDIMENT CAPTURE VS DRAINAGE AREA



ANNUAL PHOSPHORUS CAPTURE VS DRAINAGE AREA

