



# HYDROVEX<sup>®</sup>

CSO, SSO, Stormwater Management

John Meunier Products

**WATER TECHNOLOGIES**



## A long tradition in excellence

**Veolia Water Technologies Canada Inc. has  
been serving North American municipalities  
and industries since 1948**

Veolia, through its HYDROVEX® product line, has developed a strong expertise in stormwater management, Combined Sewer Overflow (CSO) and Sanitary Sewer Overflow (SSO) pollution abatement.

The HYDROVEX® line of wet weather technologies offers a wide range of sustainable, efficient and high quality solutions, including:

- Flow control for stormwater runoff
- Flow control for combined and sanitary flows
- Level control in collection systems
- Floatables screening
- Off-line or in-line retention and treatment

**More than 10,000 installations  
across North America**

# Source Control / Stormwater

Stormwater management is a growing global concern. Veolia Water Technologies Canada has a strong expertise in all aspects of stormwater management and urban drainage solutions. HYDROVEX® stormwater flow control solutions are ideal for point source control, capable of handling a wide range of flow rates.

## HYDROVEX® VHV /SVHV/ FluidVertic Vertical Vortex Flow Regulator

Active flow control device designed for very-low to medium stormwater flow rates. The discharge is controlled by an air-filled vortex which reduces the effective water passage area without physically reducing orifice size. Stormwater debris easily passes through due to the large open areas.



## HYDROVEX® IHV EURO Type Vortex Flow Regulator

Discharge throttling device based on the vortex principle used to limit outflow from reservoirs, storage tanks or overflow structures. Designed for wet well installations and specially adapted for medium to large flow rates. Large inlet and outlet orifices result in low head loss during dry weather flow.



## HYDROVEX® FluidGate and FluidHook Control Gate

Adjustable control gate which limits outflow from a control chamber. Ideal for medium to high flow rates. Supplied with an emergency pull cable to open gate and provide full pipe bypass in case of blockage. Operating rod can be provided as an option.



## HYDROVEX® TTT Membrane Regulator

Membrane flow controller used to maintain a constant discharge independent of upstream water level. Ideal for stormwater or process water flow control applications. The HYDROVEX® TTT is available in either dry or wet well configurations.



## HYDROVEX® Pond Vortex Flow Regulator

Flow and level control device for stormwater detention ponds, storage tanks, wetlands, etc. Maintains a minimum water level in the retention pond at all times while limiting the outflow during a storm event. Can be equipped with an emergency bypass system and adjustable weir height.



## HYDROVEX® CCV and LCV Membrane Check Valve

Membrane-type wall mounted check valve used in water and sewage. Prevents backwater flooding and return of tides into the sewer system. The rubber flap offers a tight, drip free solution and lower headloss as compared to traditional rigid lid check valves. Flow controlling models available.



# Combined / Sanitary Flow Control

Environmental awareness of wet weather events has evolved over the past decades. What was once a secondary issue, overflow abatement is now at the forefront of environmental concerns and regulations. Veolia Water Technologies Canada offers a large portfolio of sustainable wet weather technologies to reduce the number of overflow events and improve the quality of the receiving body of water.

## HYDROVEX® IHV Vortex Flow Regulator

Vortex throttle designed to limit flows from combined and sanitary sewers, as well as storm overflow and retention basins. Designed for dry pit installations, it is specially adapted for medium to large flow rates. Large inlet and outlet orifices result in low head loss during dry weather flow. No auxiliary energy or moving parts required to operate.



## HYDROVEX® Turbo Vortex Flow Regulator

Regulating device maintaining a constant discharge flow independent of upstream water pressure. A turbine inside the unit reacts to changing upstream head and activates a hydraulic gate valve installed on the unit's inlet pipe. Provides added security in the event of failure by using the vortex to throttle flow. The TURBO does not require electricity to operate. Suitable for small to medium flowrates.



## HYDROVEX® HHV-E Vortex Flow Regulator

Programmable control unit based on the vortex principle. Using a pressure transducer and a motorized valve assembly, this unit provides a constant flow independent of upstream water pressure. The vortex valve offers high passive security in case of failure. Small to medium flow capacity with remote control capability.



## HYDROVEX® FluidMID Metering and Control Station

The FluidMID is a monitoring and flow control system, combining a magnetic flowmeter and a motorized valve assembly, which offers a constant discharge flow independent of upstream water pressure. The programmable controller can monitor and record a variety of water quality parameters. The FluidMID is ideal for real time control (RTC) applications.

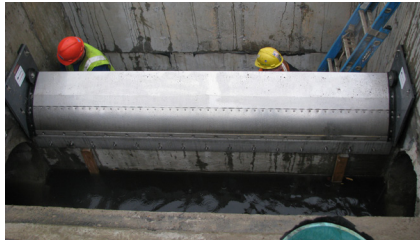


# Level Control

The hydraulic design of a sewer network typically requires a compromise between maximizing in-line retention and minimizing flood risks. Static overflow weirs cannot efficiently combine a high Hydraulic Grade Line (HGL) and a large overflow capacity. HYDROVEX® proportional overflow devices provide dynamic level control and efficient overflow capacity simultaneously, eliminating the need for long concrete weirs.

## HYDROVEX® BW Bending Weir

Flexible weir providing both level control and proportional overflow characteristics. The HYDROVEX® BW remains static until the water level reaches the edge of the unit, at which point the unit will bend forward for similar overflow rate and head, the BW is 2 to 5 times shorter than a concrete weir. Can be supplied with an upper lip for backflow prevention.



## HYDROVEX® Flap Spring-loaded Weir

Spring-loaded overflow device providing increased in-line retention and a proportional overflow curve. Typically 4 to 10 times shorter than a traditional concrete weir for a similar overflow rate and design head. Can be supplied with an upper lip for backflow prevention.



## HYDROVEX® FluidWing Overflow Weir Profile

Profiled weir shaped like an airplane wing providing an evenly distributed overflow along the entire weir length. Proportional flow progression as head increases over the weir. Ideal for precise overflow measurements, even under extremely low heads. The unit can be supplied with an underflow baffle to retain floatables.



## HYDROVEX® ARS Air Regulated Siphon

A powerful and efficient overflow device which uses a siphon to maximize the overflow capacity of a weir. Applicable for stormwater, SSO and CSO. Typically 8 to 15 times shorter than a traditional concrete weir for a similar overflow rate and design head. Greatly minimizes the cost of civil works.



# Overflow Screening

The control of floatables is one of the Nine Minimum Controls required by the USEPA (United States Environmental Protection Agency) for CSO policy compliance. The most efficient and reliable method to capture floatables during an overflow event is the installation of an overflow screen. Veolia Water Technologies Canada has a complete line of proven and reliable overflow screens.

## OS-LP Low Profile Overflow Screen

High capacity arched bar screen that removes floatables during overflow events. Intercepted floatables are mechanically raked to a self-cleaning trough located behind the unit, and reintroduced into the main interceptor downstream of the overflow site. Includes a profiled weir for increased hydraulic performance.



## StormGuard™ Overflow Fine Screen

The StormGuard™ is an upwardflow weir mounted horizontal fine screen. Suitable for weir lengths of up to 26 ft (8m) and can handle flow up to 280cfs (8m³/s). Screenings are retained in the foul flow, allowing them to be treated at the WWTP. The overflow passes through 6mm travelling perforated panels which are cleaned using a high speed



## HYDROVEX® RDS Rotary Drum Sieve

Weir mounted rotary drum sieve which retains floatables down to 3mm during CSO events. Large filtering surface allows for small footprint while maintaining large flowrate capacity. High speed brush cleans drum surface and keeps solids in the main channel.



## HYDROVEX® FluidScreen Oscillating Static Screen

Static overflow screen capable of oscillating under blinding conditions to prevent flooding of the chamber. Head loss remains constant under blinding due to the oscillating effect. No external energy required to activate screen.



# Treatment

## Offline Storage / In-line Storage

Retention and preliminary treatment of raw sewage, whether in-line or off-line, is one of the objectives of any wet weather management program. This can be accomplished using equalization tanks, clarifiers or vortex separators to store excess water during wet weather events.

### HYDROVEX® Clari Self Regulating Outlet Slit

Optimizes the hydraulics of an emergency clarifier tank by controlling the overflow discharge rate. Quiescent settling conditions are promoted, thus increasing the settling of suspended solids.



### HYDROVEX® FluidSep Vortex Separator

Static overflow device which removes solids during an event using the vortex principle. Sediments are concentrated towards the center of the unit and sent to the treatment plant. Minor events can be fully intercepted and contained inside the unit volume without overflowing, thus reducing the number of overflow events. Does not require external energy or moving parts to operate.



### HYDROVEX® SFT Sediment Flushing Tanks

Used to clean sediments, grit and debris from the floor of a retention basin following an overflow event, using a single flush. When filled with water, the HYDROVEX® SFT will tip and release its entire content, thus creating a high velocity wave that flushes the sediments to a sump at the end of the tank. Corrosion resistant, all stainless steel construction. Multiple units can be installed in parallel in wide retention basins. Low maintenance requirements.



Resourcing the world

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