

# Belgian Sanitation Project with Innovative Vortex Technology

## Project Profile

### Objective

To prevent the risk of unwanted pollution into the river system via CSOs.

### Solution

A total of 33 Storm King® separators have been installed spread around the city to control onward flows preventing overloading of the downstream network and providing pre-treatment of sediments, grits and floatables.

A €175m milestone project helping to achieve vital North European water quality targets has been completed following the installation of innovative stormwater treatment technology from Hydro International.

Distributed at-source stormwater treatment is integral to the modernised combined sewer network at Namur in Belgium, with the installation of 33 Storm King® advanced hydrodynamic separators with self-cleansing screens.

The Namur project became fully operational at the end of 2011, providing wastewater treatment for the city's 125,000 inhabitants and meeting the requirements of the European Water Framework Directive.

Situated at the confluence of the Meuse and Sambre rivers, Namur is the historic capital of the Wallonia province of central Belgium. Its complex sewage and stormwater network, developed during two centuries, was previously discharging overflow wastewater through nearly 50 separate outfalls directly into the rivers.

A new state-of-the-art sewage treatment works 6 km downstream at Brumagne will treat some 20,000 m<sup>3</sup> of sewage a day. To convey sewage to the treatment works, some 25 km of new connecting pipeline have been retrofitted to the existing sewer network. A combination of limited space, complex underground services and a level topography meant the pipes could not be buried deeply. Instead, the network is operated under pumped pressure, with a total of 54 pumping stations which inject wastewater from neighbourhood main sewers into the collection network.

## Product Profile

- The Storm King® Overflow Screen is an advanced hydrodynamic vortex separator with self-cleansing non-powered screen.
- Ideal for satellite treatment at overflow sites
- Cost-saving solution significantly reduces capital and operating costs

Find out more at: [www.hydro-int.com](http://www.hydro-int.com)



*Storm King® Overflow*

**“The solution avoided building a large, central stormwater treatment plant, saving cost and space. The Hydro International devices also greatly reduce the flow requirements of the network, saving capital expenditure and reducing operating costs and pumping requirements.”**

**Marc Lemineur**

**Deputy Director General of the Belgian utility INASEP**

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The frequent risk of overflow of the pumping stations after rainfall could cause unwanted discharges into the river system via Combined Sewer Outfalls (CSOs). So, a total of 33 Storm King® units have been installed, spread between the pumping sites. The Storm King®s control onward flows preventing overloading of the downstream network, whilst providing pre-treatment of sediments, grits and floatables. In particular they prevent highly polluting sediments, resuspended as a result of 'first flush' flow from storm incidents, from entering the river system.

Pollutants collected from Storm King®s are re-introduced into the main sewers for eventual treatment at the wastewater plant. The treated stormwater overflow can safely be discharged via the CSO to the watercourse.

Said Marc Lemineur, Deputy Director General of the Belgian utility INASEP.

“The solution avoided building a large, central stormwater treatment plant, saving cost and space. The Hydro devices also greatly reduce the flow requirements of the network, saving capital expenditure and reducing operating costs and pumping requirements.”



*Illustration showing the configuration of Storm King®s installed in Namur*

In addition to the supply of new equipment, Hydro International's expert service teams provide plant condition assessment and planned maintenance programmes for our wide range of water and wastewater treatment equipment through tailored Service Agreements to meet the needs of each site.

Hydro International maintains a comprehensive and well-managed store of spares for all its equipment. Hydro International's customers can be assured of speedy delivery of plant, helping to reduce the time our customers need to spend sourcing replacement parts.

To enable wastewater and water treatment operators to avoid interruption to their processes during planned downtime, Hydro International offers a full equipment hire service for a wide range of primary, secondary and tertiary treatment plant, which can be operated on a stand-alone basis or integrated with existing equipment.