In The Flow: Mosbaek Success Stories From The Field

Mosbaek has been solving flooding and stormwater runoff problems around the world for nearly 35 years. Here are just a few stories of how Mosbaek systems have prevented millions of dollars in property damage and impacts on the environment.

Persistent Flooding Demand New Approaches

Aalborggade – City of Randers (Denmark)

The Problem: Basements in central Randers were flooding frequently due to insufficient capacity in the area's sewage system. There was also frequent discharge into the Tyvdalen River from a nearby overflow structure.

The Idea: The city's consultants carried out a number of analyses and simulations and determined that the best approach would be to increase the capacity of the area's sewer system by laying a second pipeline parallel to the existing one.

The Mosbaek Solution: Mosbaek recommend that the central section of the new pipeline include a pipe detention basin. A manhole with a Mosbaek flow regulator was fitted both halfway and at the end of the pipe detention basin to ensure that the system would be able to handle the high capacity it required.

By taking an approach that used Mosbaek flow regulators, the city has eliminated basement flooding and unanticipated discharges of hazardous runoff into the river.

Development Leads To Overwhelming Runoff

Randers Shopping Center – Denmark

The Problem: Randers Shopping Center was built on the site of a former farm and features 1,800 parking spaces. Two thirds of the stormwater runoff from the parking lot and approximately 1,3 ha rooftop runoff is conveyed to an existing ø800 combined sewage pipe in the nearby street with a capacity of 746 l/s.

The Idea: Of the pipe's capacity, 589 l/s were used by existing catchments. The runoff from the shopping center was estimated to exceed 1,100 l/s on average every tenth year, requiring a new approach for managing the stormwater runoff.

The Mosbaek Solution: The shopping center installed a subterranean detention basin (viz. 220 and 380 m3) in each of its two parking lots. A Mosbaek vortex flow regulator controls the runoff from each basin (capacity viz. 123 and 61 l/s). Some extra storage volume is gained by allowing moderate flooding on terrain (on average once every 10th year). The result is that the volume gained is viz. 480 and 820 m3 - twice the basins' normal volumes.

Flow Control Creates Public Pleasure

Maglekilden Spring – Roskilde City (Denmark)

The Problem: Maglekilden is a small, subterranean spring that originates behind Roskilde Cathedral. Its water once was believed to possess healing powers. Until recently, water from the spring was simply directed into the sewage system and eventually discharged directly into Roskilde Harbor.

The Idea: City leaders developed an idea to use the water from Maglekilden for recreational purposes - creating a small artificial stream to feed into a pond in nearby Byparken Park. The spring yields 10-20 l/s and the new stream was designed to convey 15 l/s.

The Mosbaek Solution: To safeguard against flooding the park in case the spring's yield exceeds 15 l/s, a Mosbaek flow regulator was fitted at the spring, sending any excess water into the harbor. Thousands of families – and many happy ducks – now enjoy the flood-free park every day thanks to a smart approach to flow control.

Urban Flooding Proves Demand for Flow Regulation

Cities of Warsaw, Gdansk and Poznan (Poland)

The Problem: With extensive development in major cities throughout Poland and a landscape full of hills, stormwater management to prevent urban flooding is proving to be extremely difficult. Stormwater is also a growing problem in cities with older sewer systems unable to handle the increasing amounts of runoff.

The Idea: The loss of open space and insufficient stretches of land for building large retention basins has forced city engineers to take novel approaches. They determined that the best solution would be to build smaller retention basins and equip them with flow regulators in order to keep their capacity under control.

The Mosbaek Solution: The Mosbaek distributor in Poland worked with the various engineering teams, designers and construction teams to explain how to make best use of the flow regulators since the technology is not well known in Poland. While some of the officials were a bit skeptical that the seemingly simple metal parts could handle the job, by the end they were enthusiastic Mosbaek fans when they saw how effectively and efficiently the regulators performed.

Protecting Infrastructure and Saving Money with Mosbaek Technology

Gdansk and Krakow (Poland)

The Problem: Older sewer systems in developed areas are finding it more and more difficult to cope with increasing demands as stormwater runoff levels continue to increase. The inability to manage the water flow is putting homes and businesses at risk, such as a major factory in Krakow. The flooding also threatened to overwhelm a wastewater treatment plant in Gdansk and cause dangerous discharges. The other problem: local governments' reluctance to spend budgets to increase sewer capacity or to retrofit older sewer systems.

The Idea: In both cities, more retention basins being equipped with flow regulators and the regulators are tying in easily to the older sewer lines, thus saving money.

The Mosbaek Solution: Engineers in each city are using Mosbaek flow regulators (often without additional rotation systems), in some cases placing multiple regulators to manage flow even more effectively. Not only are they successfully protecting vital infrastructure with the regulators, there is an added benefit: Mosbaek regulators integrate easily with older sewage systems and do not required extensive retrofitting, thus producing cost savings.