



Tech notes

July 2006

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in Denver, Colo. **JULY 24 – 27**

StormCon
The North American Surface Water Quality Conference & Exposition

Booth #180

Pre-engineered Package Lift Stations
for Wastewater and Stormwater

Product Information & Updates • Installation & Technical Tips

THIS EDITION OF

TECH NOTES examines the issue of stormwater management, and how Romtec Utilities' pre-engineered package lift stations can play an effective role in helping maintain water quality. Our lift stations have proven effective in a variety of stormwater situations, such as:

- **pre-treatment**, including detention and retention ponds
- **flood control**, including construction in low spots and snow issues

In the following pages, we take a quick look at how three cities have dealt with very different stormwater issues:

- *Haley Street, Santa Barbara, Calif.*
- *Desert Inn, Las Vegas, Nev.*
- *Line M, Union City, Calif.*

FLYGT

Romtec Utilities is a Dedicated Integrator of submersible pumps and lift station equipment manufactured by ITT Flygt, the world's leading manufacturer of pumps and monitoring systems.

Look for us at these events:

- Sept. 28–30 — TriState, Primm, Nev. Seminar presentation
- Oct. 1–4 — PNCWA, Coeur d'Alene, Idaho Seminar presentation
- Oct. 21–25 — WEFTEC.06, Dallas, Tex. Exhibitor, Booth #5877

Stormwater applications for lift stations

Maintaining water quality is a challenge faced by municipalities and developers, and stormwater is at the center of the battle. Urban runoff has been identified as a significant polluter of surface waters, and as development increases, the management of stormwater will continue to take center stage.

Romtec Utilities is at the forefront of stormwater lift station technology. Our pre-engineered package lift stations are used in a variety of stormwater applications, from pre-treatment to flood control.

Pre-treatment

As urban areas grow, the expanses of hard and impervious surfaces – roads, roofs and paved parking lots – grow, too. When stormwater runoff flows over these surfaces, it accumulates contaminants such as fuel and oil from roads, cleaning soaps, and litter.

Municipalities and developers are increasingly looking at options to reduce adverse effects on our waterways, such as pre-treatment ponds designed to filter out harmful additives to urban runoff. A Romtec Utilities lift station can extend the usability of this solution by making it possible to place detention and retention ponds below the grade of normal stormwater runoff.

Flood protection

Construction projects often create the potential for stormwater collecting in low spots; couple that with the high rate of pollutants in urban runoff, and many projects face a big problem.

The construction of a

highway underpass, for example, often leaves a water-collecting depression behind. Subway stations are natural rain collectors. Plowing snow from large parking lots can result in snow berms, which act as natural dams. All of these situations can cause damaging flooding unless the stormwater is diverted into a storm drain system. The Romtec

Utilities lift station can help move stormwater in these threatening situations, in an efficient, dependable and highly customized way.

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Frank Quach, project inspector of Mark Thomas & Co., and Bob McLean of Shape Inc., review a lift station drawing next to the large detention pond in Union City, Calif. The Romtec Utilities wet well (foreground) is equipped with two Flygt submersible pumps for draining the pond after storms.

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Pre-engineered Package Lift Stations for Wastewater and Stormwater

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Case study 1: Haley Street, Santa Barbara, Calif.

Usually, the challenge is to separate storm drainage and sewer flow, so when engineers at Tierra Contract-

ing saw the City of Santa Barbara's plan to actually connect them, they were intrigued.

The Haley St. project is an experimental plan to divert the dirty runoff that accumulates during the summer away from

the storm drain line and into the sanitary sewer system. Testing showed the urban runoff resulted largely from people washing their cars and hosing off their patios. The flow wasn't big, but it was dirty – loaded with contaminants such as fuel and oil, landscaping chemicals and pet wastes.

The Haley Street storm drain conveys runoff from the downtown area and discharges to Mission Creek, which runs right alongside the downtown street. At that point, the city's storm drain line is lower than the sewer line. The Romtec Utilities lift station pumps the water up four to five feet, so it discharges into the sewer line.

Before the urban runoff is collected in the wet well, it goes through a

valve. During the winter and high flow events, the valve is closed so the runoff – mostly clean rainwater at that point – flows directly into the Haley Street storm drain and then into Mission Creek. During summer and times of low flow, the valve is opened and the lift station pumps the runoff into the sewer lines.

Case study 2: Desert Inn, Las Vegas, Nev.

County public works officials chose to install a Romtec Utilities' Pre-engineered Package Lift Station to solve a gravity problem that left standing water in an urban stormwater detention pond.

The water, heated by the region's high temperature, was creating concern over odor and health issues, including mosquito breeding. An adverse-to-grade condition at the Desert Inn Detention Basin, coupled with a frequently backed-up outlet pipe, consistently left four to five inches of standing water over the surface of the 10-acre pond.

The Romtec Utilities lift station allowed officials to avoid the costly process of digging up roadway to lay pipe to correct the grade. Today, the pump station completely drains the pond, eliminating health concerns over standing water.

Case study 3: Line M, Union City, Calif.

When a new housing development strained the capacity of Union City's storm drainage channel, the city decided to build a 20-million-gallon detention pond that works in conjunction with a Romtec Utilities lift station.

The detention pond connects to the city's storm drainage channel, Line M, with a 42-inch line. Now, when Line M fills up during a storm event, it drains through the line into the basin. When the flow stops and the channel level drops, the Romtec lift station pumps the water back into Line M.

Romtec was able to deliver a speedy solution to Union City, and worked closely with officials to ensure that the lift station met the city's needs as well as the expectations of the project engineers.



The lift station control panel and electrical controls sit just off busy Haley St. in downtown Santa Barbara, Calif., while the wet well and valve vault are actually placed in the street (below).



FOR MORE INFORMATION:

The pre-engineered package lift stations developed by Romtec Utilities work as effectively for stormwater applications as they do for wastewater. Municipalities get a solid, tested design tailored to their specifications, best-in-class components, and skilled customer service. For more information, call RomtecUtilities at 541-496-9678 or visit our website at www.romtecutilities.com.