

Pump Stations – Case Study 1



Problem

Severe infiltration



Project

Severe infiltration – Boyd Lake Pump Station rehabilitation



Client

City of Loveland, Colorado



Location

Pump station beside Boyd Lake,
Loveland, Colorado

Description

Boyd Lake Pump Station, located on the edge of Boyd Lake, is 6' diameter and 20' deep with severe problems with infiltration levels at approximately 40%. It was virtually impossible for the city to replace the pump station due to its proximity to the lake. The rehabilitation would require a system that could be successfully installed during active infiltration.

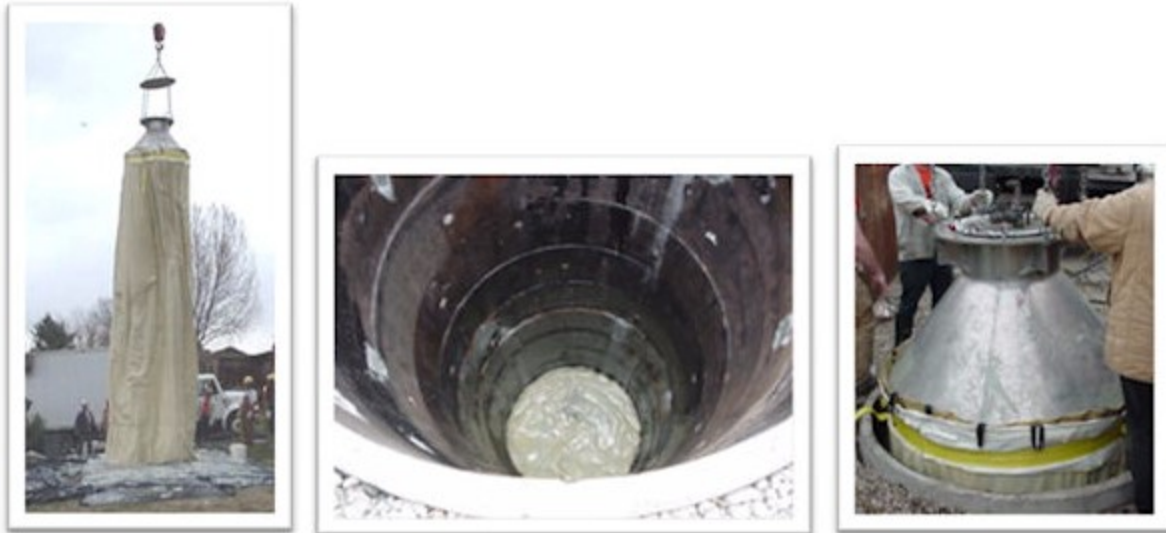
Solution

The Poly-Triplex Certified Installer inspected the structure and recommended the pump station receive a PTL-6800 Liner System. Pumps and pipes were removed and the structure was pressured cleaned @ 4000 PSI to remove any deteriorated concrete. Liner

was lowered into structure, inflated and cured in place under pressure and steam heat. With less than 2 hours prep and 5 hours curing, the pump station was then ready to place back into service.

Benefit

This pump station had infiltration levels of approximately 40%. Infiltration was completely stopped with the Poly-Triplex Liner System. Considerable cost savings and improved wastewater treatment were realized immediately.



Upper Left: Poly-Triplex Liner has been saturated and is being lowered into place with crane.

Upper Center: Pump station has been prepared and bottom disk has been put into place.

Upper Right: Inflation canister is in place.



Upper Left: Liner is cured-in-place and inflation canister removed. Bladder still to be removed.

Upper Right: Bladder is removed to reveal a completely monolithic liner from the top down, including the bottom.

Comments

“Since its construction, this sewage pump station located on the edge of a lake had infiltration which worsened to the point that there was more infiltration than wastewater being pumped out. After considering many options, the Poly-Triplex system became the only feasible and economical solution to our problem. The undertaking of this difficult project showed the determination and experience to complete even the hardest of jobs and certainly demands the highest recognition for completion of a project like this.” Ed Russell, City of Loveland, Colorado