

Manholes – Case Study 4



Problem

Chemical corrosion



Project

Manhole/vault rehabilitation –
Yellowstone National Park



Client

National Park Service



Location

Yellowstone National Park, Wyoming

Description

This project, completed in 2002, included 17 manholes located within the Yellowstone National Park. The manholes had significant deterioration from wastewater chemical corrosion. The structure pictured below was a rectangular vault.

Solution

Custom fabricated liner was manufactured by Poly-Triplex Industries, LLC to fit the size and shape of the box structure. Liner was saturated at the jobsite with a 2-part 100% solids epoxy resin, then positioned into the structure. Liner was then cured-in-place with air pressure and steam heat forming a monolithic liner from the ring and cover to the benches.

Benefit

The monolithic liner has formed to the rectangular shape of the structure and provides a gas impermeable barrier to further deterioration, infiltration and exfiltration, providing permanent protection to the pristine environment in this beautiful National Park.



Upper Left: Yellowstone National Park entrance

Upper Right: Yellowstone National Park geyser



Upper Left: Liner is being saturated at the jobsite with 2-part epoxy resin.

Upper Right: Poly-Triplex Liner installation is complete and structure is back in service.

Comments

This deteriorated vault was completely rehabilitated in one day with the Poly-Triplex Liner System. The entire project was completed in a timely manner. Since this installation, the National Park Service has become to rely on the Poly-Triplex System to correct problems in many other structures including manholes, pump stations and wet wells located throughout the National Park System.