

# CASE STUDY

## *Substantial Sewer Bypass Project Defined By Planning and Execution*



Thanks to careful planning and execution, the Sunbelt Rentals team was able to effectively execute one of the largest sewer bypass projects to date in the Mid-Atlantic for the city of Baltimore. The temporary bypass had a flow of more than 156 MGD and allowed for the over-the-hole installation of a 78-inch-cured-in-place pipe (CIPP) liner and carbon fiber rehab in one of the city's largest interceptors. Acting as a subcontractor on the project, Sunbelt's Pump & Power Services team worked alongside the prime pipeline rehabilitation contractor on the sewer bypass.

The scope of work and rental equipment included:

- Bypass of 78-inch sewer interceptor, as well as two additional interceptors on the upstream portion of the line measuring 56 and 66 inches in diameter
- Restoration of structural integrity to the existing sewer pipe through CIPP, or cured-in-place pipe liner
- Sixteen 18-inch Quiet Flow™ sound attenuated diesel trash pumps
- Eight HDPE discharge lines totaling 45,000 linear feet of 24-inch pipe
- Electric heaters and generators to provide dehumidification and heat for surface preparation and drying
- Mini-excavator; two 10,000 lb. shooting boom forklifts; three 24-inch fusion machines; two 18-inch fusion machines and one 1,900 lb. tracked skid-steer with forks

Challenged with restricted site access and a limited space for the suction location, careful planning and preliminary design on the front end of the project were required to fit the pumps, piping and discharge manifold into a small staging area.

Discharge lines also proved to be tricky, as eight 24-inch lines

ran through 5,000 feet of businesses, backyards and alleyways. To minimize the impact to the local area, Sunbelt Rentals implemented three major road cuts.

Once all equipment was staged and pumping equipment checked, the bypass went live and ran 'round-the-clock with two Sunbelt technicians performing pump watch in 12-hour shifts.

During bypass operation, the Sunbelt Rentals pump watch crew reported high levels in the sewer due to heavy rain, increasing the number of pumps running from an average of five between the 54-inch and 66-inch sewers to 13 out of the 16 total pumps in the overall system. The integrity of the bypass system was put to the test, and after one full day of high flow, the sewer returned to average flow. Following the incident, the pumps were re-tuned, and subsequently, even with higher-than-normal flow, the pumps never ran that hard again.

Before the conclusion of the bypass, Sunbelt Rentals also provided temperature control and dehumidification equipment to ensure precise dehumidification and heat for surface preparation and drying while the carbon fiber pipe was installed.

Despite challenges including limited site access, higher-than-normal flows and the trials associated with performing a bypass of this magnitude, the Sunbelt Rentals team successfully executed the project thanks to extensive preparation work, strong communication and years of proven experience to rely on.

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