

CHRISTINA RIVER FORCE MAIN EMERGENCY REPAIR PROJECT

STATE PROGRAM: Delaware Department of Natural Resources and Environmental Control

ASSISTANCE RECIPIENT: Newcastle County

ASSISTANCE AMOUNT: \$18M



PROJECT DESCRIPTION

Delaware's New Castle County owns and operates the Christina River Force Main (CRFM) that conveys wastewater to the Wilmington Water Pollution Control Facility (WWPCF) for treatment and discharge. The CRFM receives wastewater from six pumping stations and utilizes approximately 9.5 miles of pipeline to convey this wastewater. During work at the WWPCF, divers observed degradation in a critical section of concrete of the CRFM. Subsequent inspection and evaluations identified this section as a portion of the inner core of the CRFM pipeline. The project team decided that an emergency bypass needed to be designed and put in place to allow for the repair of the damaged section of the CRFM. As there are no secondary or backup lines, this presented a high-risk scenario for the County that included the potential failure and release of millions of gallons of raw wastewater per day. By using CWSRF and the emergency bypass procedures, the County was able to quickly secure \$18 million in low-cost financing without waiting for the next year's project solicitation. Through swift collaboration, planning, financing, and project review, the County was able to successfully install a bypass, and repair 600 feet of the pipe using trenchless technologies. The project was completed under budget and the CRFM is now fully operational.

To read more about this case study, please visit <https://www.epa.gov/system/files/documents/2023-04/pisces-2022-compendium.pdf>.