

PROJECT PROFILE

Anacostia 102" Gravity Sewer Bypass
Flow approximately 90 MGD (63,000 gallons per minute)

Water Management Solutions was contracted by the prime contractor on the project to perform a temporary bypass of an existing gravity sewer for the rehabilitation of the existing sewer line. The project included the need to pump the prescribed flow from a wet well approximately 30' below grade and to maintain the wet well level 23' below grade. WMS designed and subsequently utilized a system of stacked (primary and booster) 24" hydraulic H3NC pumps provided by Moving Water Industries (MWI) to generate the necessary head and flow to accomplish this 3,000-foot-long discharge run. In total 10, 24" pumps were installed to pump the flow through 5 parallel 3,000 ft 24" discharge lines. Additional spare hydraulic power units, generators, and pump heads were maintained on site to quickly respond in the case of a mechanical failure. The pumps were configured so that primary and booster pumps would activate in sequence in response to wet well level to accomplish the design criteria. Due to the special design requirements and confined space WMS and MWI developed auxiliary hydraulic system heat exchangers to ensure that the hydraulic system on the pumps remained cool despite the limited submergence of the pump heads within the wet well.

WMS performed 24/7 pump monitoring with onsite personnel and utilizing video and remote telemetry to ensure the successful operation of the equipment.

