

Before



After



Case Study: Flushing Meadows

Since acquiring the Flushing Meadows wastewater system, Flushing Meadows Utility Operating Company (UOC) has implemented a series of critical improvements to address the facility's long-standing operational deficiencies and ensure effective wastewater treatment. Prior to these upgrades, the facility was plagued by severe maintenance issues, significantly impairing its ability to provide reliable service to the community.

At acquisition, the facility was in a state of neglect. Weeds had overtaken the sand bed, and ponding was observed, indicating that the flow rate exceeded the media capacity. The UV disinfection system was non-functional, and the facility had not undergone any preventative maintenance for years. As a result, the system consistently violated limits for biochemical oxygen demand (BOD), coliform, ammonia, and total suspended solids (TSS). Additionally, the facility was overloaded, in poor condition, and lacked any form of monitoring.

Recognizing the urgency of these issues, Flushing Meadows UOC undertook a comprehensive rehabilitation plan for the Flushing Meadows facility. Key upgrades included the installation of a screening system, which helps in the removal of large solids from incoming wastewater. A Moving Bed Biofilm Reactor (MBBR) was installed, along with new blowers, aeration systems, and significant concrete and electrical upgrades, to enhance the overall treatment process. A new clarifier was built and installed to improve the separation of solids, and new dosing pumps with wiring were installed to ensure accurate chemical dosing.

The impact of these improvements is evident in the facility's performance. For example, during the first year of operations under Flushing Meadows UOC, the facility averaged 38 mg/L for TSS, a figure that has now been reduced to an average of 14.75 mg/L - a 61% reduction. This significant decrease demonstrates the effectiveness of the upgrades in restoring operational efficiency and compliance.

Additional improvements included the construction of a concrete slab for equipment placement, grading and finish work around the site, and internal MBBR piping and screens. To address disinfection, a chlorine tablet feeder was installed, and total phosphorus, nitrate, nitrite, and nitrogen equipment were added to better manage nutrient levels in the effluent. The facility's capacity was also expanded with new media and miscellaneous upgrades to accommodate future demand.

These targeted improvements have transformed the Flushing Meadows wastewater system, restoring its operational integrity and ensuring compliance with regulatory standards. Through these efforts, Flushing Meadows UOC has demonstrated its commitment to delivering safe, reliable, and environmentally responsible wastewater services to the Flushing Meadows community.