

Specific Capital Improvement Project Descriptions

Project Number	Project Name	Project Description	Estimated Project Cost
South District WWTP, 8950 SW 232 St., Goulds, FL 33170			\$ 144,434,000
1.1	Headworks	Routine repairs on existing bar screen mechanisms in headwork structure prior to aerated grit chambers	\$ 689,000
1.2	Oxygen Production	Replacement and retrofit of existing air compression units .	\$ 7,187,000
1.3	Oxygenation Trains	Aeration mixers retrofit, structural rehabilitation, and surface coating application	\$ 16,472,000
1.4	Chlorine Building	Replacement of motor control centers, relocation of electrical panels and roof repairs of old chlorine building where flushing water pumps are to remain.	\$ 2,311,000
1.5	Effluent Pump Station	Upgrade of existing obsolete pump control systems, upgrade pumps drives and motors and structural rehabilitation of pump station wet well chambers 2-4.	\$ 25,050,000
1.6	Gravity Sludge Thickeners	Replacement of thickened sludge pumps, and electrical systems in concentrator pump station. Rehabilitation of concentrator collector mechanisms and structural rehabilitation and coating of concentrators.	\$ 4,822,000
1.7	Digesters and Control Buildings	Rehabilitation or replacement of digester roofs; digester tank cleaning, structural rehabilitation and coating; sludge mixers improvement	\$ 45,942,000
1.8	Dewatering Facility	Replace existing Interim dewatering building with a new permanent dewatering facility, to include centrifuges, controls, polymer system, structural, mechanical and electrical systems.	\$ 15,828,000
1.9	FOG Removal Facility	Separation operations improvements to recently constructed FOG removal facility to aid in conveyance of oils and floating grease to beneficial use option and removal of excess grit and settled solids.	\$ 899,000
1.10	Odor Control	Upgrade odor control facilities	\$ 7,406,000
1.11	General Electrical	Rehabilitation and replacement of electrical controls and wiring as needed.	\$ 11,355,000
1.12	Chlorine Contact Chamber Structural	Structural rehabilitation and coating of chlorine contact chambers 1-4	\$ 6,473,000

Specific Capital Improvement Project Descriptions

Project Number	Project Name	Project Description	Estimated Project Cost
Central District WWTP, 3989 Rickenbacker Causeway, Miami, FL 33149			\$ 555,304,000
2.1	Electrical Improvements	Rehabilitation and replacement of electrical controls and wiring as needed	\$ 26,640,000
2.2	Building improvements	Repairs to maintenance, operations control and administration buildings to include refurbishing of roofs and staff facilities	\$ 5,490,000
2.3	Headworks Plant 1	Headworks retrofit to include addition of influent screens and an electrical room with replacement of electrical systems	\$ 19,988,000
2.4	Headworks Plant 2	Headworks retrofit to include addition of influent screens and an electrical room with replacement of electrical systems	\$ 20,091,000
2.5	Oxygenation Trains Plant 1	Aeration mixers retrofit, structural rehabilitation, and surface coating application	\$ 6,501,000
2.6	Oxygenation Trains Plant 2	Aeration mixers retrofit, structural rehabilitation, and surface coating application	\$ 14,569,000
2.7	Secondary Clarifiers Plant 1	Structural rehabilitation and replacement of sludge collection mechanisms	\$ 4,339,000
2.8	Secondary Clarifiers Plant 2	Structural rehabilitation and replacement of sludge collection mechanisms	\$ 6,688,000
2.9	RS Pump Stations Plant 1	replacement of return sludge pump, piping, motor control centers and structural repairs to pump stations	\$ 8,328,000
2.10	RS Pump Stations Plant 2	replacement of return sludge pump, piping, motor control centers and structural repairs to pump stations	\$ 13,215,000
2.11	Effluent Pump Station	Pump replacement in effluent pump station	\$ 9,306,000
2.12	Sludge Thickeners Plant 1	Replacement of thickened sludge pumps, sanitary sewer pumps, HVAC and electrical systems in concentrator pump station. Rehabilitation of concentrator collector mechanisms and structural rehabilitation and coating of concentrators.	\$ 10,381,000
2.13	Sludge Thickeners Plant 2	Replacement of thickened sludge pumps, sanitary sewer pumps, HVAC and electrical systems in concentrator pump station. Rehabilitation of concentrator collector mechanisms and structural rehabilitation and coating of concentrators.	\$ 9,093,000
2.14	Digesters Plant 1	Complete rehab of sludge digester clusters (roofs, concrete structures, recirculation & transfer pumps, mixers, & electrical systems)	\$ 53,959,000
2.15	Digesters Plant 2	Complete rehab of sludge digester clusters (roofs, concrete structures, recirculation & transfer pumps, mixers, & electrical systems)	\$ 115,672,000

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Project Number	Project Name	Project Description	Estimated Project Cost
Central District WWTP, 3989 Rickenbacker Causeway, Miami, FL 33149 (continued)			
2.16	Dewatering Building	Construction of a new dewatering facility and sludge cake conveyance system to sludge storage buildings	\$ 93,042,000
2.17	Chlorination Facilities	Replacement of chlorine gas storage, liquid chlorination and dosing system with bulk sodium hypochlorite storage and dosing system in separate outdoor structures	\$ 16,184,000
2.18	Odor Control Systems	Odor control buildings motor control center replacement including air conditioned electrical rooms. Replacement of odor control chemical pumps, piping, valves and gas stripping tower media.	\$ 18,936,000
2.19	Co-Gen Facility	Installation of two new Cogeneration engines, Cogeneration Building improvements, replacement of biogas pipeline and installation o biogas conditioning system.	\$ 28,919,000
2.20	Septage Unloading	Construction of a new septage handling station to remove FOG from the main wastewater treatment stream and treat either through digestion or off-site third part facility.	\$ 26,575,000
2.21	Pump Station 1	Rehabilitation of pump station odor control system and of bar screen mechanisms	\$ 10,924,000
2.22	Pump Station 2	Rehabilitation of pump station odor control system, rehabilitation of bar screen mechanisms, and replacement pump stations flow metering to improve maintenance accessibility	\$ 5,189,000
2.23	O2 Plant Process Controls Phase 2	Replacement of process control equipment for existing oxygen production systems either due to equipment failing or being obsolete.	\$ 482,000
2.24	Gas Monitoring	Gas monitoring and alarms in hazardous areas	\$ 324,000
2.25	Ventilation Improvements	Ventilation Improvements in Hazardous Areas	\$ 2,464,000
2.26	Rehabilitation of Walkways and Stairways	Replacement of corroded walkways, stairways, railings, grating throughout the plant	\$ 2,477,000
2.27	Oxygen Production	Construction of a new 80 ton/day oxygen production cryogenic tower and air compression unit to provide full redundancy as existing units are near the end of useful life and prone to failure.	\$ 25,132,000
2.28	SCADA RTU Upgrades	SCADA RTU upgrades due to exisiting RTUs being obsolete and difficulty of locating replacement parts	\$ 396,000
2.29	High Strength Influent Impact Study	Investigation as to the sources of increased TSS and BOD loading experienced at the plant and conceptual solutions to eliminate or mitigate the change in plant influent characteristics	\$ -

Specific Capital Improvement Project Descriptions

Project Number	Project Name	Project Description	Estimated Project Cost
North District WWTP, 2575 NE 156 St., North Miami, FL 33160			\$ 249,375,000
3.1	Headworks and Sludge Degritting Transfer	Phase 1: Replacement of bar screens with perforated plate screens Phase 2: Upgrade pretreatment buildings for fire code compliance and replacement of primary sludge grit separation	\$ 30,910,000
3.2	Primary Clarifiers and Odor Control	Rehabilitation of structural, mechanical and odor control systems	\$ 44,713,000
3.3	Oxygenation Trains	Rehabilitation of Aeration Tanks structural, mechanical and electrical systems	\$ 24,289,000
3.4	Oxygen Production	Rehabilitation of oxygen plant structural, mechanical and electrical systems	\$ 6,420,000
3.5	Secondary Clarifiers	Structural, mechanical and electrical rehabilitation of the secondary clarifiers	\$ 72,335,000
3.6	Disinfection	Replacement of chlorine gas storage, liquid chlorination and dosing system with bulk sodium hypochlorite storage and dosing system in the existing chlorine building	\$ 17,557,000
3.7	Effluent Disposal	Installation of standby pumps to ensure effluent disposal capacity and structural rehabilitation of ocean outfall pump station wet well	\$ 25,672,000
3.8	Plant Wide Electrical	Rehabilitation and replacement of electrical controls and wiring as needed	\$ 17,521,000
3.9	Flood Mitigation	Generator and Electrical Building flood mitigation at NDWWTP	\$ 4,187,000
3.10	Yard Piping Replacement	Replacement of wastewater piping that interconnects unit processes throughout the plant	\$ 4,575,000
3.11	SCADA RTU Upgrades	SCADA RTU upgrades due to existing RTUs being obsolete and difficulty of locating replacement parts	\$ 1,196,000

Specific Capital Improvement Project Descriptions

Project Number	Project Name	Project Description	Estimated Project Cost
Wastewater Collection and Transmission Lines			\$ 405,577,000
4.1	Collection System I/I Repairs	Rehab of Collection System (Dig & Replace Mainlines and Laterals, Manhole Replacement, Cured-in-Place Liners and Sectional Liners)	\$ 127,781,000
4.2	Government Cut FM - Phase 1& 2 (construction ongoing)	Replace existing portion of 54 inch FM from the water shaft of Phase 1 in Government Cut to mainland Miami Beach	\$ 35,187,000
4.3	Government Cut FM - Phase 3	Replace existing portion of 54 inch FM from land shaft of Phase 1 at Fisher Island to CDWWTP at Virginia Key	\$ 114,765,000
4.4	North Dade 72 inch PCCP FM Rehabilitation	Rehabilitation of the remaining 3.5 miles of the 72 inch PCCP FM located between NW 17 Ave and NE 10 Ave	\$ 23,012,000
4.5	South Dade 54 inch PCCP FM Rehabilitation	Rehabilitation of approximately 2.5 miles of 54 inch PCCP FM from SW 112 Ave and SW 280 St to SW 107 Ave and SW 248 St	\$ 18,009,000
4.6	Replacement of Tamiami Canal Aerial Crossing FM's at NW 37th Ave	Replace corroded twin 24 inch FM's crossing the Tamiami Canal at NW 37 Ave, just south of NW 21 St	\$ 711,000
4.7	Replacement of 18 inch DIP FM in Miami Lakes	Replace 1 mile of corroded 18 inch DIP FM located at NW 60 Ave and NW 138 St	\$ 2,261,000
4.8	Rehabilitation of 54 inch PCCP FM in the City of Miami	Rehabilitate by Cured-in-Place liner approximately 2 miles of 54 inch PCCP FM located on NW 2 St between NW 67 Ave and NW 37 Ave	\$ 10,552,000
4.9	Replace Approximately 25 miles of AC force mains	See attached description of individual force mains	\$ 50,423,000
4.10	Opa-Locka Airport 48" PCCP force main replacement	Rehabilitation of 2.5 miles of 48" PCCP force main running along the Biscayne Canal between NW 57th Avenue & NW 32 nd Avenue	\$ 22,876,000

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Project Number	Project Name	Project Description	Estimated Project Cost
Sewer Pump Station Systems			\$ 102,932,000
5.1	Upgrade of PS#0418	Covert PS# 418 into a booster type station	\$ 23,002,000
5.2	Upgrade of PS#0691	Replacement of pumping and electrical equipment	\$ 5,773,000
5.3	Upgrade of PS#0692	Replacement of pumping and electrical equipment	\$ 5,773,000
5.4	Replacement of Switchgear PS#0414	Replacement of electrical switchgear	\$ 1,431,000
5.5	Replacement of Switchgear and Rehabilitation of Wet well PS#0415	Replacement of electrical switchgear and rehabilitation of the wet well to include a odor control unit	\$ 4,619,000
5.6	Replacement of Switchgear PS#0416	Replacement of electrical switchgear	\$ 1,431,000
5.7	Replacement of Switchgear and Rehabilitation of Wet well PS#0417	Replacement of electrical switchgear and rehabilitation of the wet well to include a odor control unit	\$ 3,079,000
5.8	Replacement of Electrical and Mechanical Equipment in PS#0107	Replacement of pumping and electrical equipment	\$ 3,849,000
5.9	Replacement of Plumbing and Electrical Equipment at PS#0301	Replacement of pumping and electrical equipment to include generator	\$ 4,389,000
5.10	Upgrade of PS#0488	Conversion of pump station to submersible type station	\$ 2,862,000
5.11	Installation of 60 inch FM from Kendall Dr to PS#0536	Installation of 60" F/M from Kendall Dr to PS#0537 to eliminate the 42" reduction in the 60" F/M	\$ 5,724,000
5.12	Replacement of Switchgear at PS#0187	Replacement of Anvic Drive with VFD	\$ 3,434,000
5.13	Refurbish Emergency Generators and Controls at Regional Pump Stations	Refurbish emergency generators and controls at regional pump stations due to parts obsolescence	\$ 2,988,000
5.14	Upgrade of PS #0086, 0492	See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.	\$ 2,127,000
5.15	Upgrade of PS #0065, 0201, 0334, 0374, 0607	See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.	\$ 5,836,000
5.16	Upgrade of PS #00198, 0437, 0466, 0680	See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.	\$ 3,806,000
5.17	Upgrade of PS #0037, 0351, 0370	See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.	\$ 5,371,000
5.18	Upgrade of PS #0441, 0491, 0710, 0827, 0852, 1236	See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.	\$ 7,527,000
5.19	SCADA RTU Upgrades	SCADA RTU upgrades for 635 pump stations due to existing RTUs being obsolete and difficulty of locating replacement parts	\$ 9,911,000