

## **APPENDIX D**

### **Capital Projects Work Plan**

The Capital Projects Work Plan consists of this narrative and three exhibits - the projects' descriptions attached as Exhibit D-1 (including the separate list of Asbestos Cement force mains that make up Project 4.9 and the separate list of individual pump station improvement descriptions that make up Projects 5.14 through 5.18 inclusive); the projects' schedules with milestones attached as Exhibit D-2; and the projects' cost schedule attached as Exhibit D-3. Although the costs of individual projects (identified with a unique project number) are in 2012 dollars, the total cost of individual projects reflect a 2% annual inflation rate commencing in FY '14-'15.

Miami-Dade County's County's Water and Sewer Department ("MDWASD") held three public workshops on September 24, 25 and 27, 2012 in the North, South and Central areas of the County, respectively, to receive community input on the capital improvement projects. The Department also solicited written comments on its website. The Department considered the public's comments prior to finalizing the list of capital projects shown in Exhibit D-1.

In establishing the schedules for the Capital Projects Work Plan shown in Exhibit D-2, MDWASD took into consideration operational and project implementation factors which include sequencing projects to keep the system operational and time to design, procure, construct and commission the projects.

These schedules reflect the need to maintain the operational viability of the Department's wastewater collection, pump stations, transmission, treatment and disposal systems in a manner that will minimize service interruptions, sanitary sewer overflows or non-compliance with effluent standards. The sequencing involves limiting the number of functional components that are out of service at one time at each of the plants and ensuring that flows can be directed away from plants with limited capacity due to repair and replacement work. This means that the work must be sequenced among the three plants as well as within each of the plants. Many of the projects must be done during the dry season when average daily flows are low, so that fact also extends the schedule for plant repairs. For the purpose of establishing priorities, the Department factored the criticality of each individual project in the context of public health, welfare and safety, operational constraints and environmental significance.

Based on this rationale, most of the collection, transmission and pump station projects have been assigned similarly high priorities and are scheduled to commence at the start of FY '13 -'14. A major exception to these is the Government Cut project. Phases 1 & 2

are currently budgeted and under construction. In addition, the preliminary design of Phase 3 is currently underway and is scheduled for completion during FY '12 - '13. As shown on Exhibit D-2 of this work plan, almost all of the identified wastewater collection and transmission system projects, together with the wastewater pump stations system projects, are front-loaded and scheduled for completion within the first five years of the Consent Decree. The sole exceptions are the Collection System I/I Repairs project and the Replacement of Asbestos Cement Force Mains project. The former is part of an on-going program for which we are proposing funding throughout the life of the Consent Decree. Note that the Collection System I/I Repairs project which includes inspection of approximately 6000 miles of pipe will be performed concurrently with all other work. The Asbestos Cement Force Main project consists of the replacement of sixty-six (66) individual force mains which are projected to be completed by the end of the sixth year.

The schedule of each project includes time for engineering design, permitting, procurement and construction. Although the schedule allocates permitting time of one (1) year for each project, the actual time to obtain a permit will vary depending on the type and location of the project. For projects that are located within a municipality, MDWASD or its contractor must obtain a municipal building permit and has no control over each municipality's requirements and review time for issuing a permit. Additionally, there may be several types of permits required, including electrical, mechanical and structural permits. Permits are normally obtained as part of the design process so that construction bids will reflect the conditions imposed by permitting authorities for maintenance of traffic, allowable working hours, and site restoration requirements. Allocating one year should be sufficient time for obtaining all permits regardless of where the project is located. With regard to procurement, MDWASD intends to accelerate the County Commission's internal approval process but must comply with Florida's competitive bidding laws.

Scheduling of capital projects associated with the three regional treatment plants presents the greatest challenge inasmuch as taking units and/or processes out of service needs to be done in a way that does not adversely affect the operational capacity of the plants. For this reason, a large number of these projects needs to be sequenced in a fashion wherein the unit or process is placed out of service during the dry season, normally from the end of November to the end of May. Another scheduling variable taken into consideration is the need to divert flows from one treatment plant to another while work that limits the plant's hydraulic capacity is being performed. Finally, the State's Outfall legislation is another factor to consider in scheduling the work at the Central and North District Plants. The legislation may impact the work schedule. The state outfall legislation currently requires diverting almost all flows from the outfalls by 2025. This, in turn, requires adding at least High Level Disinfection (filtration and disinfection) to all of the North and Central District flows. In addition, the legislation requires significant reuse of these flows. Existing site constraints may well result in the

need to construct one or more entirely new plants in more westerly locations, thereby potentially requiring alterations to the collection system. This Capital Projects Work Plan assumes that the existing plants will be overhauled in their present locations, an assumption that may need to be altered as the outfall plan develops. It is also possible that changes to the outfall statute will be made during the next or future legislative sessions, and such changes could also impact the Work Plan. Although design activities for many of the treatment plants' projects are scheduled to commence shortly after the projected effective date of the Consent Decree, there are several projects whose completion extends beyond 10 years after said effective date. The following are explanations for the proposed length and completion dates of these specific projects.

#### Project 1.3 - SDWWTP Oxygenation Train Rehabilitation

This project does not start at the beginning of the Consent Decree because recent tank cleanings, minor structural rehabilitation, mixer replacements for energy efficiency and process modifications have improved the conditions of these units. However, the oxygenation trains will require extensive maintenance during the proposed life of the Consent Decree. The construction phase for the extensive rehabilitation of these units is scheduled for mid-2018, which is well before deterioration would be severe enough to result in tank failure or compromise the treatment process. Construction will require seven (7) years for completion because the tanks are a critical part of secondary treatment that is highly sensitive to hydraulic conditions. Therefore, it is advisable for these units to be out of service during the dry weather periods of the year. Additionally, in order to ensure that a tank can be fully rehabilitated during the dry season, and that firm plant capacity is maintained at all times, only one tank will be rehabilitated per year.

#### Projects 2.5 and 2.6 - CDWWTP Plants 1 and 2 Oxygenation Train Rehabilitation

The construction phase of these projects will require 6 years for completion because the tanks are a critical part of the secondary treatment that is highly sensitive to hydraulic conditions. Therefore, it is only advisable for these units to be out of service during the dry weather periods of the year. Additionally, in order to ensure that a tank can be fully rehabilitated during the dry season, and that firm plant capacity is maintained at all times, only one tank will be rehabilitated per year.

#### Projects 2.7, 2.8, 2.9 and 2.10 - CDWWTP Plants 1 and 2 Secondary Clarifiers and Return Sludge Pump Stations

Currently, fibrous and other material accumulations that include rags, paper, plastic and hair and solids deposition result in failure of the sludge collection mechanism in the secondary clarifiers. The construction phases of the secondary clarifier projects are not scheduled to start prior to the construction and full operation of the CDWWTP's

headwork project since this project will target rag and solids removal upstream of the secondary clarifiers.

Under normal circumstances it would be advisable to have only one clarifier out of service per plant at CDWWTP. However, the physical pairing of a return sludge pump station with the corresponding secondary clarifiers at the CDWWTP dictates that two clarifiers and their paired pump station be rehabilitated at the same time for ease of construction. However, this pairing is also required in case the removal and replacement of badly corroded return sludge pipes from one clarifier causes damage to the adjacent clarifier's structure and return sludge pipes. The construction phase for each pair of clarifiers and their shared return sludge pump station will take approximately one year. Since there are 16 secondary clarifiers and 8 return sludge pump stations at the CDWWTP, the full construction phase of these two projects is 8 years.

#### Projects 2.14 and 2.15 - CDWWTP Plant 1 and 2 Digesters

The level of deterioration and complexity of the anaerobic digesters requires that each cluster of four digester tanks be taken completely out of service for extensive masonry and steel structural repairs; complete replacement of pipes, valves, sludge mixing equipment, heat exchangers and pumps; demolition of failed floating covers and installation of new covers. Since these units were built at different times, the six digester clusters reflect different design and construction methods. Accordingly, the rehabilitation of each cluster will require an individual design effort. For these reasons, the construction phase of each digester cluster has been conservatively estimated to take the better part of two years. It must be emphasized that this is an estimated construction time based on similar level of work being performed on each cluster. Until a detailed design for the rehabilitation required for each digester cluster is sufficiently complete, a more realistic construction time estimate for each cluster will not be available. The current estimate for the entire construction phase of all digesters is 10 years, with only one digester cluster taken out of service at a time.

#### Projects 3.2 and 3.5 - NDWWTP Primary and Secondary Clarifiers

Currently, fibrous and other material accumulations that include rags, paper, plastic and hair and solids deposition result in failure of the sludge collection mechanism in the primary and secondary clarifiers. The construction phase of the clarifier projects is not scheduled to start until the NDWWTP headwork project is completed because this project will target rag and solids removal upstream of the primary and secondary clarifiers. Also, the construction phase for these projects cannot commence until

completion of the CDWWTP's headwork project because that project will require a substantial diversion of flows to both the SDWWTP and the NDWWTP. Hence, the NDWWTP's full capacity must be made available during that time.

Both primary and secondary clarifiers at NDWWTP have a unique feature among the county's treatment plants in that the tanks are enclosed structures for odor control purposes. The voluminous metal enclosures create hot, humid and corrosive environments that attack exposed electrical, mechanical and air handling equipment along with metal and concrete structures. The resulting impacts are most prevalent in the primary clarifiers as the hydrogen sulfide concentrations are highest prior to oxidation in the oxygenation trains. For this reason the primary clarifiers will be rehabilitated prior to the secondary clarifiers. Primary and secondary clarifiers will not be rehabilitated in tandem as the reduced capacity of primary clarifiers during construction will cause hydraulic conditions that could result in solids carry over into the secondary treatment process. Solids carry over would stress the surface loading rate of secondary clarifiers and the return sludge pumping operations. The additional hydraulic stress of having secondary clarifiers out of service at the same time will adversely impact activated sludge settling, and could result in high TSS/CBOD concentrations in the plant's effluent during said rehabilitation.

Exhibit D-1 Capital Project Descriptions

| Project Number   | Project Name                        | Project Description   | Project Impact/Need   |
|--|-------------------------------------|---|---|
| South District WWTP, 8950 SW 232 St., Goulds, FL 33170 |                                     |   |   |
| 1.1  | Headworks                           | Routine repairs on existing bar screen mechanisms in headwork structure prior to aerated grit chambers  | Failure of bar screen mechanism could result in the blinding of the bar screen and cause an overflow of raw sewage from the plant headworks structure towards nearby surface waters, especially during peak wet weather.  |
| 1.2  | Oxygen Production                   | Replacement and retrofit of existing air compression units .  | Replacements and modifications are needed to meet WWTPs 125 ton oxygen demand. Loss of pure oxygen production will affect performance of secondary treatment process and result in effluent limit violations.   |
| 1.3  | Oxygenation Trains                  | Aeration mixers retrofit, structural rehabilitation, and surface coating application  | Loss of aeration tank capacity will result in effluent limit violations.  |
| 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.   | Roof leaks or failure of MCC and electrical panel could result in loss of plant flushing water which is used for spray systems and odor control.  |
| 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.   | Loss of pumping capacity or wet well function will result in unpermitted effluent discharge into the surrounding surface waters.  |
| 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. | Failure of sludge thickening will result in a biological overloading of the secondary treatment process and effluent limit violations.  |
| 1.7  | Digesters and Control Buildings     | Rehabilitation or replacement of digester roofs; digester tank cleaning, structural rehabilitation and coating; sludge mixers improvement   | Loss of digestion capacity will result in a decline in biogas/methane production for power generation and unstabilized sludge that will require landfill disposal.  |
| 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.                     | Failure of sludge dewatering would result in solids accumulation in the secondary treatment process and effluent limit violations.  |
| 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.    | Current FOG separation tank is not capable of adequately handling solids load, resulting in excess odors and unanticipated manual labor to remove large amounts of grit, settled soils and hardened grease.   |
| 1.10   | Odor Control                        | Upgrade odor control facilities   | Complaints of nuisance odors by nearby residents could result from a lack of properly functioning odor control systems.   |
| 1.11   | General Electrical                  | Rehabilitation and replacement of electrical controls and wiring as needed.   | Loss of electrical controls or wiring could result in plant shutdowns, wastewater overflows and effluent violations.  |
| 1.12   | Chlorine Contact Chamber Structural | Structural rehabilitation and coating of chlorine contact chambers 1-4  | Structural failure of a chlorine contact chamber would lead to a lack of disinfection contact time, an effluent violation. A hydraulic overload could also occur from multiple chambers being out of service for corrective maintenance, resulting in an effluent spill to nearby surface waters. |

Exhibit D-1 Capital Project Descriptions

| Project Number   | Project Name                 | Project Description  | Project Impact/Need  |
|--|------------------------------|--|--|
| Central District WWTP, 3989 Rickenbacker Causeway, Miami, FL 33149 |                              |  |  |
| 2.1  | Electrical Improvements      | Rehabilitation and replacement of electrical controls and wiring as needed   | Loss of electrical controls or wiring could result in plant shutdowns, wastewater overflows and effluent violations.   |
| 2.2  | Building improvements        | Repairs to maintenance, operations control and administration buildings to include refurbishing of roofs and staff facilities  | These improvements are needed to provide staff with adequate and safe facilities to perform their jobs.  |
| 2.3  | Headworks Plant 1            | Headworks retrofit to include addition of influent screens and an electrical room with replacement of electrical systems   | Failure of headwork electrical system will result in grit accumulation in secondary treatment process leading to effluent limit violations. Lack of headworks screening results in accumulation of rags and plastics in plant processes, leading to pump, mixer and clarifier collection mechanism failure; and effluent limit violations. |
| 2.4  | Headworks Plant 2            | Headworks retrofit to include addition of influent screens and an electrical room with replacement of electrical systems   | Failure of headwork electrical system will result in grit accumulation in secondary treatment process leading to effluent limit violations. Lack of headworks screening results in accumulation of rags and plastics in plant processes, leading to pump, mixer and clarifier collection mechanism failure; and effluent limit violations. |
| 2.5  | Oxygenation Trains Plant 1   | Aeration mixers retrofit, structural rehabilitation, and surface coating application   | Loss of oxygenation tank capacity will result in effluent limit violations.  |
| 2.6  | Oxygenation Trains Plant 2   | Aeration mixers retrofit, structural rehabilitation, and surface coating application   | Loss of oxygenation tank capacity will result in effluent limit violations.  |
| 2.7  | Secondary Clarifiers Plant 1 | Structural rehabilitation and replacement of sludge collection mechanisms  | Loss of sludge settling capacity will result in effluent limit violations.   |
| 2.8  | Secondary Clarifiers Plant 2 | Structural rehabilitation and replacement of sludge collection mechanisms  | Loss of sludge settling capacity will result in effluent limit violations.   |
| 2.9  | RS Pump Stations Plant 1     | replacement of return sludge pump, piping, motor control centers and structural repairs to pump stations   | Loss of return sludge pumping capacity will result in a failure of the aeration process and effluent limit violations.   |
| 2.10   | RS Pump Stations Plant 2     | replacement of return sludge pump, piping, motor control centers and structural repairs to pump stations   | Loss of return sludge pumping capacity will result in a failure of the aeration process and effluent limit violations.   |
| 2.11   | Effluent Pump Station        | Pump replacement in effluent pump station  | Loss of sufficient pumping capacity will result in unpermitted effluent discharge into the surrounding surface waters.   |
| 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. | Failure of sludge thickening will result in a biological overloading of the secondary treatment process and effluent limit violations.   |
| 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. | Failure of sludge thickening will result in a biological overloading of the secondary treatment process and effluent limit violations.   |
| 2.14   | Digesters Plant 1            | Complete rehab of sludge digester clusters (roofs, concrete structures, recirculation & transfer pumps, mixers, & electrical systems)  | Loss of digestion capacity will result in a decline in biogas/methane production for power generation and unstabilized sludge that will require landfill disposal.   |
| 2.15   | Digesters Plant 2            | Complete rehab of sludge digester clusters (roofs, concrete structures, recirculation & transfer pumps, mixers, & electrical systems)  | Loss of digestion capacity will result in a decline in biogas/methane production for power generation and unstabilized sludge that will require landfill disposal.   |
| 2.16   | Dewatering Building          | Construction of a new dewatering facility and sludge cake conveyance system to sludge storage buildings  | Failure of sludge dewatering would result in solids accumulation in the secondary treatment process and effluent limit violations.   |

Exhibit D-1 Capital Project Descriptions

| Project Number   | Project Name                             | Project Description  | Project Impact/Need   |
|--|--|--|---|
| Central District WWTP, 3989 Rickenbacker Causeway, Miami, FL 33149 (continued) |  |  |   |
| 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                              | Failure of existing chlorine gas storage system could lead to and unregulated discharge of chlorine gas and exposure of plant personnel and nearby community to chlorine gas. Additionally, a failure of the chlorine system would result in a lack of disinfection of effluent, a effluent violation.  |
| 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.  | Complaints of nuisance odors by nearby residents could result from a lack of properly functioning odor control systems.   |
| 2.19   | Co-Gen Facility                          | Installation of two new Cogeneration engines, Cogeneration Building improvements, replacement of biogas pipeline and installation o biogas conditioning system.                                | Sudden loss of cogeneration engines could result in partial loss of power to the plant and temporary equipment shutdown. Consistent lack of cogeneration units would result in loss of heat for the anaerobic digesters.  |
| 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.                     | Septage currently puts and added load on plant's secondary treatment, is labor intensive.   |
| 2.21   | Pump Station 1                           | Rehabilitation of pump station odor control system and of bar screen mechanisms  | Odor complaints could result from an improperly functioning odor control system. Failure of bar screen mechanism could result in the blinding of the bar screen and cause an overflow of raw sewage from the pump station towards nearby surface waters, especially during peak wet weather flow events.  |
| 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                  | Odor complaints could result from an improperly functioning odor control system. Failure of bar screen mechanism could result in the blinding of the bar screen and cause an overflow of raw sewage from the pump station towards nearby surface waters, especially during peak wet weather flow events. Inability to access the station's flow meter in a timely fashion has resulted in periods without proper flow measurement from this pump station. |
| 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.   | Loss of pure oxygen production will affect performance of secondary treatment process and result in effluent limit violations.  |
| 2.24   | Gas Monitoring                           | Gas monitoring and alarms in hazardous areas   | Personnel could be overcome by noxious fumes such as hydrogen sulfide, carbon dioxide carbon monoxide or methane if unaware of their presence due to lack of gas monitoring.  |
| 2.25   | Ventilation Improvements                 | Ventilation Improvements in Hazardous Areas  | Sufficient ventilation in hazardous areas is required to meet NFPA 820.   |
| 2.26   | Rehabilitation of Walkways and Stairways | Replacement of corroded walkways, stairways, railings, grating throughout the plant  | Personnel could suffer falling injuries from eroding concrete and corroding metal.  |
| 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. | Loss of pure oxygen production will affect performance of secondary treatment process and result in effluent limit violations.  |
| 2.28   | SCADA RTU Upgrades                       | SCADA RTU upgrades due to existing RTUs being obsolete and difficulty of locating replacement parts  | Failure to upgrades these RTUs could result in loss of monitoring and control of unit processes   |
| 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       | Influent loading characteristics well above design parameters are contributing factors in effluent limit violations. If unaddressed, continued effluent violation are likely.   |

Exhibit D-1 Capital Project Descriptions

| Project Number  | Project Name                             | Project Description  | Project Impact/Need  |
|---|--|--|--|
| North District WWTP, 2575 NE 156 St., North Miami, FL 33160 |  |  |  |
| 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 | Replacement of influent screens and upgrade of headworks will reduce rags problems and improve treatment process.  |
| 3.2   | Primary Clarifiers and Odor Control      | Rehabilitation of structural, mechanical and odor control systems  | Loss of primary clarifier capacity will increase workload of the secondary treatment process and will result in effluent limit violations. Complaints of nuisance odors by nearby residents could result from a lack of properly functioning odor control systems.                                     |
| 3.3   | Oxygenation Trains                       | Rehabilitation of Aeration Tanks structural, mechanical and electrical systems   | Loss of oxygenation tank capacity will result in effluent limit violations.  |
| 3.4   | Oxygen Production                        | Rehabilitation of oxygen plant structural, mechanical and electrical systems   | Loss of pure oxygen production will affect performance of secondary treatment process and result in effluent limit violations.   |
| 3.5   | Secondary Clarifiers                     | Structural, mechanical and electrical rehabilitation of the secondary clarifiers   | Loss of sludge settling capacity will result in effluent limit violations.   |
| 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                 | Failure of existing chlorine gas storage system could lead to and unregulated discharge of chlorine gas and exposure of plant personnel and nearby community to chlorine gas. Additionally, a failure of the chlorine system would result in a lack of disinfection of effluent, a effluent violation. |
| 3.7   | Effluent Disposal                        | Installation of standby pumps to ensure effluent disposal capacity and structural rehabilitation of ocean outfall pump station wet well  | Loss of sufficient pumping capacity or wet well function will result in unpermitted effluent discharge into the surrounding protected wetlands.  |
| 3.8   | Plant Wide Electrical                    | Rehabilitation and replacement of electrical controls and wiring as needed   | Loss of electrical controls or wiring could result in plant shutdowns, wastewater overflows and effluent violations.   |
| 3.9   | Flood Mitigation                         | Generator and Electrical Building flood mitigation at NDWWTP   | Flooding of emergency standby generator and electrical switchgear area would result in loss of emergency power and power distribution. Emergency power is most critical during storm events when flooding is most likely.  |
| 3.10  | Yard Piping Replacement                  | Replacement of wastewater piping that interconnects unit processes throughout the plant  | A leak or rupture of plant yard piping will result in sewage and/or sludge spill that may contaminate nearby surface waters.   |
| 3.11  | SCADA RTU Upgrades                       | SCADA RTU upgrades due to existing RTUs being obsolete and difficulty of locating replacement parts  | Failure to upgrade these RTUs could result in loss of monitoring and control of unit processes   |

Exhibit D-1 Capital Project Descriptions

| Project Number                               | Project Name   | Project Description  | Project Impact/Need  |
|--|--|--|--|
| Wastewater Collection and Transmission Lines |  |  |  |
| 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) | Renewal/replacement of defective gravity sewers with documented excessive inflow/infiltration  |
| 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                   | Replace critically damaged sections of 54-inch force main to avert catastrophic failures in Government Cut   |
| 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                       | Replace critically damaged sections of 54-inch force main to avert catastrophic failures in Fisher's Cut   |
| 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                           | Replace remaining damaged section of 72-inch force main that has experienced catastrophic failure  |
| 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             | Replace sections of 54-inch force main that has critically damages pipe segments   |
| 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                                 | Replace twin 24-inch force mains that are corroded and have experienced failures   |
| 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   | Replace severely corroded 18-inch pipe that has had multiple failures  |
| 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   | Complete rehabilitation of 54-inch force main that is deteriorated and has experienced failures  |
| 4.9  | Replace Approximately 25 miles of AC force mains                 | See attached description of individual force mains   | Replace asbestos cement force mains that have experienced failures and are difficult to locate in the field.   |
| 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       | Complete rehabilitation of 48-inch force main that is deteriorated and determined to have approximately one quarter of its line segments distressed based on in-situ condition assessments |

Exhibit D-1 Capital Project Descriptions

| Project Number             | Project Name  | Project Description   | Project Impact/Need   |
|----------------------------|---|---|---|
| Sewer Pump Station Systems |   |   |   |
| 5.1                        | Upgrade of PS#0418  | Covert PS# 418 into a booster type station  | The station has reach the end of its useful life. Booster station is needed to relieve pressures in the Doral area.           |
| 5.2                        | Upgrade of PS#0691  | Replacement of pumping and electrical equipment   | Existing equipment is beyond its useful life. Station capacity increase is required to handle increased Homestead flows       |
| 5.3                        | Upgrade of PS#0692  | Replacement of pumping and electrical equipment   | Existing equipment is beyond its useful life. Station capacity increase is required to handle increased Homestead flows       |
| 5.4                        | Replacement of Switchgear PS#0414                                     | Replacement of electrical switchgear  | Existing equipment is beyond its useful life.   |
| 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                    | Existing equipment is beyond its useful life. Wet well structure is deteriorated badly due to H2S                             |
| 5.6                        | Replacement of Switchgear PS#0416                                     | Replacement of electrical switchgear  | Existing equipment is beyond its useful life.   |
| 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                    | Existing equipment is beyond its useful life. Wet well structure is deteriorated badly due to H2S                             |
| 5.8                        | Replacement of Electrical and Mechanical Equipment in PS#0107         | Replacement of pumping and electrical equipment   | Existing equipment is beyond its useful life. Parts are not readily available for the load cell type controllers              |
| 5.9                        | Replacement of Plumbing and Electrical Equipment at PS#0301           | Replacement of pumping and electrical equipment to include generator  | Existing equipment is beyond its useful life due to the saltwater environment   |
| 5.10                       | Upgrade of PS#0488  | Conversion of pump station to submersible type station  | Existing equipment is beyond its useful life.   |
| 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                          | To reduce pressure differential and increase flow transfer between PS#0559 and 0536   |
| 5.12                       | Replacement of Switchgear at PS#0187                                  | Replacement of Anvic Drive with VFD   | Existing equipment is beyond its useful life. Parts are not available   |
| 5.13                       | Refurbish Emergency Generators and Controls at Regional Pump Stations | Refurbish emergency generators and controls at regional pump stations due to parts obsolescence                           | Emergency backup generators are unreliable due to age of controllers and condition of wiring on the engines                   |
| 5.14                       | Upgrade of PS #0086, 0492   | See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.                     | The pump stations are out of compliance of the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. |
| 5.15                       | Upgrade of PS #0065, 0201, 0334, 0374, 0607                           | See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.                     | The pump stations are out of compliance of the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. |
| 5.16                       | Upgrade of PS #00198, 0437, 0466, 0680                                | See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.                     | The pump stations are out of compliance of the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. |
| 5.17                       | Upgrade of PS #0037, 0351, 0370, 0403                                 | See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.                     | The pump stations are out of compliance of the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. |
| 5.18                       | Upgrade of PS #0441, 0491, 0710, 0827, 0852, 1236                     | See attached Pump Station Compliance Projects sheet for individual pump station project descriptions.                     | The pump stations are out of compliance of the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. |
| 5.19                       | SCADA RTU Upgrades  | SCADA RTU upgrades for 635 pump stations due to existing RTUs being obsolete and difficulty of locating replacement parts | Failure to upgrades these RTUs could result in loss of monitoring and control of wastewater pump stations                     |

Individual AC force mains in Project 4.9

|    | Pipe Length | Diameter | From Location                    | To Location                     | Atlas Page | As Built Type | As Built No | As Built Sheet | Comments |
|----|-------------|----------|----------------------------------|---------------------------------|------------|---------------|-------------|----------------|----------|
| 1  | 2757        | 12       | SW 112 Ave & SW 104 St           | SW 112 Ave & SW 112 St          | S21        | NA            | NA          | NA             |          |
| 2  | 2000        | 8        | NE 14 Ave & 191 St               | NE 14 Ave & Miami Gardens Dr    | D2         | ES            | 4708        | 1, 2           |          |
| 3  | 1520        | 6        | PS 356                           | NW 53 Ct & NW 195 Dr            | L2         | ES            | 836         |                | 4        |
| 4  | 1430        | 8        | NW 53 Ct & NW 195 Dr             | NW 52 Ct & NW 191 St            | L2         | ES            | 836         |                | 4        |
| 5  | 920         | 10       | NW 52 Ct & NW 191 St             | NW 52 Ct & NW 188 St            | L2         | ES            | 836         |                | 4        |
| 6  | 276         | 6        | PS 362                           | NW 52 Ct & NW 190 St            | L2         | ES            | 793         |                | 8        |
| 7  | 400         | 10       | NW 52 Ct & NW 190 St             | NW 52 Ave & NW 189 Ter          | L2         | ES            | 793         |                | 8        |
| 8  | 1650        | 10       | NW 52 Ct & NW 188 St             | NW 52 Ave & NW 183 St           | L2         | ES            | 836         |                | 5        |
| 9  | 1492        | 8        | PS 385                           | NW 29 Ct & NW 199 St            | J1         | ES            | 826         |                | 4        |
| 10 | 1080        | 12       | NW 29 Ct & NW 199 St             | NW 30 Pl & NW 199 St            | J1         | ES            | 826         |                | 4        |
| 11 | 400         | 8        | NW 29 Ct & NW 199 St             | NW 28 Ave & NW 199 St           | J1         | ES            | 830         |                | 3        |
| 12 | 310         | 6        | PS 374                           | NW 28 Ave & NW 199 St           | J1         | ES            | 830         |                | 3        |
| 13 | 3235        | 12       | NW 30 Pl & NW 199 St             | NW 37 Ave & NW 199 St           | J1         | ES            | 823         |                | 4        |
| 14 | 1785        | 8        | PS 368                           | NW 37 Ave & NW 194 Ter          | J2         | ES            | 834         |                | 2        |
| 15 | 896         | 4        | PS 375                           | NW 29 Pl & NW 191 St            | J2         | ES            | 818         |                | 6        |
| 16 | 896         | 10       | PS 427                           | NW 29 Pl & NW 191 St            | J2         | ES            | 922         |                | 1        |
| 17 | 1076        | 10       | NW 29 Pl & NW 191 St             | NW 32 Ave & NW 191 St           | J2         | ES            | 818         |                | 6        |
| 18 | 2614        | 6        | PS 376                           | NW 32 Ave & NW 191 St           | J2         | ES            | 782         |                | 7        |
| 19 | 1450        | 6        | PS 377                           | NW 36 Ave & NW 183 St           | J2         | ES            | 797         |                | 1        |
| 20 | 467         | 8        | PS 366                           | NW 42 Pl & NW 199 Ter           | K2         | ES            | 808         |                | 5        |
| 21 | 1792        | 10       | NW 42 Pl & NW 199 Ter            | NW 39 Ct & NW 199 St            | K2         | ES            | 808         |                | 5        |
| 22 | 2056        | 6        | PS 358                           | PS 352                          | K3         | ES            | 775         |                | 12       |
| 23 | 11027       | 8        | PS 1022                          | PS 1072                         | AA36, Z36  | ES            | 4597        |                | 1        |
| 24 | 1793        | 8        | PS 353                           | NW 48 Ct & NW 178 Ter           | L3         | ES            | 780         |                | 15       |
| 25 | 1425        | 10       | NW 52 Ave & NW 173 Dr            | NW 52 Ave & NW 178 Terr         | L3         | ES            | 788         |                | 12       |
| 26 | 2025        | 6        | PS 354                           | NW 52 Ave & NW 173 Dr           | L3         | ES            | 788         |                | 12       |
| 27 | 2450        | 4        | Pvt PS @ SW 149 Ter              | MH 14 @ PS 719                  | Q23 Q24    | ES            | 676         |                | 1        |
| 28 | 1610        | 8        | PS 786                           | MH 5 @ PS 785                   | R15        | U             | 93          |                | 1        |
| 29 | 1350        | 12       | PS 811                           | SW 107 Ave & SW 76 St           | R19        | U             | 136         |                | 1        |
| 30 | 2745        | 12       | PS 811                           | SW 102 Ave & SW 81 St           | R19        | U             | 123         |                | 3        |
| 31 | 2168        | 10       | PS 812                           | SW SW 102 Ave & SW 84 St        | R19        | U             | 411         |                | 1        |
| 32 | 1622        | 12       | SW 107 Ave & SW 104 St           | SW 107 Ave & Kendale Blvd       | R20        | U             | 245         |                | 2        |
| 33 | 1266        | 4        | Pvt PS @ SW 1104 Ave & SW 169 St | MH 59 @ SW 103 Ave              | R25        | ES            | 741         |                | 1        |
| 34 | 6612        | 10       | PS 709                           | Homestead Ave & Kumquat St      | R25        | ES            | 739         |                | 1        |
| 35 | 2505        | 6        | SW 110 Ave & Banyan St           | SW 95 Ave & SW Banyan St        | R25        | N/A           | N/A         | N/A            |          |
| 36 | 649         | 4        | PS 721                           | US1 & Banyan St                 | R25        | ES            | 701         |                | 1        |
| 37 | 767         | 4        | PS 749                           | PS 731                          | R25        | ES            | 650         |                | 2        |
| 38 | 1066        | 4        | PS 747                           | US1 & East Indigo St            | R25        | N/A           | N/A         | N/A            |          |
| 39 | 1418        | 10       | SW 102 Ave & SW 176 St           | Homestead Ave & West Jessamine  | R25        | ES            | 687         |                | 8        |
| 40 | 4017        | 8        | PS 745                           | SW 102 Ave & SW 176 St          | R25        | ES            | 687         |                | 8        |
| 41 | 1386        | 4        | PS 731                           | SW Duval Ave & West Indigo St   | R25        | ES            | 741         |                | 1        |
| 42 | 3769        | 10       | SW 102 Ave & West Jessamine      | US 1 & SW 184 St                | R25        | ES            | 739         |                | 2        |
| 43 | 1858        | 12       | Homestead Ave & SW 180 St        | Railroad St & SW 184 St         | R25        | ES            | 739         |                | 2        |
| 44 | 1200        | 8        | PS 810                           | SW 118 Pl & SW 72 St            | S19        | U             | 243         |                | 1        |
| 45 | 650         | 12       | PS 793                           | SW 118 Pl & SW 72 St            | S19        | U             | 243         |                | 1        |
| 46 | 666         | 6        | PS 724                           | SW 106 Ave & SW 155 St          | S24        | ES            | 734         |                | 1        |
| 47 | 973         | 8        | PS 869                           | SW 122 Ave & SW 88 St           | T20        | U             | 149         |                | 5        |
| 48 | 1822        | 10       | PS 1017                          | SW 123 Pl & SW SW 268 St        | T31        | ES            | 1039        |                | 3        |
| 49 | 3412        | 10       | PS 1029                          | SW 132 Ave & SW 268 St          | U30        | ES            | 1044        |                | 1        |
| 50 | 5649        | 8        | SW 137 Ave & SW 268 St           | SW 128 Ave & SW 268 St          | U31        | ES            | 1040        |                | 6        |
| 51 | 6432        | 10       | PS 1028                          | SW 137 Ave & SW 288 St          | U31        | ES            | 1040        |                | 6        |
| 52 | 5461        | 10       | PS 1027                          | SW 132 Ave & SW 280 St          | U31        | ES            | 1049        |                | 4        |
| 53 | 2340        | 8        | PS 1018                          | MH 44A @ SW 132 Ave             | U32        | ES            | 1053        |                | 1        |
| 54 | 2680        | 12       | SW 137 Ave & SW 72 St            | SW 142 Ave & SW 72 St           | V18        | U             | 191         |                | 1        |
| 55 | 2363        | 12       | SW 142 Ave & SW 72 St            | SW 147 Ave & SW 72 St           | V18        | U             | 202         |                | 6        |
| 56 | 2451        | 8        | PS 864                           | SW 147 Ave & SW 72 St           | V18        | U             | 202         |                | 4        |
| 57 | 1441        | 8        | SW 142 Ave & Kendale Lakes Blvd  | SW 140 Ave & Kendale Lakes Blvd | V19        | U             | 420         |                | 5        |
| 58 | 2101        | 10       | SW 140 Ave & Kendale Lakes Blvd  | SW 137 Ave & Kendale Lakes Blvd | V19        | U             | 420         |                | 4        |
| 59 | 776         | 12       | SW 137 Ave & Kendale Lakes Blvd  | SW 137 Ave & SW 81 St           | V19        | U             | 420         |                | 4        |
| 60 | 1420        | 8        | PS 1013                          | PS 1012                         | V31        | ES            | 4543        |                | 3        |
| 61 | 2213        | 10       | PS 1012                          | SW 144 Ave & SW 280 St          | V31        | ES            | 4543        |                | 3        |
| 62 | 958         | 8        | PS 1011                          | SW 144 Ct & SW 280 St           | V31        | ES            | 4544        |                | 3        |
| 63 | 6565        | 10       | SW 147 Ave & SW 288 St           | SW 134 Pl & SW 288 St           | V32        | ES            | 1056        |                | 1        |
| 64 | 1236        | 6        | PS 1009                          | SW 147 Ave & SW 296 St          | V32        | ES            | 4547        |                | 1        |
| 65 | 1819        | 6        | PS 1006                          | PS 1005                         | W32        | ES            | 4594        |                | 1        |
| 66 | 2989        | 8        | PS 1002                          | SW 152 Ave & SW 304 St          | W33        | ES            | 4593        |                | 3        |

136839 Feet  
25.916477 Miles

**Description of Individual Pump Station Compliance Projects**

| <b>Pump Station</b> | <b>Project Description</b>   |
|---------------------|--|
| PUMP STATION 0065   | New submersible pumps in the existing dry well/ Larger suction and discharge piping/ Electrical upgrade                  |
| PUMP STATION 0086   | Convert to submersible with existing wet well/ Electrical upgrade  |
| PUMP STATION 0201   | New submersible pumps in the existing wet well/ New valve box/ Electrical upgrade<br>Complete I/I 48 repairs for 176 gpm |
| PUMP STATION 0334   | New submersible PS/ Electrical upgrade<br>2,200 L.F. of new 8" FM  |
| PUMP STATION 0374   | New submersible pumps and valve box/ Electrical upgrade<br>320 L.F. of new 8" FM   |
| PUMP STATION 0492   | New submersible PS/ Electrical upgrade   |
| PUMP STATION 0607   | New submersible PS/ Electrical upgrade   |
| PUMP STATION 0198   | New submersible pumps in the existing dry well / Electrical upgrade<br>Flow isolation and I/I repairs as needed          |
| PUMP STATION 0437   | New submersible pumps and valve box/ Electrical upgrade  |
| PUMP STATION 0466   | New submersible pumps and valve box/ Electrical upgrade  |
| PUMP STATION 0680   | New submersible pumps/ New valves above ground/ Electrical upgrade   |
| PUMP STATION 0037   | New submersible PS/ Electrical upgrade   |
| PUMP STATION 0351   | New submersible pumps and valve box/ Electrical upgrade<br>Replace 360 L.F. of 4" with 8" FM                             |
| PUMP STATION 0370   | New submersible PS/ Electrical upgrade<br>760 L.F. of new 8" FM  |
| PUMP STATION 0403   | New submersible PS/ Electrical upgrade/ On site generator  |
| PUMP STATION 0441   | New submersible PS/ Electrical upgrade   |
| PUMP STATION 0491   | Flow isolation and I/I repairs as needed   |
| PUMP STATION 0710   | New submersible PS/ Electrical upgrade<br>1,800 of L.F. of new 8" FM   |
| PUMP STATION 0827   | Larger submersible pumps/ New valve vault/ Electrical upgrade<br>Replace 1,600 L.F. of 4" FM with 8" FM                  |
| PUMP STATION 0852   | New submersible PS/ Electrical upgrade   |
| PUMP STATION 1236   | Complete I/I 300 repairs for 130 gpm   |



| ID  | ID Number                         | Task Name                                    | Duration         | Start              | Finish              | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|-----|-----------------------------------|--|------------------|--------------------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 66  | 1.12.3                            | Procurement                                  | 365 days         | Mon 4/9/18         | Mon 4/8/19          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 67  | 1.12.4                            | Construction                                 | 802 days         | Tue 4/9/19         | Fri 6/18/21         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 68  | <b>2 Central District R&amp;R</b> |  | <b>5383 days</b> | <b>Tue 1/1/13</b>  | <b>Mon 9/27/27</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 69  | 2.1                               | <b>Miscellaneous Electrical Improvements</b> | <b>1161 days</b> | <b>Sun 1/1/17</b>  | <b>Fri 3/6/20</b>   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 70  | 2.1.1                             | Engineering Design                           | 171 days         | Sun 1/1/17         | Tue 6/20/17         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 71  | 2.1.2                             | Permitting                                   | 365 days         | Wed 6/21/17        | Wed 6/20/18         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 72  | 2.1.3                             | Procurement                                  | 365 days         | Thu 6/21/18        | Thu 6/20/19         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 73  | 2.1.4                             | Construction                                 | 260 days         | Fri 6/21/19        | Fri 3/6/20          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 74  | 2.2                               | <b>Repairs to Various Buildings</b>          | <b>1225 days</b> | <b>Thu 5/1/14</b>  | <b>Wed 9/6/17</b>   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 75  | 2.2.1                             | Engineering Design                           | 171 days         | Thu 5/1/14         | Sat 10/18/14        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 76  | 2.2.2                             | Permitting                                   | 365 days         | Sun 10/19/14       | Sun 10/18/15        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 77  | 2.2.3                             | Procurement                                  | 365 days         | Mon 10/19/15       | Mon 10/17/16        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 78  | 2.2.4                             | Construction                                 | 324 days         | Tue 10/18/16       | Wed 9/6/17          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 79  | 2.3                               | <b>Headworks/Grit Basin Plant 1</b>          | <b>1483 days</b> | <b>Tue 10/1/13</b> | <b>Sun 10/22/17</b> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 80  | 2.3.1                             | Engineering Design                           | 307 days         | Tue 10/1/13        | Sun 8/3/14          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 81  | 2.3.2                             | Permitting                                   | 365 days         | Mon 8/4/14         | Mon 8/3/15          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 82  | 2.3.3                             | Procurement                                  | 365 days         | Tue 8/4/15         | Tue 8/2/16          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 83  | 2.3.4                             | Construction                                 | 446 days         | Wed 8/3/16         | Sun 10/22/17        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 84  | 2.4                               | <b>Headworks/Grit Basin Plant 2</b>          | <b>1483 days</b> | <b>Thu 5/1/14</b>  | <b>Tue 5/22/18</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 85  | 2.4.1                             | Engineering Design                           | 307 days         | Thu 5/1/14         | Tue 3/3/15          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 86  | 2.4.2                             | Permitting                                   | 365 days         | Wed 3/4/15         | Wed 3/2/16          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 87  | 2.4.3                             | Procurement                                  | 365 days         | Thu 3/3/16         | Thu 3/2/17          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 88  | 2.4.4                             | Construction                                 | 446 days         | Fri 3/3/17         | Tue 5/22/18         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 89  | 2.5                               | <b>Oxygenation Trains Plant 1</b>            | <b>1415 days</b> | <b>Sun 6/1/14</b>  | <b>Sun 4/15/18</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 90  | 2.5.1                             | Engineering Design                           | 94 days          | Sun 6/1/14         | Tue 9/2/14          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 91  | 2.5.2                             | Permitting                                   | 365 days         | Wed 9/3/14         | Wed 9/2/15          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 92  | 2.5.3                             | Procurement                                  | 365 days         | Thu 9/3/15         | Thu 9/1/16          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 93  | 2.5.4                             | Construction Train #2                        | 196 days         | Sat 10/1/16        | Fri 4/14/17         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 94  | 2.5.5                             | Construction Train #3                        | 197 days         | Sun 10/1/17        | Sun 4/15/18         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 95  | 2.6                               | <b>Oxygenation Trains Plant 2</b>            | <b>2144 days</b> | <b>Wed 6/1/16</b>  | <b>Thu 4/14/22</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 96  | 2.6.1                             | Engineering Design                           | 94 days          | Wed 6/1/16         | Fri 9/2/16          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 97  | 2.6.2                             | Permitting                                   | 365 days         | Sat 9/3/16         | Sat 9/2/17          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 98  | 2.6.3                             | Procurement                                  | 365 days         | Sun 9/3/17         | Sun 9/2/18          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 99  | 2.6.4                             | Construction Train #1                        | 197 days         | Mon 9/3/18         | Mon 3/18/19         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 100 | 2.6.5                             | Construction Train #2                        | 197 days         | Tue 10/1/19        | Tue 4/14/20         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 101 | 2.6.6                             | Construction Train #3                        | 197 days         | Thu 10/1/20        | Thu 4/15/21         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 102 | 2.6.7                             | Construction Train #4                        | 196 days         | Fri 10/1/21        | Thu 4/14/22         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 103 | 2.7                               | <b>Secondary Clarifiers Plant 1</b>          | <b>1963 days</b> | <b>Thu 4/1/21</b>  | <b>Sat 8/15/26</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 104 | 2.7.1                             | Engineering Design                           | 188 days         | Thu 4/1/21         | Tue 10/5/21         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 105 | 2.7.2                             | Permitting                                   | 365 days         | Wed 10/6/21        | Wed 10/5/22         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 106 | 2.7.3                             | Procurement                                  | 365 days         | Thu 10/6/22        | Thu 10/5/23         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 107 | 2.7.4                             | Construction Clarifiers 1,2                  | 348 days         | Fri 10/6/23        | Tue 9/17/24         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 108 | 2.7.5                             | Construction Clarifiers 3,4                  | 348 days         | Wed 9/18/24        | Sun 8/31/25         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 109 | 2.7.6                             | Construction Clarifiers 5,6                  | 349 days         | Mon 9/1/25         | Sat 8/15/26         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 110 | 2.8                               | <b>Secondary Clarifiers Plant 2</b>          | <b>2660 days</b> | <b>Wed 6/1/16</b>  | <b>Tue 9/12/23</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 111 | 2.8.1                             | Engineering Design                           | 188 days         | Wed 6/1/16         | Mon 12/5/16         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 112 | 2.8.2                             | Permitting                                   | 365 days         | Tue 12/6/16        | Tue 12/5/17         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 113 | 2.8.3                             | Procurement                                  | 365 days         | Wed 12/6/17        | Wed 12/5/18         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 114 | 2.8.4                             | Construction Clarifiers 1,2                  | 348 days         | Thu 12/6/18        | Mon 11/18/19        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 115 | 2.8.5                             | Construction Clarifiers 3,4                  | 349 days         | Tue 11/19/19       | Sun 11/1/20         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 116 | 2.8.6                             | Construction Clarifiers 5,6                  | 348 days         | Mon 11/2/20        | Fri 10/15/21        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 117 | 2.8.7                             | Construction Clarifiers 7,8                  | 348 days         | Sat 10/16/21       | Wed 9/28/22         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 118 | 2.8.8                             | Construction Clarifiers 9,10                 | 349 days         | Thu 9/29/22        | Tue 9/12/23         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 119 | 2.9                               | <b>Return Sludge PS Plant 1</b>              | <b>1963 days</b> | <b>Thu 4/1/21</b>  | <b>Sat 8/15/26</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 120 | 2.9.1                             | Engineering Design                           | 188 days         | Thu 4/1/21         | Tue 10/5/21         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 121 | 2.9.2                             | Permitting                                   | 365 days         | Wed 10/6/21        | Wed 10/5/22         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 122 | 2.9.3                             | Procurement                                  | 365 days         | Thu 10/6/22        | Thu 10/5/23         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 123 | 2.9.4                             | Construction PS #1                           | 348 days         | Fri 10/6/23        | Tue 9/17/24         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 124 | 2.9.5                             | Construction PS #2                           | 348 days         | Wed 9/18/24        | Sun 8/31/25         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 125 | 2.9.6                             | Construction PS #3                           | 349 days         | Mon 9/1/25         | Sat 8/15/26         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 126 | 2.10                              | <b>Return Sludge PS Plant 2</b>              | <b>2660 days</b> | <b>Wed 6/1/16</b>  | <b>Tue 9/12/23</b>  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 127 | 2.10.1                            | Engineering Design                           | 188 days         | Wed 6/1/16         | Mon 12/5/16         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 128 | 2.10.2                            | Permitting                                   | 365 days         | Tue 12/6/16        | Tue 12/5/17         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 129 | 2.10.3                            | Procurement                                  | 365 days         | Wed 12/6/17        | Wed 12/5/18         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 130 | 2.10.4                            | Construction PS #1                           | 348 days         | Thu 12/6/18        | Mon 11/18/19        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

Project: Project Scheduling MSP  
Date: Wed 11/14/12

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone



| ID  | ID Number | Task Name   | Duration  | Start        | Finish       | 2012 |     | 2013 |     | 2014 |     | 2015 |     | 2016 |     | 2017 |     | 2018 |     | 2019 |     | 2020 |     | 2021 |     | 2022 |     | 2023 |     | 2024 |     | 2025 |     | 2026 |     | 2027 |     | 2028 |     |
|-----|-----------|---|-----------|--------------|--------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
|     |           |   |           |              |              | Jul  | Oct | Jan  | Apr | Jul  | Oct |
| 197 | 2.19      | <b>Co-Gen Improvements</b>                            | 1796 days | Thu 5/1/14   | Sun 3/31/19  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 198 | 2.19.1    | Engineering Design                                    | 474 days  | Thu 5/1/14   | Mon 8/17/15  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 199 | 2.19.2    | Permitting  | 365 days  | Tue 8/18/15  | Tue 8/16/16  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 200 | 2.19.3    | Procurement   | 365 days  | Wed 8/17/16  | Wed 8/16/17  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 201 | 2.19.4    | Construction  | 592 days  | Thu 8/17/17  | Sun 3/31/19  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 202 | 2.20      | <b>Septage Unloading Station</b>                      | 1311 days | Thu 11/1/18  | Fri 6/3/22   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 203 | 2.20.1    | Engineering Design                                    | 282 days  | Thu 11/1/18  | Fri 8/9/19   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 204 | 2.20.2    | Permitting  | 365 days  | Sat 8/10/19  | Sat 8/8/20   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 205 | 2.20.3    | Procurement   | 365 days  | Sun 8/9/20   | Sun 8/8/21   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 206 | 2.20.4    | Construction  | 299 days  | Mon 8/9/21   | Fri 6/3/22   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 207 | 2.21      | <b>Pump Station No.1</b>                              | 1118 days | Sat 10/1/16  | Wed 10/23/19 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 208 | 2.21.1    | Engineering Design                                    | 128 days  | Sat 10/1/16  | Sun 2/5/17   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 209 | 2.21.2    | Permitting  | 365 days  | Mon 2/6/17   | Mon 2/5/18   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 210 | 2.21.3    | Procurement   | 365 days  | Tue 2/6/18   | Tue 2/5/19   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 211 | 2.21.4    | Construction  | 260 days  | Wed 2/6/19   | Wed 10/23/19 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 212 | 2.22      | <b>Pump Station No.2</b>                              | 1118 days | Wed 10/1/14  | Sun 10/22/17 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 213 | 2.22.1    | Engineering Design                                    | 128 days  | Wed 10/1/14  | Thu 2/5/15   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 214 | 2.22.2    | Permitting  | 365 days  | Fri 2/6/15   | Fri 2/5/16   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 215 | 2.22.3    | Procurement   | 365 days  | Sat 2/6/16   | Sat 2/4/17   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 216 | 2.22.4    | Construction  | 260 days  | Sun 2/5/17   | Sun 10/22/17 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 217 | 2.23      | <b>O2 Plant Process Controls Phase 2</b>              | 1256 days | Tue 10/1/13  | Thu 3/9/17   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 218 | 2.23.1    | Engineering Design                                    | 125 days  | Tue 10/1/13  | Sun 2/2/14   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 219 | 2.23.2    | Permitting  | 365 days  | Mon 2/3/14   | Mon 2/2/15   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 220 | 2.23.3    | Procurement   | 365 days  | Tue 2/3/15   | Tue 2/2/16   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 221 | 2.23.4    | Construction  | 401 days  | Wed 2/3/16   | Thu 3/9/17   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 222 | 2.24      | <b>Gas Monitoring and Alarms</b>                      | 993 days  | Thu 1/1/15   | Tue 9/19/17  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 223 | 2.24.1    | Engineering Design                                    | 63 days   | Thu 1/1/15   | Wed 3/4/15   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 224 | 2.24.2    | Permitting  | 365 days  | Thu 3/5/15   | Thu 3/3/16   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 225 | 2.24.3    | Procurement   | 365 days  | Fri 3/4/16   | Fri 3/3/17   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 226 | 2.24.4    | Construction  | 200 days  | Sat 3/4/17   | Tue 9/19/17  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 227 | 2.25      | <b>Ventilation Improvements</b>                       | 1519 days | Fri 1/1/21   | Thu 2/27/25  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 228 | 2.25.1    | Engineering Design                                    | 188 days  | Fri 1/1/21   | Wed 7/7/21   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 229 | 2.25.2    | Permitting  | 365 days  | Thu 7/8/21   | Thu 7/7/22   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 230 | 2.25.3    | Procurement   | 365 days  | Fri 7/8/22   | Fri 7/7/23   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 231 | 2.25.4    | Construction  | 601 days  | Sat 7/8/23   | Thu 2/27/25  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 232 | 2.26      | <b>Rehabilitation of Walkways and Stairways</b>       | 5110 days | Tue 10/1/13  | Mon 9/27/27  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 233 | 2.26.1    | Construction  | 5110 days | Tue 10/1/13  | Mon 9/27/27  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 234 | 2.27      | <b>Oxygen Production</b>                              | 1825 days | Thu 1/1/15   | Mon 12/30/19 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 235 | 2.27.1    | Engineering Design                                    | 365 days  | Thu 1/1/15   | Thu 12/31/15 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 236 | 2.27.2    | Permitting  | 365 days  | Fri 1/1/16   | Fri 12/30/16 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 237 | 2.27.3    | Procurement   | 365 days  | Sat 12/31/16 | Sat 12/30/17 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 238 | 2.27.4    | Construction  | 730 days  | Sun 12/31/17 | Mon 12/30/19 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 239 | 2.28      | <b>SCADA RTU Upgrades</b>                             | 180 days  | Tue 10/1/13  | Sat 3/29/14  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 240 | 2.28.1    | Construction  | 180 days  | Tue 10/1/13  | Sat 3/29/14  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 241 | 2.29      | <b>High Strength Influent Impact Study</b>            | 540 days  | Tue 1/1/13   | Tue 6/24/14  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 242 | 2.29.1    | Engineering Study                                     | 540 days  | Tue 1/1/13   | Tue 6/24/14  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 243 | 3         | <b>North District R&amp;R</b>                         | 5349 days | Tue 1/1/13   | Tue 8/24/27  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 244 | 3.1       | <b>Headworks and Sludge Degritting &amp; Transfer</b> | 1923 days | Tue 1/1/13   | Sat 4/7/18   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 245 | 3.1.1     | Engineering Design                                    | 270 days  | Tue 1/1/13   | Fri 9/27/13  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 246 | 3.1.2     | Permitting  | 365 days  | Tue 10/1/13  | Tue 9/30/14  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 247 | 3.1.3     | Procurement   | 365 days  | Wed 10/1/14  | Wed 9/30/15  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 248 | 3.1.4     | Construction Phase 1: Screens                         | 450 days  | Thu 10/1/15  | Fri 12/23/16 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 249 | 3.1.5     | Construction Phase 2: Building Improvements           | 920 days  | Thu 10/1/15  | Sat 4/7/18   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 250 | 3.2       | <b>Primary Clarifiers and Odor Control</b>            | 1996 days | Sun 11/1/15  | Sun 4/18/21  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 251 | 3.2.1     | Engineering Design                                    | 215 days  | Sun 11/1/15  | Thu 6/2/16   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 252 | 3.2.2     | Permitting  | 365 days  | Fri 6/3/16   | F            |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |





| ID  | ID Number | Task Name   | Duration         | Start              | Finish              | 2012 |     | 2013 |     | 2014 |     | 2015 |     | 2016 |     | 2017 |     | 2018 |     | 2019 |     | 2020 |     | 2021 |     | 2022 |     | 2023 |     | 2024 |     | 2025 |     | 2026 |     | 2027 |     | 2028 |     |
|-----|-----------|---|------------------|--------------------|---------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
|     |           |   |                  |                    |                     | Jul  | Oct | Jan  | Apr | Jul  | Oct |
| 381 | 5.8.3     | Procurement   | 365 days         | Mon 8/10/15        | Mon 8/8/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 382 | 5.8.4     | Construction  | 902 days         | Tue 8/9/16         | Sun 1/27/19         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 383 | 5.9       | <b>Replacement of Pumping and Electrical Equipment at PS#0301</b>           | <b>1651 days</b> | <b>Fri 11/1/13</b> | <b>Wed 5/9/18</b>   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 384 | 5.9.1     | Engineering Design  | 219 days         | Fri 11/1/13        | Sat 6/7/14          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 385 | 5.9.2     | Permitting  | 365 days         | Sun 6/8/14         | Sun 6/7/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 386 | 5.9.3     | Procurement   | 365 days         | Mon 6/8/15         | Mon 6/6/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 387 | 5.9.4     | Construction  | 702 days         | Tue 6/7/16         | Wed 5/9/18          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 388 | 5.10      | <b>Upgrade of PS#0488</b>   | <b>1651 days</b> | <b>Fri 11/1/13</b> | <b>Wed 5/9/18</b>   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 389 | 5.10.1    | Engineering Design  | 219 days         | Fri 11/1/13        | Sat 6/7/14          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 390 | 5.10.2    | Permitting  | 365 days         | Sun 6/8/14         | Sun 6/7/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 391 | 5.10.3    | Procurement   | 365 days         | Mon 6/8/15         | Mon 6/6/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 392 | 5.10.4    | Construction  | 702 days         | Tue 6/7/16         | Wed 5/9/18          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 393 | 5.11      | <b>Installation of 60 inch FM from Kendall Dr to PS#0536</b>                | <b>1651 days</b> | <b>Fri 11/1/13</b> | <b>Wed 5/9/18</b>   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 394 | 5.11.1    | Engineering Design  | 219 days         | Fri 11/1/13        | Sat 6/7/14          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 395 | 5.11.2    | Permitting  | 365 days         | Sun 6/8/14         | Sun 6/7/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 396 | 5.11.3    | Procurement   | 365 days         | Mon 6/8/15         | Mon 6/6/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 397 | 5.11.4    | Construction  | 702 days         | Tue 6/7/16         | Wed 5/9/18          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 398 | 5.12      | <b>Replacement of Switchgear at PS#0187</b>                                 | <b>1651 days</b> | <b>Fri 11/1/13</b> | <b>Wed 5/9/18</b>   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 399 | 5.12.1    | Engineering Design  | 219 days         | Fri 11/1/13        | Sat 6/7/14          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 400 | 5.12.2    | Permitting  | 365 days         | Sun 6/8/14         | Sun 6/7/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 401 | 5.12.3    | Procurement   | 365 days         | Mon 6/8/15         | Mon 6/6/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 402 | 5.12.4    | Construction  | 702 days         | Tue 6/7/16         | Wed 5/9/18          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 403 | 5.13      | <b>Refurbish Emergency Generators and Controls at Regional Pumpstations</b> | <b>993 days</b>  | <b>Fri 11/1/13</b> | <b>Wed 7/20/16</b>  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 404 | 5.13.1    | Engineering Design  | 63 days          | Fri 11/1/13        | Thu 1/2/14          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 405 | 5.13.2    | Permitting  | 365 days         | Fri 1/3/14         | Fri 1/2/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 406 | 5.13.3    | Procurement   | 365 days         | Sat 1/3/15         | Sat 1/2/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 407 | 5.13.4    | Construction  | 200 days         | Sun 1/3/16         | Wed 7/20/16         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 408 | 5.14      | <b>Upgrade of PS# 0086, 0492</b>  | <b>450 days</b>  | <b>Mon 10/8/12</b> | <b>Tue 12/31/13</b> |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 409 | 5.14.1    | Procurement   | 180 days         | Mon 10/8/12        | Sat 4/6/13          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 410 | 5.14.2    | Construction  | 270 days         | Sat 4/6/13         | Tue 12/31/13        |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 411 | 5.15      | <b>Upgrade of PS# 0065, 0201, 0334, 0374, 0607</b>                          | <b>730 days</b>  | <b>Wed 1/1/14</b>  | <b>Thu 12/31/15</b> |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 412 | 5.15.1    | Engineering Design  | 190 days         | Wed 1/1/14         | Thu 7/10/14         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 413 | 5.15.2    | Permitting  | 90 days          | Thu 7/10/14        | Wed 10/8/14         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 414 | 5.15.3    | Procurement   | 180 days         | Wed 10/8/14        | Mon 4/6/15          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 415 | 5.15.4    | Construction  | 270 days         | Mon 4/6/15         | Thu 12/31/15        |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 416 | 5.16      | <b>Upgrade of PS# 0198, 0437, 0466, 0680</b>                                | <b>730 days</b>  | <b>Fri 1/2/15</b>  | <b>Sat 12/31/16</b> |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 417 | 5.16.1    | Engineering Design  | 190 days         | Fri 1/2/15         | Sat 7/11/15         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 418 | 5.16.2    | Permitting  | 90 days          | Sat 7/11/15        | Fri 10/9/15         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 419 | 5.16.3    | Procurement   | 180 days         | Fri 10/9/15        | Wed 4/6/16          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 420 | 5.16.4    | Construction  | 270 days         | Wed 4/6/16         | Sat 12/31/16        |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 421 | 5.17      | <b>Upgrade of PS# 0037, 0351, 0370, 0403</b>                                | <b>730 days</b>  | <b>Sat 1/2/16</b>  | <b>Sun 12/31/17</b> |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 422 | 5.17.1    | Engineering Design  | 190 days         | Sat 1/2/16         | Sun 7/10/16         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 423 | 5.17.2    | Permitting  | 90 days          | Sun 7/10/16        | Sat 10/8/16         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 424 | 5.17.3    | Procurement   | 180 days         | Sat 10/8/16        | Thu 4/6/17          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 425 | 5.17.4    | Construction  | 270 days         | Thu 4/6/17         | Sun 12/31/17        |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 426 | 5.18      | <b>Upgrade of PS# 0441, 0491, 0710, 0827, 0852, 1236</b>                    | <b>730 days</b>  | <b>Sun 1/1/17</b>  | <b>Mon 12/31/18</b> |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 427 | 5.18.1    | Engineering Design  | 190 days         | Sun 1/1/17         | Mon 7/10/17         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 428 | 5.18.2    | Permitting  | 90 days          | Mon 7/10/17        | Sun 10/8/17         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 429 | 5.18.3    | Procurement   | 180 days         | Sun 10/8/17        | Fri 4/6/18          |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 430 | 5.18.4    | Construction  | 270 days         | Fri 4/6/18         | Mon 12/31/18        |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 431 | 5.19      | <b>SCADA RTU Upgrades</b>   | <b>900 days</b>  | <b>Tue 10/1/13</b> | <b>Fri 3/18/16</b>  |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 432 | 5.19.1    | Construction  | 900 days         | Tue 10/1/13        | Fri 3/18/16         |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |

Exhibit D-3 Capital Project Costs in 2012 dollars with 2% inflation starting in Fiscal Year 2014-2015

| Project No.   | Fiscal Year | FY 11-12   | FY 12-13 | FY 13-14   | FY 14-15  | FY 15-16   | FY 16-17   | FY 17-18   | FY 18-19   | FY 19-20   | FY 20-21   | FY 21-22   | FY 22-23   | FY 23-24   | FY 24-25   | FY 25-26   | FY 26-27   | Total       |             |
|---|-------------|--|----------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| South District<br>WWTP                                | 1.1         | Headworks  | -        | -          | -         | -          | 40,872     | 6,313      | 147,822    | 350,536    | 143,019    | -          | -          | -          | -          | -          | -          | 688,562     |             |
|   | 1.2         | Oxygen Production  | -        | -          | -         | 386,558    | 102,761    | 337,770    | 3,224,406  | 3,135,713  | -          | -          | -          | -          | -          | -          | -          | 7,187,207   |             |
|   | 1.3         | Oxygenation Trains   | -        | -          | -         | -          | -          | 878,767    | 201,245    | 1,246,973  | 2,102,896  | 2,144,953  | 2,170,209  | 2,231,610  | 2,276,242  | 2,321,767  | 897,625    | -           | 16,472,285  |
|   | 1.4         | Chlorine Building  | -        | -          | -         | -          | -          | -          | -          | 139,812    | 19,702     | 885,308    | 1,266,296  | -          | -          | -          | -          | -           | 2,311,117   |
|   | 1.5         | Effluent Pump Station  | -        | -          | -         | -          | -          | 122,210    | 1,263,562  | 308,564    | 1,849,241  | 8,419,009  | 8,563,926  | 4,523,161  | -          | -          | -          | -           | 25,049,674  |
|   | 1.6         | Gravity Sludge Thickeners  | -        | -          | -         | -          | -          | -          | -          | 260,403    | -          | 67,896     | 250,362    | 2,118,405  | 2,125,254  | -          | -          | -           | 4,822,319   |
|   | 1.7         | Digesters and Control Buildings                                  | -        | -          | 2,454,906 | 583,704    | 1,411,096  | 7,841,062  | 7,997,884  | 8,157,841  | 8,343,795  | 8,487,418  | 664,111    | -          | -          | -          | -          | -           | 45,941,818  |
|   | 1.8         | Dewatering Facility  | -        | -          | 259,953   | 677,584    | 135,224    | 2,559,945  | 5,573,495  | 5,684,965  | 937,318    | -          | -          | -          | -          | -          | -          | -           | 15,828,485  |
|   | 1.9         | FOG Removal Facility   | -        | -          | 53,280    | 8,504      | 213,969    | 524,084    | 99,590     | -          | -          | -          | -          | -          | -          | -          | -          | -           | 899,428     |
|   | 1.10        | Odor Control   | -        | -          | -         | -          | -          | -          | -          | 418,320    | 87,832     | 968,878    | 3,757,430  | 2,173,544  | -          | -          | -          | -           | 7,406,004   |
|   | 1.11        | General Electrical   | -        | -          | -         | -          | -          | 657,134    | 119,901    | 1,937,455  | 5,786,325  | 2,854,271  | -          | -          | -          | -          | -          | -           | 11,355,085  |
|   | 1.12        | Chlorine Contact Chamber Structural                              | -        | -          | -         | -          | -          | 80,911     | 305,901    | 54,091     | 1,287,452  | 2,746,465  | 1,997,716  | -          | -          | -          | -          | -           | 6,472,536   |
|   |             |  |          |            |           |            |            |            |            |            |            |            |            |            |            |            |            | 144,434,520 |             |
| Central District<br>WWTP                              | 2.1         | Electrical Improvements  | -        | -          | -         | -          | -          | 1,528,478  | 310,941    | 9,612,574  | 15,187,868 | -          | -          | -          | -          | -          | -          | 26,639,861  |             |
|   | 2.2         | Building Improvements  | -        | -          | 258,096   | 114,887    | 4,440      | 5,112,137  | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 5,489,560   |
|   | 2.3         | Headworks Plant 1  | -        | -          | 1,102,202 | 270,772    | 2,418,078  | 15,258,482 | 938,083    | -          | -          | -          | -          | -          | -          | -          | -          | -           | 19,987,617  |
|   | 2.4         | Headworks Plant 2  | -        | -          | 520,763   | 719,492    | 137,606    | 8,802,482  | 9,910,266  | -          | -          | -          | -          | -          | -          | -          | -          | -           | 20,090,610  |
|   | 2.5         | Oxygenation Trains Plant 1                                       | -        | -          | 352,796   | 97,433     | -          | 3,048,060  | 3,124,883  | -          | -          | -          | -          | -          | -          | -          | -          | -           | 6,623,172   |
|   | 2.6         | Oxygenation Trains Plant 2                                       | -        | -          | -         | -          | 776,311    | 214,394    | 469,088    | 2,887,906  | 3,433,703  | 3,502,377  | 3,554,291  | -          | -          | -          | -          | -           | 14,838,069  |
|   | 2.7         | Secondary Clarifiers Plant 1                                     | -        | -          | -         | -          | -          | -          | -          | -          | -          | 218,036    | 73,678     | 958        | 1,371,336  | 1,414,262  | 1,260,747  | -           | 4,339,016   |
|   | 2.8         | Secondary Clarifiers Plant 2                                     | -        | -          | -         | -          | 219,424    | 205,837    | 19,083     | 1,028,545  | 1,284,203  | 1,306,308  | 1,332,434  | 1,292,059  | -          | -          | -          | -           | 6,687,893   |
|   | 2.9         | RS Pump Stations Plant 1   | -        | -          | -         | -          | -          | -          | -          | -          | -          | 418,475    | 141,411    | 1,838      | 2,631,990  | 2,714,376  | 2,419,736  | -           | 8,327,826   |
|   | 2.10        | RS Pump Stations Plant 2   | -        | -          | -         | -          | 433,570    | 406,723    | 37,708     | 2,032,345  | 2,537,509  | 2,581,187  | 2,632,811  | 2,553,033  | -          | -          | -          | -           | 13,214,885  |
|   | 2.11        | Effluent Pump Station  | -        | -          | -         | -          | -          | 533,152    | 108,460    | 2,690,666  | 5,973,278  | -          | -          | -          | -          | -          | -          | -           | 9,305,555   |
|   | 2.12        | Sludge Thickeners Plant 1  | -        | -          | -         | -          | -          | 527,462    | 178,243    | 2,317      | 6,125,001  | 3,547,750  | -          | -          | -          | -          | -          | -           | 10,380,773  |
|   | 2.13        | Sludge Thickeners Plant 2  | -        | -          | -         | -          | 548,411    | 75,003     | 2,614,132  | 5,467,649  | 351,427    | -          | -          | -          | -          | -          | -          | -           | 9,056,622   |
|   | 2.14        | Digesters Plant 1  | -        | -          | -         | -          | -          | -          | -          | -          | 1,125,932  | 645,677    | 1,618,129  | 13,963,822 | 16,005,804 | 15,722,851 | 4,877,099  | -           | 53,959,314  |
|   | 2.15        | Digesters Plant 2  | -        | -          | 1,665,295 | 1,435,966  | 8,288,418  | 17,618,814 | 17,961,692 | 18,245,629 | 17,033,613 | 17,902,005 | 15,521,038 | -          | -          | -          | -          | -           | 115,672,470 |
|   | 2.16        | Dewatering Building  | -        | -          | -         | -          | 1,361,452  | 3,711,393  | 1,242,792  | 6,874,978  | 42,776,112 | 37,074,968 | -          | -          | -          | -          | -          | -           | 93,041,695  |
|   | 2.17        | Chlorination Facilities  | -        | -          | 867,598   | 244,139    | 915,126    | 14,157,001 | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 16,183,864  |
|   | 2.18        | Odor Control Systems   | -        | -          | -         | -          | -          | 1,086,506  | 218,014    | 4,702,798  | 12,928,663 | -          | -          | -          | -          | -          | -          | -           | 18,935,982  |
|   | 2.19        | Co-Gen Facility  | -        | -          | 479,041   | 1,079,893  | 407,375    | 1,999,254  | 16,540,498 | 8,412,543  | -          | -          | -          | -          | -          | -          | -          | -           | 28,918,605  |
|   | 2.20        | Septage Unloading  | -        | -          | -         | -          | -          | -          | 1,461,087  | 367,681    | 4,315,406  | 20,430,595 | -          | -          | -          | -          | -          | -           | 26,574,769  |
|   | 2.21        | Pump Station 1   | -        | -          | -         | -          | -          | 697,690    | 62,663     | 9,248,264  | 915,461    | -          | -          | -          | -          | -          | -          | -           | 10,924,078  |
|   | 2.22        | Pump Station 2   | -        | -          | -         | 331,449    | 29,769     | 4,412,061  | 415,994    | -          | -          | -          | -          | -          | -          | -          | -          | -           | 5,189,273   |
|   | 2.23        | O2 Plant Process Controls Phase 2                                | -        | -          | 29,932    | 2,620      | 261,054    | 176,780    | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 470,387     |
|   | 2.24        | Gas Monitoring   | -        | -          | -         | 20,332     | 2,253      | 301,277    | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 323,862     |
|   | 2.25        | Ventilation Improvements   | -        | -          | -         | -          | -          | -          | -          | -          | 138,255    | 30,336     | 317,552    | 1,394,689  | 583,026    | -          | -          | -           | 2,463,858   |
|   | 2.26        | Rehabilitation of Walkways and Stairways                         | -        | -          | 155,070   | 158,172    | 161,777    | 164,562    | 167,853    | 171,210    | 175,113    | 178,127    | 181,690    | 185,323    | 189,548    | 192,810    | 196,667    | 198,951     | 2,476,872   |
|   | 2.27        | Oxygen Production  | -        | -          | -         | 973,892    | 633,865    | 101,324    | 8,661,361  | 11,768,704 | 2,992,797  | -          | -          | -          | -          | -          | -          | -           | 25,131,943  |
|   | 2.28        | SCADA RTU Upgrades   | -        | -          | 396,000   | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 396,000     |
|   | 2.29        | High Strength Influent Impact Study                              | -        | -          | -         | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | -           |
|   |             |  |          |            |           |            |            |            |            |            |            |            |            |            |            |            |            | 555,644,431 |             |
| North District<br>WWTP                                | 3.1         | Headworks and Sludge Degritting Transfer                         | -        | 1,639,000  | 491,699   | -          | 16,653,533 | 8,778,086  | 3,347,595  | -          | -          | -          | -          | -          | -          | -          | -          | -           | 30,909,912  |
|   | 3.2         | Primary Clarifiers and Odor Control                              | -        | -          | -         | -          | 2,552,353  | 477,181    | 4,608,763  | 14,298,688 | 14,624,620 | 8,151,427  | -          | -          | -          | -          | -          | -           | 44,713,031  |
|   | 3.3         | Oxygenation Trains   | -        | -          | -         | -          | -          | -          | -          | 1,198,305  | 434,437    | 14,004     | 9,514,063  | 10,062,743 | 3,065,139  | -          | -          | -           | 24,288,692  |
|   | 3.4         | Oxygen Production  | -        | -          | -         | -          | -          | -          | -          | -          | 235,303    | 183,046    | 22,384     | 4,365,556  | 1,613,582  | -          | -          | -           | 6,419,870   |
|   | 3.5         | Secondary Clarifiers   | -        | -          | -         | -          | -          | -          | -          | 2,540,947  | 1,818,892  | 396,140    | 7,503,013  | 11,786,379 | 12,055,044 | 12,262,549 | 12,507,800 | 11,464,683  | 72,335,446  |
|   | 3.6         | Disinfection   | -        | -          | -         | -          | -          | 1,063,643  | 146,351    | 5,470,515  | 10,876,126 | -          | -          | -          | -          | -          | -          | -           | 17,556,636  |
|   | 3.7         | Effluent Disposal  | -        | -          | -         | -          | 1,340,927  | 384,401    | 343,519    | 7,105,112  | 7,267,070  | 7,392,158  | 1,838,521  | -          | -          | -          | -          | -           | 25,671,707  |
|   | 3.8         | Plant Wide Electrical  | -        | -          | 244,034   | 272,017    | 278,218    | 276,611    | 85,689     | 3,066,981  | 4,525,554  | 4,603,453  | 4,168,080  | -          | -          | -          | -          | -           | 17,520,639  |
|   | 3.9         | Flood Mitigation   | -        | -          | 187,928   | 89,519     | 10,723     | 3,898,879  | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 4,187,050   |
|   | 3.10        | Yard Piping Replacement  | -        | -          | -         | -          | 229,384    | 76,585     | 1,813      | 1,289,669  | 1,352,414  | 1,375,693  | 249,886    | -          | -          | -          | -          | -           | 4,575,443   |
|   | 3.11        | SCADA RTU Upgrades   | -        | -          | 803,000   | 392,700    | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 1,195,700   |
|   |             |  |          |            |           |            |            |            |            |            |            |            |            |            |            |            |            | 249,374,127 |             |
| Wastewater<br>Collection and<br>Transmission<br>Lines | 4.1         | Collection System I/I Repairs                                    | -        | -          | 8,000,001 | 8,160,001  | 8,346,004  | 8,489,665  | 8,659,458  | 8,832,647  | 9,033,983  | 9,189,486  | 9,373,276  | 9,560,741  | 9,778,674  | 9,946,995  | 10,145,935 | 10,263,795  | 127,780,661 |
|   | 4.2         | Government Cut FM - Phase 1 & 2 (construction ongoing)           | -        | 35,187,000 | -         | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 35,187,000  |
|   | 4.3         | Government Cut FM - Phase 3                                      | -        | 7,280,002  | 1,170,001 | 21,648,556 | 55,355,060 | 29,310,958 | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 114,764,576 |
|   | 4.4         | North Dade 72 inch PCCP FM Rehabilitation                        | -        | -          | 1,418,160 | 159,408    | 6,024,545  | 10,731,760 | 4,678,460  | -          | 159,408    | -          | -          | -          | -          | -          | -          | -           | 23,012,333  |
|   | 4.5         | South Dade 54 inch PCCP FM Rehabilitation                        | -        | -          | 1,088,205 | 149,730    | 4,888,616  | 10,224,898 | 1,657,274  | -          | -          | -          | -          | -          | -          | -          | -          | -           | 18,008,723  |
|   | 4.6         | Replacement of Tamiami Canal Aerial Crossing FM's at NW 37th Ave | -        | -          | 46,464    | 2,994      | 596,628    | 64,883     | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 710,970     |
|   | 4.7         | Replacement of 18 inch DIP FM in Miami Lakes                     | -        | -          | 140,614   | 15,694     | 1,091,876  | 1,012,949  | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 2,261,133   |
|   | 4.8         | Rehabilitation of 54 inch PCCP FM in the City of Miami           | -        | -          | 656,196   | 73,238     | 5,095,418  | 4,727,092  | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | 10,551,945  |
|   | 4.9         | Replace Approximately 30 miles of AC FM Transmission System      | -        | -          | 2,531,777 | 845,570    | 20,010     | 15,022,577 | 15,666,402 | 15,979,730 | 357,245    | -          | -          | -          | -          | -          | -          | -           | 50,423,312  |
|   | 4.10        | Opa-Locka Airport 48" PCCP force main replacement                | -        | -          | 1,263,122 | 302,814    | 2,464,045  | 14,113,293 | 4,732,787  | -          | -          | -          | -          | -          | -          | -          | -          | -           | 22,876,061  |
|   |             |  |          |            |           |            |            |            |            |            |            |            |            |            |            |            |            | 405,576,712 |             |
| Sewer Pump<br>Station Systems                         | 5.1         | Upgrade of PS#0418   | -        | -          | 1,314,411 | 250,500    | 2,704,44   |            |            |            |            |            |            |            |            |            |            |             |             |