Metropolitan Wastewater Project List
(Prioritization Results- As of November 2010)

Rank	Title	Description	Facility Type
1	MBC - Chemical System Improvements (PHASE 2)	**Background:** Isolation valves and actuators in storage tank spill containment cells are inaccessible during rain or water flooding or a tank spill. Electrical conduits at floor level are also subject to flooding . As dual chemical storage tanks are piped, isolation of one tank isolation cannot be done without isolation of both tanks requiring shutdown of that entire particular chemical system when emergency repairs are needed. There is potential for siphoning out the contents of a storage tank when a downstream pipe leaks or is ruptured. Potential spill in the digester gallery when an overhead single-walled chemical pipe leaks or ruptures. Discontinued Ferrous and Ferric Chloride pumps and oversized actuators require replacement. Perforated roof causes flooding of storage tank spill containment cells. **Scope:** This project entails improvements to the ferrous/ferric and polymer chemical storage and feed systems : remove piping, motorized valves, electrical conduits from spill containment cells; improve storage tank isolation valuing and overflow piping; provide necessary access platforms for tank isolation valves; prevent siphoning of chemicals from storage tanks-install air gap standpipes; provide secondary piping on single-walled overhead piping; replace/upgrade ferric/ferrous chloride pumps and valve actuators; provide added roof supports or revise to non-perforated roof.	Treatment
2	NCWRP Grit Accumulation at the Headworks and Gates Upgrades	**Background:** The influent channels of the NCWRP's headworks were designed for the ultimate future capacity of 45 mgd/90 mgd (average/peak). Present flows are at 20-30mgd average and 45 mgd peak. Thus, existing channel velocities are very low resulting in grit settling and accumulation. A channel air agitation system is provided but gets buried by the large volume of grit. Air flows should be increased but more important, channel configuration has to be revised (sectional area reduced) to provide proper channel velocities and eliminate grit settling. The inlet and outlet gates at the two mechanical bar screens and at the bypass channel with trash rack (total of 6 gates) and the 2 influent gates at the grit tanks are corroded and require replacement. **Scope:** Revise HW Influent channels to increase flow velocities and also increase air flows for more channel flow turbulence to prevent grit accumulation. Repair or Replace existing sluice gates at screens inlets & Outlets and at grit tanks inlets (total 9 gates) .	Treatment
3	MBC Dewatering Centrifuge Replacement	**Background:** (1) Existing centrifuges in operation since 1998 and are nearing end of useful life as evidenced by increase in repair frequency. (2) Capacity of existing units is also being approached and replacement units require increased capacity for future. (3) Replacement units must fit into existing designed space with minimal modifications to limit impact on operation and reduce changeover time. **Scope:** (1) Replace 6 of the 8 existing Alfa Laval Sharples DS 706 units with Alfa Laval G2-120 units which have very similar physical size, configuration, and power requirement and increases the unit capacity from approx 225 gpm to 350 gpm. (2) Replace at the rate of 2 units per year with only 1 unit out at a time, (required to maintain dewatering capacity)	Treatment
4	PLWTP Hydroelectric Generator Isolation Valve and Penstock Restoration	**Background:** The PLWTP Hydroelectric generator produces $360,000 worth of renewable electricity yearly. The 84-inch butterfly valve that isolates the internal components of the turbine from the ocean outfall is leaking. The inability of this valve to seal the hydro discharge from the outfall makes it practically impossible to perform inspections, maintenance and repair to the turbine, it's piping and other components within. Failure to replace this valve will lead to eminent shutdown of the hydroelectric and therefore loss of renewable energy revenue. This work is safety related and is the part of the Hydro Federal Energy Regulatory Commission inspection every three years. **Scope:** This project will provide a new valve on the discharge side of the Hydro. A temporary isolation of the discharge valve area is required so this work can be completed and for the penstock upgrades. 1. Replace the 84-inch butterfly valve with an 84-inch gate valve. 2. Repair and upgrade the penstock. 3. Temporary isolation of the discharge valve area so work can be performed.	Treatment
5	South Metro Sewer Rehabilitation, Phase 3B	**Background:** This project will rehabilitate the remaining 5,000 feet of the 108 inch pipeline from Winship Lane to Pump Station 2. Sections of the South Metro Interceptor have deteriorated significantly due to the corrosive effects of sewer gases over 40 years. **Scope:** Rehabilitate 5,000 feet of pipeline	Pipeline
6	Pump Station 2 Onsite Standby Power	**Background:** Project entails the removal and disposal of the two existing natural gas reciprocating engines and the installation of two 4.6 MW natural gas turbine generators and one 206 kW diesel startup generator. Also, the two existing engine drives will be replaced with new electric motors. This new configuration will provide 100% power back-up to SDG&E thus satisfying EPA recommendations. This option will also serve as a more reliable surge protection for the force mains in the event of a power failure. **Scope:** EPA recommends that facilities like Pump Station 2 be equipped with two separate and independent sources of electrical power. The current Pump Station 2 power system does not comply with the EPA recommendations. The Pump Station 2 facility currently has three feeds, two of the feeds are from the same substation. All feeds are limited to two pumps, except during emergency conditions. Loosing two of the three feeds the pump station is limited to a 5 pump operation only. The proposed recommendation will improve the overall power reliability and enhance standby power at Pump Station 2. Also, this option will provide force main surge protection at all times during the stations operation and in the event of a total power failure.	Pump Station
7	NCWRP Influent Pump Station Bridge Cranes/Hoists and Isolation Gates/Valves Upgrades	**Background:** The existing leaky condition of the wetwell isolation stop gates and pumps discharge isolation valves at the NCWRP Influent Pump Station does not allow for complete O&M work to be done on the main sewage pumps. As the stop gates are packed with grit/solids debris, each wetwell pump drafttube cannot be fully drained out cleaned out. Complete isolation of a pump for service cannot be done as its discharge valve leaks. The hydraulic oil driven wetwell BC/Hoist is inoperable due to corrosion damage. The pump room BCs & hoist's present arrangement does not allow separate servicing of valves on the discharge piping without dismantling the pump-motor shafting arrangement. **Scope:** Refurbish existing wetwell isolation stop gates. Remove/re[place existing pump discharge isolation valves. Replace existing inoperable hydraulic bridge crane in wetwell, install electric, non-explosive type crane/hoist. Install a new bridge crane or monorail hoist above Pumps discharge check & gate valves.	Treatment
8	NCWRP -EDR Mechanical Upgrades	**Background:** Due to many years of exposure to environmental elements, the first 3 Electro-Dialysis Reversal (EDR) units installed in 1998 including EDR valves, piping, tubing, electrical conduits, racks, and covers have experienced damage, corrosion, and degradation. Other upgrades require installation of soft start on the recycle pumps, replacement of EDR stack covers and the addition of a mixer on the brine tank. **Scope:** Replace /upgrade all faulty and deteriorating the EDR units equipment and appurtenances.	Treatment

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9	EMTS - Lab Boat Dock and Steam Line	**Background:** The Environmental Monitoring and Technical Services Lab (EMTS Lab) Boat Dock and Steam Line Project provides for the design and construction of a boat dock located in the channel adjacent to the EMTS Laboratory, as well as under-grounding approximately 600 feet of an above ground steam line situated along the frontage of the boat channel. **Scope:** A 40,000 square foot ocean monitoring laboratory was constructed and is now in operation. As a part of the Public Benefit Conveyance of this property, Public Utilities is required to construct a boat dock and to fund a portion of the esplanade improvements along our frontage. To gain future unobstructed access to the boat dock within the adjacent boat channel, and to provide unobstructed access to the future esplanade, the existing steam line must be underground. Public Utilities currently leases boat dock space at Driscoll's Wharf, and this project would eliminate this ongoing expense.	Other
10	NCWRP - Primary Sedimentation Tanks Odor Control System Upgrades	**Background:** The present odor control system at the Primary Sedimentation Tanks was designed to treat foul air from the tanks with 0-25 ppm of hydrogen sulfides. Current actual H2S readings are from 10- 80ppm posing potential SDAPCD air discharge violations including public complaints. The foul air ducting at the OCS facility are leaking at the isolation dampers due to damaged seals and leaves of the butterfly valves. **Scope:** Upgrade the Odor scrubbers to treat foul air with 0-100ppm H2S by possibly adding one unit each of the carbon and packed chemical absorbers along with increased foul air volume withdrawal from the tanks.	Treatment
11	SBWRP - Demineralization Facility Phases 1 & 2	**Background:** This project provides for demineralization of reclaimed water. Phase I will construct a demineralization facility to provide 7.5 million gallons a day (MGD) of reclaimed water for conveyance to the users. Phase II will expand the facility to provide 15 mgd of reclaimed water. The majority of reclaimed water is used for irrigation. Demineralization will reduce the level of total dissolved solids in the reclaimed water. **Scope:** 1. Install 3 EDR units at SBWRP for Phase 1 2. Install 3 EDR units at SBWRP for Phase 2	Treatment
12	MBC - Odor Control Facility Upgrades	**Background:** The odor control facility serves various solid treatment processes. Several areas at the Metro Biosolids Center (MBC) have been identified to cause significant odor problems due to foul air collection deficiencies because of insufficient fan capacities and high ducting pressure losses, including poorly located foul air collection registers. Capacity Upgrades to fans, installation of variable-speed motors; removal/replacement of high pressure loss ducting with Installing access platforms at the monitoring instruments and air volume control dampers will provide safe and timely access for operation and maintenance personnel **Scope:** This project will upgrade fan capacities to provide required air changes in foul air generating areas; install fume hood foul air collection system at the truck loadout stations and at the de-gritting room;	Treatment
13	Wet Weather Storage Facility - Phase I	**Background:** This project includes the implementation of the Live Stream Discharge of reclaimed water from the North City Water Reclamation Plant This project includes the implementation of the Wet Weather Stream Discharge of reclaimed water from the North City Water Reclamation Plant during heavy rain events to offload wet weather sewer system flows. It will be implemented only during extreme wet weather events when PS2 capacity is approached, and it would be an interim solution until long-term capital projects are completed, i.e. storage tank , SBWTP, and/or IPR. This project also includes constructing a seven-million gallon (7-MG) Underground Storage Tank at the Liberty Station (vacated Naval Training Center) to provide hydraulic relief to the Pump Station 2, the South and North Metro Interceptors, and the major trunk sewers **Scope:** The facility will reduce the risk of potential wet weather overflows, which may be caused by the capacity limitation of the Metro Pump Station 2 during extreme rainfall events.	Other
14	MBC - Stream Discharge Dechlorination Facility	**Background:** This project is part of the Wet Weather Stream Discharge of reclaimed water from the North City Water Reclamation Plant during extreme wet weather events. This project includes construction of a dechlorination facility, a necessary component of the Wet Weather Stream Discharge project. It will be implemented only during extreme wet weather events when PS2 capacity is approached, and it would be an interim solution until long-term capital projects are completed, i.e. storage tank , SBWTP, and/or IPR. **Scope:** This project will include building a dechlorination structure to dechlorinate approximately 16 mgd - 30 mgd of treated RW from 36" RW pipe at MBC side and discharge it into San Clemente stream. This structure will be build near stream discharge facility.	Treatment
15	MBC - Valve Access Platforms Installation in Biosolids Storage Building	**Background:** Existing piping/valves arrangement causes multiple trains of equipment to be removed from service when a valve or its actuator fails and needs to be repaired or maintained. Poor and unsafe access to these valves result in lengthy and costly repair times and impacting solids storage and delivery capacities. Existing hard to access valves especially those at elevated levels pose safety problems to O/M personnel. **Scope:** Evaluate valve accessibility options including the use of , ladders, scaffolding, platforms, and/ or catwalks and provide best and safe alternative(s).	Treatment
16	South Bay Pump Station and Conveyance System Phase 1	**Background:** The project consists of installing a diversion structure, pump station and force main to divert flow from the South Metro Interceptor to the South Bay Secondary Treatment Plant from Sweetwater area to the South Bay Secondary Plant. Phase 1 will have an average capacity of 21 mgd with the ultimate peak capacity at 103 mgd.	Pump Station
17	MBC - New Biosolids Truck Loadout Facility	**Background:** The existing biosolids storage facility houses also the truck loadout stations posing safety concerns due to foul odors and truck fumes for the MBC operators and maintenance staff. To cope with increased biosolids flows sent to MBC in future, a larger capacity truck loadout facility is needed. **Scope:** This project proposes to construct a new separate automated loadout facility to provide additional loudout stations at MBC. Not considered till 2020, pending secondary treatment at PLWTP.	Treatment
18	South Bay Waste Water Treatment Plant Phase 1	**Background:** The South Bay Secondary Treatment Plant and Sludge Processing Facilities Phase 1 will be constructed on the Dairy Mart Road site adjacent to the existing SBWRP by 2030 assuming current MER limit for PLWTP discharge. The Phase 1 of the South Bay Secondary Treatment Plant (SBSTP) will be 21 mgd and the Sludge Processing Facility will process the sludge from the existing 15 mgd SBWRP and the new 21 mgd SBSTP	Treatment
19	South Bay Pump Station and Conveyance System Phase 2	**Background:** Phase 2 will provide a 28 mgd capacity increase to Phase 1 of project for a total capacity of 49 mgd. Project envisioned beyond 2050	Pump Station
20	Flow Metering at PS 1	**Background:** This project is the result of the WWTD efficiency study of the Automation of major Pump Stations. The goal is to try to reduce the number of operator interventions in the current control strategy and make the strategy more user friendly. Monitoring the incoming flow would allow automatic flow control at Pump Station 1. **Scope:** Modify six existing ADS flow meters upstream of pump station 1 to provide live flow data to the Pump station 1 DCS system to provide automatic flow control.	Pump Station

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21	South Bay Waste Water Treatment Plant Phase 2	**Background:** Phase 2 will provide a 28 mgd capacity increase to Phase 1 (view item 28 above) of project for a total capacity of 49 mgd. Project envisioned beyond 2050	Treatment
22	PLWWTP - South Access Road Protection Project	**Background:** This project provides for continued access to the Point Loma Wastewater Treatment Plant and investigates, and may implement, options to mitigate erosion at two sea coves adjacent to the plant's access road. **Scope:** The treatment plant has only one access road as granted by the federal government and this project is needed to ensure continued access.	Treatment
23	MBC - Dewatered Biosolids Storage & Loading - AHU Piping Modifications	**Background:** Chilled water valves and piping for air handling units are dangerously located above MCC's and pose risk of damaging electrical equipment in the event of a leak or spill from these assets during repair/ maintenance work. Potential safety hazard (electrocution) from damaged electrical equipment. **Scope:** Reroute piping, relocate leaky valves and provide condensate pan/ drain from AHU.	Treatment
24	MBC - Area 76: Control Room Emergency Air Supply	**Background:** During a power outage, foul air and hazardous gases accumulate in the centrifuge building, including the operation control room posing safety concern besides absence of Air-conditioned air for delicate electrical equipment and room comfort for the MBC operators. **Scope:** Provide HVAC capability for Area-76 Control Room during emergency MBC power shutdowns.	Treatment