

CHAPTER 6 - IMPLEMENTATION PLAN

This chapter discusses the implementation plan and schedules for the improvement projects for the Metropolitan Biosolids Center (MBC). After reviewing the various projects proposed in Chapter 1, MWWD classified the projects based on costs, implementation timing, and also implementation methodology.

Presented in Table 6-1 are the major projects (with total construction costs larger than \$0.5 Million) recommended for implementation from Fiscal Years 2006 to 2030 with an estimated total construction cost of about \$55 Million. *(These projects have been recently approved by MWWD for CIP funding and implementation as indicated.)*

TABLE 6-1 Major Upgrade Projects for MBC					
Project No.	Project Name	C.I.P. No.	Projected Construction Start (FY)	Projected Completion (FY)	Estimated Total Cost (\$ Million)
P-9.3	Dewatering Transfer Pumps Upgrade	42-915.9	2005	2006	0.7
P-10.1	Standby Centrifuge Sludge Feed and Polymer Feed Pumps Installation	45-981.0	2007	2010	1.5
P-10.2	Centrate Collection Piping Upgrades – Phases 2 and 3	45-982.0	2012	2016	2.0
P-10.6	Replace 4 Dewatering Centrifuges with Larger Capacity Units	45-983.0	2009	2014	6.0
P-11.1	Additional Biosolids Storage Silos	45-984.0	2007	2014	8.0
P-11.3	Valve Access Platforms Installation In Biosolids Storage Building	45-985.0	2017	2019	4.5
P-11.5	Emergency Direct Pipeline Loadout Station	45-986.0	2007	2009	0.7
P-11.6	New Biosolids Truck Loadout Facility	TBA	2024	2030	20.0
N-1	Wastewater Pump Station Upgrade and Forcemain Extension	45-988.0	2007	2010	1.2
N-2	Odor Control Facility Upgrades & Dampers Access Platforms Installation	45-989.0	2007	2009	5.0
N-6.1 N-6.2	Storm Water Drainage System Improvements	45-990.0	2013	2016	3.0
E-6.2	Emergency Electric Generating Units Installation	45-991.0	2013	2016	2.0
				TOTAL	54.6
TBA - To be assigned later					

Presented in Table 6-2 below are the projects that can be done either by MWWD (via in-house design and/or construction) using the Engineering and Program Management Division (EPMD) or the Operations and Maintenance Division (OMD) staff or by selected outside consulting engineering firms. These projects, recommended for the MWWD Annual Allocation budget, are presented in Table 6-2 and projected to cost a total of about \$6 Million over the next ten years until year 2016.

TABLE 6-2			
Projects Proposed for C.I.P. Funding Allocation			
Project No.	Project Name	Total Cost (in \$ Million)	Implementation Schedule (FY)
Done By: DESIGN CONSULTANT			
P-3.3 & 3.4	Degritting Facility Foul Air Collection Upgrades	0.10	2010-2013
P-4.1, 4.2, 4.3, 4.4	Thickened Solids Wetwell Improvements	0.30	2010-2013
P-5	TSL Pumping & Blending Tanks Bypass Upgrades	0.70	2007-2010
P-11.2	Lime Mixers Bypass	0.50	2007-2008
P-12.1, 12.2, 12.3, 12.4	Chemical Storage/Handling Systems Improvements	1.20	2011-2015
N-3	Potable/Process/ Utility Water Systems Improvements	0.50	2014-2016
E-3	Wastewater Pump Station Backup Power	0.25	2014-2016
Done By: MWWD / EPMD			
P-2.2	Raw Solids Receiving Tanks Isolation Valves	0.10	2008-2009
P-8.1	Gas Flares Backup Power	0.10	2007
P-10.3	Centrate Pipeline Access Ports	0.25	2008-2011
P-11.4	Cake Storage/Loading Facility- AHU Piping Modifications	0.08	2010-2011
P-14.2	Ferric Chloride Feed System Upgrades	0.12	2009-2011
P-15.1	Centrate Forcemain Upgrade	0.25	2010-2012
P-15.2	Centrate PS Wetwell Access Hatch	0.08	2015-2016
E-2.2	Area 76 Control Room Emergency Air Supply Fan	0.07	2013-2014
Done By: MWWD/ OMD-MBC			
P-9.1	Digested Biosolids Storage Inflow Surges Control	0.50	2010-2013
P-10.4B	Cake Bins Level Control Upgrade	0.20	2007-2009
P-12.7	Double- Walled Chemical Piping	0.20	2014-2016
N-2.3B	Area 86 Operator's Control Booth	0.20	2007-2008
N-3.4	Process Water Isolation Valves	0.20	2007-2009
	TOTAL	5.90	

The following Table 6-3 presents the projects proposed for implementation using MBC's annual O&M budget allocation. These projects will be primarily designed by MBC's O&M staff and constructed by a selected MWWD contractor or by plant staff and will cost about a total of about \$0.5 Million in the next 6 years.

**TABLE 6-3
Projects Proposed for Annual O&M Budget Funding**

Project No.	Project Name	Total Cost (in \$ Million)	Implementation Schedule (FY)
P-1	Monitor Pressures on NC Raw Solids Pipeline	0.00	2006
P-2.1	Raw Solids Receiving Tanks Suction Pipe F/D Ports	0.04	2010-2011
P-3.2	Raw Solids Degritters/ Flexible Grit Piping Upgrade	0.02	2007
P-6.4	Trailer-Mounted Blending Tanks Heat Exchangers	0.01	2009
P-7.1	FC Injectors Relocation to /Digester Roof	0.01	2006
P-7.3	Digester Emergency Overflow Weir	0.02	2008
P-9.2	On-Site FIRP Emergency Plan	0.05	2006-2007
P-9.4	Monitor Grit from PLWTP	0.00	2006
P-9.5	Digester Biosolids Storage Flex Piping Installation	0.05	2006
P-10.4A	Cake Pump Controls Upgrade	0.05	2006
P-12.6	Raise Level Sensors In Chemical Containment Cells	0.01	2006
P-13	Combine Polymer Storage & Mixing Systems	0.065	2004 -2006
P-14.1	Pilot Testing of Ferric Chloride Pumps	0.01	2006
P-15.3	Area 94 -Troubleshooting Master Valve Stations	0.02	2006
E-4.1	Fire Alarm System Upgrade	0.15	2006-2008
	TOTAL	0.51	