

Recommended 2020 Facilities Plan – Summary for Public Hearing on April 25 and 26, 2007

1. Purpose of the 2020 Facilities Plan

As a regional governmental agency providing wastewater treatment and flood management services for 28 municipalities, the Milwaukee Metropolitan Sewerage District (MMSD) serves 1.1 million people in a 411 square mile service area. To meet projected future growth while maintaining regulatory compliance, MMSD developed this 2020 Facilities Plan (2020 FP). The purpose of the 2020 FP is to identify which Facilities, Policies, Operational Improvements and Programs (FPOPs) are required to achieve the water resource goals inspired by our public.

2. Coordination with Regional Water Quality Management Plan Update (RWQMPU)

In 2002, the MMSD and the Southeastern Wisconsin Regional Planning Commission (SEWRPC) formed the Water Quality Initiative (WQI). The WQI is a coordinated and collaborative water quality planning effort, and the effort has resulted in two plans: a Regional Water Quality Management Plan Update (RWQMPU) as produced by SEWRPC, and a year 2020 Facilities Plan, as produced by MMSD. The RWQMPU evaluates water quality and provides a plan to achieve water quality goals for six watersheds within southeastern Wisconsin. The 2020 FP focuses on MMSD managed FPOPs.

The WQI utilized the EPA-endorsed watershed approach in developing these two plans. This watershed approach embraces several principles: watershed based planning, decisions based on sound science, and partnerships and public involvement in problem-solving.

3. Structure of 2020 Facilities Plan

- ◆ *State of the Art Report (SOAR)* - Presents the results of the technology analysis.
- ◆ *Treatment Report* – Analysis yielding MMSD treatment facilities to achieve the recommended 5 year design LOP under year 2020 conditions
- ◆ *Conveyance Report* – Analysis yielding MMSD conveyance facilities to achieve the recommended 5 year design LOP under year 2020 conditions.
- ◆ *Facilities Plan Report* - Presents and summarizes the 2020 planning process, and presents overall recommendations.

4. Water Quality Analysis Summary

The SEWRPC RWQMPU led to the following key findings in regards to water quality:

1. The region's surface waters generally are achieving water quality standards for most pollutants.
2. Nonpoint pollution (stormwater runoff) is the largest source of fecal coliform bacteria, which is the pollutant of primary concern.
3. Reducing (or even eliminating) combined sewer overflows and sanitary sewer overflows will result in little or no water quality improvement.
4. The Milwaukee area can achieve significant improvements to water quality only through regional implementation of extensive measures to reduce pollution from nonpoint sources as recommended in the SEWRPC Plan.

5. 2020 Facilities Plan Recommendations

Key 2020 FP recommendations are for a 5 year level of protection (LOP – which means a projection of one event each five years on the average or a 20% chance of an SSO in a year) for sanitary sewer overflows (SSOs) and

adequate treatment under the projected 2020 population and land use conditions. The 2020 FP recommended investments are in addition to the investment required under the 2002 Stipulation between the MMSD and the WDNR.

Wet Weather Control Plan – The plan recommends the following facilities may be needed to achieve the 5 year LOP in the year 2020 (depending upon growth):

- ◆ Additional 150 million gallons per day (MGD) physical-chemical secondary treatment capacity at the South Shore Wastewater Treatment Plant after verification project (\$97-152 M).
- ◆ Increase pumping capacity from the Inline Pump Station to the Jones Island Wastewater Treatment Plant to meet a total firm pumping capacity of 180 MGD (\$108 M).
- ◆ Add 9 Metropolitan Interceptor Sewer projects to address hydraulic constraints (\$0-55 M).
- ◆ Construct one MIS in the Franklin, Muskego, New Berlin area, to allow for new development following advanced facility planning. (\$15 M)
- ◆ Regardless of growth, the MMSD should continue development and implementation of a comprehensive sustainable program to manage infiltration and inflow (I/I) in the municipally owned sewer systems-served by the MMSD (\$25-37 M).
- ◆ The plan indicates that the District is able to continue to achieve regulatory requirements for combined sewer overflows (no more than 6 CSOs/year) without additional facilities through the year 2020.

Interim Biosolids Management Plan- The 2020 FP interim recommendation is to continue the production of Milorganite®, while continuing to evaluate the possibility of combining Milorganite® with other technologies, considering cost and environmental impact. Rehabilitation of the existing facility is required (\$251 M).

Other Recommendations and Supportive Programs – The plan outlines recommendations that address a variety of wastewater treatment plant and conveyance system issues.

Implementation Recommendation: As many of the key recommendations are growth driven, the plan recommends that District proceed slowly, and utilize a plan-do-check-act implementation process – which has been named the “adaptive” implementation plan. Secondly, the plan recommends using regional partnerships in order to advance and achieve the regional water quality goals and objectives.

6. Financial Impacts

A summary of the estimated costs is presented in the tables below. The Adaptive Implementation Plan (AIP) represents estimated costs through 2020 based upon slower growth in population and land use than assumed in the 2020 FP. This adaptive plan is reasonable because it is based upon proceeding slowly on costly new expenditures to prevent building facilities which may not be needed before 2020. The need for many of the recommended facilities in the 2020 Facilities Plan is dependent upon regulatory issues, gathering of additional data, preliminary engineering work, and population growth. All of these factors will influence the adaptive implementation schedule, and the schedule can and will be changed as needed.

The Full Implementation Plan represents estimated costs assuming all growth occurs by 2020 as assumed in the 2020 FP revised baseline population estimates. A full explanation of these cost estimates is presented in Chapter 11 of the *2020 Facilities Plan Report*.

The impacts of the costs shown in Tables 1 and 2 on the average household in the MMSD service area can be summarized as follows:

- The adaptive implementation plan will result in property tax rates which are identical to those rates projected by the MMSD for the 2007 to 2012 Financing Plan presented and approved by the MMSD Commission in October 2006. The adaptive plan accomplished this by delaying some projects which were in the 2007-2012 Financial Plan and by restructuring some of the current MMSD debt.

- The Full Implementation Plan will result in property tax rates which are approximately 20% higher than those rates projected by the MMSD for the 2007 to 2012 Financing Plan presented and approved by the MMSD Commission in October 2006. These increases are not expected to initiate until 2009. The Full Implementation Plan includes all 2020 Facilities and does not delay any projects which were in the 2007-2012 Financial Plan. The Full Implementation Plan also restructures some of the current MMSD debt.
- The incremental User Charge (operation and maintenance) cost impact on the average household is about \$2.00 per year (starting in 2014) for the adaptive plan and about \$5.00 per year (with \$2.00 in 2014 and the remaining \$3.00 in 2020) for the Full Implementation Plan.

Component	Adaptive Implementation Plan³	Full Implementation Plan⁴
Wet Weather Control Plan	123	359
Interim Biosolids Plan	154	251
Other Recommendations	39	39
Totals	316	649

1) These costs are MMSD only and do not include costs for communities to control I/I.

2) These costs are estimated in 2007 \$ and are +50/-30% estimates.

3) As presented to MMSD Commission on 4/16/07.

4) As presented in the *Facilities Plan Report* Chapter 10 – Table 10-1 and in the *Executive Summary* – Table ES-1. Note that the tables in the FP and Executive Summary also included a separate category for Preliminary Engineering at a total cost of \$2.8 million. In Table 1, all of the Preliminary Engineering is included in the three categories presented.

Assumption¹	Adaptive Implementation Plan				Full Implementation Plan			
	Property Tax³			User Charges⁵	Property Tax⁴			User Charges⁵
	2008	Annual Increase	Peak Year 2020		2008	Annual Increase	Peak Year 2020	
\$150,000 Value Home ²	\$201	4.7%	\$349	\$85	\$201	8%	\$434	\$88
\$300,000 Value Home ²	\$402	4.7%	\$698	\$85	\$402	8%	\$869	\$88

1) The charges estimated above apply to a home in a member community.

2) Home value assumed to increase at the rate of 4.8% each year.

3) District equalized value growth rate assumed to be 4.8% per year in the adaptive implementation plan. 17% of these costs (as shown in Table 1 for \$316 million) are for the 2020 Facilities Plan. Other costs are for ongoing capital needs.

4) District equalized value growth rate assumed to be 5.67% per year in the full implementation plan. 28% of these costs (as shown in Table 1 for \$649 million) are for the 2020 Facilities Plan. Other costs are for ongoing capital needs.

5) User charges for recovery of O&M costs averages about \$83 per household in 2007, thus the increase expected for the Adaptive Implementation Plan is about \$2 per year and for the Full Implementation Plan is about \$5 per year. The estimated cost increases for User Charges do not include the expected increases due to the expiration of the existing operating contract in 2008.