

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED
FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Form 1600-8

Rev. 7-2006

Department of Natural Resources (DNR)

Region or Bureau
Bureau of Watershed Management

Type List Designation
150.03 (8)(i).5.c

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., Insert Date.

Contact Person:

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Applicant: **Milwaukee Metropolitan Sewerage District**

Title of Proposal: **MMSD 2020 Facilities Plan**

Location:

The Milwaukee Metropolitan Sewerage District (MMSD) is a regional governmental agency providing wastewater treatment and flood management services for 28 municipalities, serving 1.1 million people in a 411 square mile service area. MMSD serves all of Milwaukee County (with the exception of South Milwaukee) and portions of Ozaukee, Racine, Washington and Waukesha Counties.

PROJECT SUMMARY

1. Brief overview of the proposal including the DNR action

The purpose of the 2020 Facilities Plan (FP) is to identify which Facilities, Policies, Operational Improvements and Programs (FPOPs) are required to ensure adequate capacity to convey, store and treat wastewater generated within the MMSD sewer service area through the year 2020. The recommended alternative is intended to provide for future growth, protect regional water quality and maintain compliance with state and federal regulations. It should be noted that the recommended plan assumes committed capital projects (such as the N.27th Street Extension to the Inline Storage (deep tunnel) System) and ongoing MMSD programs.

The major project elements of the recommended plan are:

Wet Weather Control Plan

- ◆ Adding 150 million gallons per day (MGD) physical-chemical secondary treatment capacity at the South Shore Wastewater Treatment Plant (\$97-152 M).
- ◆ Increasing 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 million).

- ◆ Adding 9 Metropolitan Interceptor Sewer (MIS) projects to address hydraulic constraints (\$0-55 million).
- ◆ Constructing a new MIS in the Franklin, Muskego, New Berlin area, to allow for new development following advanced facility planning. (\$15 million)
- ◆ Continuing to develop and implement comprehensive sustainable program to manage infiltration and inflow (I/I) in the municipally-owned sewer systems served by the MMSD (\$25-37 million).

Interim Biosolids Management Plan

The 2020 FP interim recommendation is to continue the production of Milorganite®, while evaluating 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. The plan also incorporates recommendation that relate to MMSDs responsibilities for flood management. The watercourse plan recommendations include channel rehabilitation and flood mitigation projects that will provide water quality benefits, improve aquatic habitat and indirectly benefit the wastewater facilities by reducing flood related infiltration and inflow in the sanitary sewers.

The department action that is the subject of this environmental assessment is however limited to the wastewater related improvements.

The MMSD and the Southeastern Wisconsin Regional Planning Commission (SEWRPC) undertook a joint planning effort in 2002 that is titled the Water Quality Initiative (WQI). The WQI is a coordinated and collaborative water quality planning effort that resulted in two plans: a Regional Water Quality Management Plan Update (RWQMUP) as produced by SEWRPC, and a year 2020 Facilities Plan, as produced by MMSD. The RWQMUP 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 used the EPA-endorsed watershed approach to develop these two plans. The watershed approach embraces several principles: watershed based planning, decisions based on sound science, and partnerships and public involvement in problem-solving.

2. List the documents, plans, studies or memos on which this DNR review is based

The entire MMSD 2020 Facilities Plan and a detailed environment assessment were the main documents on which the department's review is based. Various department personnel attended numerous meetings with SEWRPC and MMSD during the development of the 2020 Facilities Plan and the RWQMUP.

The MMSD 2020 Facilities Plan and environmental assessment can be viewed on the internet. The web address is:

<http://www.mmsd.com/wqi/index.cfm>

DNR EVALUATION OF PROJECT SIGNIFICANCE

3. Environmental Effects and Their Significance
 - a. Discuss which of the primary and secondary environmental effects listed in the supporting documents are long-term or short-term.

Water Quality Impacts

The recommended plan will improve the operations of the MMSD facilities and reduce the risk of sanitary sewer overflows. The recommended plan will therefore generally have a beneficial effect on surface water quality however

significant improvements to water quality will require extensive regional measures to reduce pollution from non-point sources. Over the MMSD planning area, the Recommended Plan will not result in any measurable improvement in water quality when evaluated in terms of number of days per year that the instream fecal coliform water quality standards are met. An extensive analysis of water quality impacts is presented in the 2020 Facilities Plan. The plan is not expected to significantly impact groundwater.

Primary Construction Impacts

Construction of capital improvements will consume fuel and materials of construction. Short-term traffic disruptions and construction related dust, noise and erosion. These impacts can be mitigated by limiting construction hours, use of mufflers, and dust suppression. Best management practices for erosion control will be required.

Secondary Effects

The plan will provide for sewer service for anticipated residential, commercial or industrial development service area. Effects associated with growth include increased traffic, noise, air pollution, waste generation and stormwater runoff. Existing land in agricultural production will be lost and the rural character of the area will be converted more to an urban character. This will also result in some loss of wildlife habitat. The development enabled by the sewer Service area SSA expansion is expected to enhance the local economy and provide jobs.

Estimated Cost and 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. 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 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 be initiated 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.

SUMMARY OF KEY 2020 FP RECOMMENDATIONS		
CAPITAL COSTS, \$ MILLIONS ^{1,2} FOR 2020 FACILITIES PLAN ELEMENTS ONLY		
Component	Adaptive Implementation Plan ³	Full Implementation Plan ⁴
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 dollars 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 this table the cost of Preliminary Engineering is included in the three categories

ESTIMATED YEARLY FINANCIAL IMPACT ON TYPICAL CUSTOMER ¹								
Assumption ¹	Adaptive Implementation Plan				Full Implementation Plan			
	Property Tax ³			User Charges ⁵	Property Tax ³			User Charges ⁵
	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.

- b. Discuss which of the primary and secondary environmental effects listed in the supporting documents are effects on geographically scarce resources (e.g. historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered resources, or ecologically sensitive areas).

The plan will not result in any known adverse effects on historic or cultural resources, recreational resources, threatened or endangered resources or ecologically sensitive areas. The major capital improvements recommended by the 2020 Facilities Plan will be evaluated further during the design phase.

- c. Discuss the extent to which the primary and secondary environmental effects listed in the supporting documents are reversible.

The primary and secondary environmental effects are generally considered irreversible.

4. Significance of Cumulative Effects

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

The cumulative effects of providing sewer and other urban services to commercial, residential or industrial development include increased traffic, noise, air pollution and potentially stormwater runoff. Existing land in agricultural production will be lost and the rural character of the area will be converted more to an urban character. It is important to note that much of the service area has already been converted to urban uses and that some of the projected growth is redevelopment within urbanized areas. The development enabled by the SSA expansion is expected to enhance the local economy and provide jobs.

The Regional Water Quality Management Plan is intended to promote efficient, orderly and planned land use development patterns which allow for logical, cost-effective sewer development that incorporates sound environmental management practices.

5. Significance of Risk

- a. Explain the significance of any unknowns that create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?

One of the major issues evaluated in the 2020 Facilities Plan and Regional Water Quality Management Plan Update was the water quality effects of wet-weather overflows from the separated and combined sewer system tributary to the MMSD conveyance, storage and treatment facilities. Comprehensive water quality modeling was employed to analyze the water quality impacts of alternatives. The 2020 Facilities Plan recommendations are based in part on providing a specified Level of Protection (LOP) from sanitary sewer overflows. Level of Protection is essentially a risk-based design criteria expressed as the probability of occurrence of an overflow in a given period. A 5-year LOP means that, on a long-term average basis, a sanitary sewer overflow would be expected to occur once in 5 years (or a 20 % chance of an event in any given year).

The 2020 Facilities Plan determined that for overall system design a 5-year LOP was acceptable. Water quality modeling demonstrates that complete elimination of sanitary sewer overflows would result in little improvement in water quality on an annual basis. The cost of further reducing the risk of overflows from a 5-year recurrence to a 10-year recurrence is estimated to be \$638 million.

- b. Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

The department approval of the recommended alternative presented in the 2020 Facilities Plan does not authorize the discharge of untreated wastewater from the MMSD sewerage system. Any unscheduled bypass or overflow of wastewater at the treatment works or from the collection system is prohibited, and the Department may take enforcement action for such occurrences under s. 283.89, Wis. Stats.

6. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

Although an innovative watershed approach to planning was employed in the development of the 2020 Facilities Plan approval of the recommended alternative is not a precedent setting action. Implementation of the recommended plan, though based in part on maintaining a 5-year LOP, does not preclude further reductions in the risk of sanitary sewer overflows.

7. Significance of Controversy over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

The primary controversy associated with the Recommended Plan concerns the recommended 5-year Level of Protection (LOP) with respect to sanitary sewer overflows (SSO). Some persons that have commented on the plan would prefer that MMSD assume that it has reached a point of diminishing returns in terms of achieving water quality improvements through additional expenditures on SSO and CSO control. They believe that MMSD should focus on coordinated water quality improvements in lieu of additional capital expenditures to control SSOs. Other commenters assert that a 5-year LOP for SSOs not sufficient and that SSOs need to be eliminated. Using this approach, MMSD would focus on capital expenditures to eliminate SSOs beyond the 5-year LOP, regardless of the minimal expected water quality improvements.

ALTERNATIVES

8. Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

The 2020 Facilities Plan initially developed a number of “screening alternatives” to investigate the concepts that would virtually eliminate sanitary sewer overflows or both sanitary and combined sewer overflows. The screening alternatives evaluated the use of combined sewer separation and increased capacity in the MMSD treatment plants, Inline Storage System (deep tunnels) and the Inline Storage System pumping station to eliminate overflows.

The screening level cost estimates for alternatives to eliminate sanitary sewer overflows only ranged from \$1.2 to \$1.4 billion. The estimated costs to eliminate both sanitary and combined sewer overflows ranged from \$4.2 to 5 billion. The 2020 Facilities Plan performed a more detailed analysis on alternatives for achieving a 5-year and 10-year Level of Protection for sanitary sewer overflows. The recommended alternative achieves a 5-year level of protection. The estimated additional cost to achieve a 10-year LOP is \$638 million.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

9. List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed.

The 2020 FP and SEWRPC conducted an extensive public participation process. The process included public meetings involving citizens, elected officials, and technical experts. Department personnel had numerous meetings with MMSD and SEWRPC during the development of the plan. MMSD held public hearings on the plan on April 25 and April 26, 2007. See the 2020 Facilities Plan for documentation of the public participation process and response to public comments.

DECISION (This decision is not final until certified by the appropriate authority)

In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s.1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. EIS Process Not Required

The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department.

B. Major Action Requiring the Full EIS Process

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator	Date Signed
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Number of responses to news release or other notice: *one*

Certified to be in compliance with WEPA	
Environmental Analysis and Liaison Program Staff	Date Signed
<i>MICHAEL C. [Signature]</i>	<i>18DEC07</i>

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, ss. 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.



NEWS RELEASE

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FOR RELEASE: ~~Insert Release Date~~ 27 NOV 07 MCT

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SUBJECT: Milwaukee Metropolitan Sewerage District 2020 Facilities Plan
Environmental Assessment available for public review and comment

Milwaukee, Wis. -- The Milwaukee Metropolitan Sewerage District (MMSD) has requested approval from the Department of Natural Resources of a plan for improvements to its facilities. The MMSD 2020 Facilities Plan identifies wastewater conveyance and treatment systems, programs, operations, and policies required by the year 2020 to protect public health, property, and the environment.

The major elements of the plan include:

Wet Weather Control Plan: adding physical-chemical secondary treatment capacity at the South Shore Wastewater Treatment Plant; increasing pumping capacity from the Inline Pump Station to the Jones Island Wastewater Treatment Plant; constructing nine Metropolitan Interceptor Sewer (MIS) projects; constructing a new MIS in the Franklin, Muskego, New Berlin area; developing of a program to manage infiltration and inflow;

Biosolids Management Plan: continuing production of Milorganite® and evaluation of other biosolids treatment technologies.

Other Supportive Programs: Watercourse Flood Management Plan, Best Management Practices demonstration projects, and policy implementation.

The entire MMSD 2020 Facilities Plan can be viewed on the internet at the following MMSD web site: <http://www.mmsd.com/wqi/index.cfm>

The estimated total cost to implement all recommendations of the plan within the planning period is \$649 million. By the year 2020 this will add an estimated \$171 to the property tax on a \$300,000 home. User charges for an average household will also increase

Dear Mr. Scheuble,

Thank you for your message commenting on the MMSD 2020 Facilities Plan. As I understand your comment you object to the expansion of the MMSD sewer service to areas that are outside the Great Lakes watershed.

The MMSD sewer service area has been established in the Areawide Water Quality Management Plan prepared by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) in accordance with Chapter NR 121, Wisconsin Administrative Code. Sewer Service Areas can be amended however wastewater facilities plans are required to conform to the Areawide Plan.

The transport of water across watershed boundaries is a topic of much public debate and regulation under state and federal law. The issue is being discussed in the as it relates to the Great Lakes Compact but also with respect to protecting drinking water supplies and mitigating localized environmental effects. The Great Lakes compact is intended to prevent the transport of water out of the Great Lakes watershed and does not restrict diversions into Lake Michigan. It is likely that, over time, policies will further evolve to address this issue in a more comprehensive fashion. The Department is however constrained to act on the current plan within the context of our current regulations.

It is important to note that although some portions of the MMSD sewer service area extend beyond the boundaries of the Lake Michigan watershed the vast majority of the service area is within the Lake Michigan drainage basin. Therefore, for the most part, the recommended improvements in the 2020 Facilities Plan would remain unchanged whether or not sewer service was extended to undeveloped areas outside of the Lake Michigan watershed. The MMSD has also proposed an "Adaptive Implementation" plan that will defer construction until growth and development patterns demonstrate the need for the facilities. Approval of the plan will not therefore preclude future consideration of the issues that you raise as development occurs and public policies evolve.

Thanks again for taking the time to provide your comments.

Gerry Novotny

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