

Chapter 6: Regulations and Permits

6.1 Introduction

This chapter summarizes the regulations and permits as they apply to the Milwaukee Metropolitan Sewerage District's (MMSD) 2020 Facilities Plan (2020 FP). Some of these regulate or permit MMSD actions; these primarily involve legal requirements for the water, air or solid waste effects resulting from MMSD activities or construction. Additionally, this chapter discusses a number of regulations and governmental policies that influence water quality within the MMSD planning area but are not directly applied to MMSD activities.

6.2 Regulations and Permits Directly Applicable to Milwaukee Metropolitan Sewerage District

The MMSD operates under a number of permits issued by the Wisconsin Department of Natural Resources (WDNR). These include a Wisconsin Pollutant Discharge Elimination System (WPDES) permit and two Air Pollution Control Operation Permits, all issued by the WDNR to MMSD. These permits are identified as follows:

- ◆ WPDES Permit # WI-0036820-02-0
- ◆ Air Pollution Control Operation Permit –Jones Island Wastewater Treatment Plant #241029250-P01
- ◆ Air Pollution Control Operation Permit –South Shore Wastewater Treatment Plant #241228350-P01

The WPDES permit, which incorporates requirements from the federal National Pollutant Discharge Elimination System (NPDES), regulates sanitary sewer, combined sewer and treatment plant discharges, the disposal of biosolids, and industrial pretreatment. The current WPDES permit was issued on April 1, 2003 and expires on March 31, 2008. The U.S. Environmental Protection Agency (USEPA) has delegated the authority to administer the NPDES permitting within Wisconsin to the WDNR. The Air Pollution Control Operation Permits regulate air emissions sources at each of the treatment plants. The Jones Island Wastewater Treatment Plant (JIWWTP) Air Pollution Control Operation Permit was issued on November 22, 2004 and expires November 22, 2009. The Air Pollution Control Operation Permit for South Shore Wastewater Treatment Plant (SSWWTP) was issued on August 31, 2004 and expires August 31, 2009. In addition, MMSD has voluntarily developed stormwater plans to address runoff generated from its facilities. Finally, construction or maintenance activities in the vicinity of watercourses may trigger requirements to obtain federal or state permits. The requirements of these regulations and permits as they pertain to MMSD planning and operations are described below.

6.2.1 Conveyance System

Both federal and state regulations pertain to the operation of the MMSD wastewater conveyance system. This section summarizes the specific requirements for the operation of the sanitary



sewer, combined sewer, and inline storage systems. More information regarding conveyance system regulations and permits is found in Chapter 6, *Regulations and Permits* of the *Conveyance Report*.

Sanitary Sewer System

A detailed discussion on the requirements of MMSD with regard to its sanitary sewer system can be found in Chapter 6, *Regulations and Permits* of the *Conveyance Report*.

Combined Sewer System

Two municipalities within MMSD's sewer service area, Milwaukee and Shorewood, own and operate a combined sewer system as part of their local, municipal conveyance system. Combined sewer flows are conveyed to MMSD's interceptor sewer system and wastewater treatment system. The combined sewer area constitutes about 23.5 square miles or about 5 percent of the total sewered area served by MMSD.

The MMSD does, however own the combined sewer outfall sewers that the municipal combined sewer area is tributary to. Combined sewer overflows (CSOs) are point sources subject to NPDES permit requirements including the technology-based and water quality-based requirements of the federal Clean Water Act (CWA). The Wet Weather Water Quality Act of 2000 (WWWQA) amended Section 402 of the CWA (33 U.S.C. sec. 1342) to require that all federal discharge permittees conform to the USEPA's 1994 CSO Control Policy.(1,2) The requirements of permittees under this policy are to:

- ◆ Implement nine minimum controls (NMC)
- ◆ Develop a long-term CSO control plan (LTCP)
- ◆ Implement the LTCP
- ◆ Implement a post-construction compliance monitoring program

The nine minimum controls are measures that can reduce CSOs and their water quality impacts without significant engineering studies or major construction.(3) These include:

- ◆ Proper operation and regular maintenance programs for the sewer system and the CSOs
- ◆ Maximum use of the collection system for storage
- ◆ Review and modification of pretreatment requirements to assure that CSO impacts are minimized
- ◆ Maximization of flow to the publicly owned treatment works (POTW) for treatment
- ◆ Prohibition of CSOs during dry weather
- ◆ Control of solid and floatable materials in CSOs
- ◆ Establishment of pollution prevention programs
- ◆ Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts



- ◆ Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls

The MMSD has implemented these nine minimum controls, which are documented in a report entitled *Documentation of Implementation of the Nine Minimum Combined Sewer Overflow Controls*.(4)

Another major component of the CSO Control Policy is the development of an LTCP for controlling CSOs. Completion of an LTCP is also a requirement of MMSD's permit and the stipulation agreement reached during 2002 in the case of the *State of Wisconsin v. the Milwaukee Metropolitan Sewerage District* (Case no. 02-CV-2701). The WDNR 2002 Stipulation requires that the 2020 Facilities Plan include recommendations for further combined sewer overflow control as may be required by Wisconsin or federal law. In conformance with the WDNR 2002 Stipulation and permit requirements, an LTCP was completed by MMSD and is included as Appendix 10A, *Combined Sewer Overflows Long-Term Control Plan* of this report.

According to the CSO Control Policy, the LTCP should include the following elements:

- ◆ Characterization, monitoring, and modeling of the combined sewer system.
- ◆ Public participation.
- ◆ Consideration of sensitive areas.
- ◆ Evaluation of alternatives to meet the requirements of the CWA using either the "presumption approach" or the "demonstration approach." The presumption approach is based on the LTCP meeting one of the minimum performance criteria specified in the CSO Control Policy. One criterion allows up to four CSOs to occur annually. The permitting agency, which in this case is the WDNR, also has the discretion to allow an additional two CSOs to occur each year. The demonstration approach is more complex and requires that the LTCP demonstrate that it is adequate to meet water quality standards along with other criteria. Under this latter approach, the performance of water quality modeling is necessary to evaluate the impacts of CSOs on water quality.
- ◆ Cost/performance considerations.
- ◆ Operational plan.
- ◆ Maximizing treatment at the existing POTW plant.
- ◆ Implementation schedule.
- ◆ Post-construction compliance monitoring program.

As discussed in the LTCP, MMSD has already met the presumption goals of the CSO Control Policy. This is based on the performance of the inline storage system (ISS), which has limited the occurrence of CSOs to less than six per year.

Necessary elements of the LTCP are included as part of the 2020 facilities planning process and are presented in Appendix 10A, *Combined Sewer Overflows Long-Term Control Plan* of this report.



Limitations on CSO discharges are specified in the MMSD WPDES permit. These include the following:

- ◆ The prohibition of discharges from CSO outfalls during dry weather.
- ◆ Restricting the discharge of any pollutant to levels that will not cause Wisconsin's water quality standards to be exceeded.
- ◆ Providing records verifying that no discharges are occurring from outfalls when the gates to the ISS are open, unless the capacity of the corresponding near surface collector has been exceeded. This includes estimating the duration and the volume of each CSO event.
- ◆ Prohibiting wet weather discharges except to prevent wet weather flows from exceeding the capacity of the ISS.

Notification and reporting requirements for CSO discharges are similar to those described above for SSO events and are enumerated in Section 9.2.6 of the WPDES permit. Discussion of these notification requirements can be found in the *Combined Sewer Overflows Summary of Historic Planning and Implementation Long-Term Control*.(5)

Inline Storage System

The WPDES permit requires that the ISS be operated and maintained to meet either of these two performance standards with regard to CSOs:

- ◆ No more than six CSO discharge events per year; OR
- ◆ The capture and delivery of no less than 85% by volume of the combined sewage collected in the combined sewer system resulting from precipitation events on a system-wide annual average basis to either JIWWTP or SSWWTP. This requirement is listed in Section 3.2.5 of the WPDES permit.

In addition, in order to minimize the ISS impacts to the groundwater, the WPDES permit requires the ISS to be operated in a manner that ensures it will not be filled above the crown of the ISS main tunnel and that a net positive head is maintained from the groundwater to the ISS, which may be demonstrated by maintaining a net positive head in adjacent wells or piezometers. A well or piezometer is considered to have a net positive head if the hydraulic head in the well or piezometer is greater than the hydraulic head of the ISS. The permit requires notification to the WDNR if the system is filled above the crown of the ISS main tunnel at its upstream terminus. Section 6 of the WPDES permit also contains detailed groundwater monitoring and data reporting requirements.

6.2.2 Treatment Plants

The two MMSD wastewater treatment plants, JIWWTP and SSWWTP, operate under separate air pollution control operation permits and one comprehensive wastewater permit (WPDES Permit #WI-0036820-02-0).



WPDES Treatment Plant Permit Requirements

The MMSD WPDES permit specifies the conditions and requirements that MMSD wastewater discharges and other processes must meet. A copy of the MMSD WPDES permit is in Appendix 6A of the *Treatment Report*. Standard requirements of that permit as they relate to the wastewater treatment plants include:

- ◆ Reporting and Monitoring Requirements
- ◆ System Operating Requirements
- ◆ Effluent Discharge Limitations
- ◆ Industrial Pretreatment Program Requirements
- ◆ Land Application Requirements (Biosolids)

Flows into each plant must be monitored on a continuous basis and 24-hour composite samples must be taken to evaluate the concentration of a number of water quality parameters on a daily or a monthly basis per the requirements listed in Sections 1.1 and 1.2 of the WPDES permit. For more detail on the specific permit requirements, refer to Chapter 6, *Wastewater Treatment Plant Permits* of the *Treatment Report*.

Land Application Requirements (Biosolids)

Section 7 of the MMSD WPDES permit sets out monitoring and sludge quality limits for biosolids disposal. Section 9.6 of the permit sets forth the general requirements for land application of biosolids. Three grades of biosolids are approved for application on WDNR approved sites (WPDES permit Section 7.1):

- ◆ Agri-Life®, anaerobically digested liquid sludge, which is land applied onto agricultural sites
- ◆ Anaerobically digested cake sludge
- ◆ Milorganite®, heat dried sludge, packaged for public marketing and distribution or bulk applied to land

Table 6-8 in Chapter 6, *Wastewater Treatment Plant Permits* of the *Treatment Report* presents monitoring requirements and limitations in more detail.

Industrial Pretreatment

According to the CWA and state law, any public sewage treatment facility that has both (1) a design capacity of 5 million gallons per day (MGD) or more, and (2) receives wastewater from industrial users must have a pretreatment program.(6,7,8) Both MMSD treatment plants meet these requirements and the WDNR administers the pretreatment requirements through the WPDES permit issued to MMSD. The WDNR initially approved the MMSD pretreatment program in December 1983.



The MMSD Industrial Waste Pretreatment Program (IWPP) enforces a combination of federal standards and local limits on significant industrial users. Generally, a facility is a significant industrial user if it meets one or more of the following criteria:

- ◆ A facility is in an industrial category covered by federal standards
- ◆ The facility discharges more than 25,000 gallons per day of process wastewater, unless MMSD makes a finding of no potential to adversely affect the sewerage system
- ◆ The facility has a reasonable potential to violate the local limit for a pollutant regulated under MMSD's IWPP or a categorical limit (as defined in 40 CFR Part 403)

At the end of 2005, the IWPP monitored 139 significant industrial users. Permits implement a combination of environmentally-based local limits and federal technology-based limits. The MMSD's local requirements are in Chapter 11, MMSD Rules. Table 6-1 displays the historical reduction in six metals in both influent streams and in biosolids; these reductions are thought to be largely attributable to the IWPP.(9)

Source	Pollutant	Annual Average Concentrations (ug/L)		Percent Reduction (since 1975)
		1975	2005	
Jones Island Influent	Cadmium	49	2.9	94%
	Chromium	3160	91	97%
	Copper	190	67	65%
	Lead	360	15	96%
	Nickel	160	13	92%
	Zinc	750	245	67%
South Shore Influent	Cadmium	31	3	90%
	Chromium	3550	17	99.5%
	Copper	630	95	85%
	Lead	280	8	97%
	Nickel	580	11	98%
	Zinc	1900	177	91%
Agri-Life® Biosolids	Cadmium	55	4.6	92%
	Chromium	11800	286	98%
	Copper	1300	415	68%
	Lead	830	88	89%
	Nickel	1300	42	97%
	Zinc	3680	959	74%
Milorganite® Biosolids	Cadmium	94	4	96%
	Chromium	7250	218	97%
	Copper	250	238	5%
	Lead	690	46	93%
	Nickel	110	28	75%
	Zinc	1270	505	60%

Source: MMSD, *Reduction Effectiveness Analysis* (2005), compiled from Monthly Discharge Reports transmitted to WDNR

Both MMSD and the operators of the regulated facilities conduct sampling to verify compliance with the pretreatment requirements. The MMSD inspects each significant industrial user facility at least once per year to review the operations generating wastewater. If violations are found, enforcement action can range from warning letters to litigation seeking penalties up to \$10,000 per day per violation. This approach has been very successful, reducing some pollutants by 90% or more in many cases, as shown in Table 6-1, with an overall significant pollutant load reduction. The IWPP also ensures that industrial facilities pay user charges in proportion to their load on the sewerage system.

Mercury and Other Pollutants

The MMSD has worked to reduce mercury since 1997. Mercury reduction has been accomplished through mercury collection programs, a thermostat recycling initiative, mercury in schools clean sweeps, a work shop for health care providers, and requiring dental offices to implement best management practices and separators for amalgam. This program is a requirement in the WPDES permit.(10).

In addition, the MMSD Household Hazardous Waste Program has served to reduce other incompatible pollutants to the wastewater treatment plants. More information regarding these programs can be found in Chapter 6, *Existing Policies and Programs of the State of the Art Report*.

Air Emissions

The WDNR has issued an Air Pollution Control Operation Permit, also known as a “Title V permit” for each MMSD treatment plants. Both plants are classified as Part 70 Sources, which defines them as major sources of air pollution emissions. The MMSD is required to submit to the WDNR an Air Emission Inventory Summary Report for each treatment plant every year. More information regarding permit requirements can be found in Chapter 6, *Wastewater Treatment Plant Permits* of the *Treatment Report*.

6.2.3 Facilities Stormwater Permits

Amendments to the CWA in 1987 established a program for permitting stormwater discharges. The State of Wisconsin obtained certification from the USEPA, which enabled the state to administer the stormwater discharge permitting program as an extension of the existing WPDES permit program. The administrative rules for the state stormwater discharge permit program are set forth in Wisconsin Administrative Code NR 216, the most current version of which became effective on August 1, 2004.

Wis. Admin Code NR 216 establishes criteria defining those stormwater discharges that require WPDES stormwater permits and establishes performance standards for industrial facilities, construction sites, and municipal stormwater systems. The current NR 216 rules have an exclusion under the federal Intermodal Surface Transportation Efficiency Act that postponed WPDES permit application deadlines for some facilities that are owned or operated by municipalities. The MMSD has voluntarily prepared stormwater pollution prevention plans (SWPPPs) for six of its facilities: JIWWTP and SSWWTP; the North, West, and South Service



Facilities; and MMSD Headquarters. The primary purpose of these SWPPPs is to identify potential sources of stormwater and non-stormwater contamination and to identify appropriate best management practices to reduce or eliminate the potential for stormwater contamination. Each SWPPP was designed to comply with the requirements for Tier 2 industrial facilities as set forth in Wis. Admin. Code NR 216.

6.2.4 Permits For In-Stream Work

Under Wis. Stat. Chapter 30, Navigable Waters, Harbors and Navigation, the WDNR has the authority to regulate the deposition of materials upon the bed of any navigable body of water, the straightening or altering of the courses of a stream, the dredging of material from the bed of a lake or river, the enlargement of any navigable waterway, and diversions from any body of water.(11) Navigable waters include those wetland areas below the ordinary high water mark of an adjacent navigable lake or stream; navigability is determined on a case-by-case basis by WDNR staff. According to the U.S. Coast Guard and U.S. Army Corps of Engineers (COE), the Milwaukee River downstream of North Humboldt Boulevard, the Menomonee River downstream of Canal Street, and the Kinnickinnic River downstream of Lincoln Avenue are all considered to be part of Milwaukee Harbor, the entirety of which is considered to be “Navigable Waters of the U.S.”(12) Work within Milwaukee Harbor or Lake Michigan requires a permit from the U.S. COE under Section 10 of the federal Rivers and Harbors Act of 1899. Also, any construction that could involve the temporary discharge of fill material to navigable waters or wetlands may require a federal permit under Section 404 of the CWA, issued by the COE, and/or a water quality certification by the state of Wisconsin under Wis. Admin. Code NR 103, issued by the WDNR. The need for Wisconsin Chapter 30 permits or federal dredge and fill permits is assessed by MMSD on a project by project basis and necessary permits are obtained whenever required by the applicable law.

6.3 Other Regulations, Permits and Standards Relevant to the Planning Process

In addition to the regulatory issues described in the previous section, there are a number of regulatory items that are relevant to the development of the 2020 FP even though they are not directly applied to MMSD operations. These include regulations promulgated by MMSD itself that are applied to its users, municipal stormwater permits, receiving water quality standards, the WDNR nonpoint source program, groundwater management activities, and the COE dredging program. These regulations and programs are all relevant to developing a watershed-based approach to water quality improvement.

6.3.1 MMSD Rules

The MMSD regulates discharges to the sewerage system to allow proper function of its collection and treatment facilities. It also regulates the construction of additions to local systems and the reconstruction or repair of existing facilities. These regulations are set forth in the various chapters of the MMSD Rules.(13) The following sections summarize the chapters of the MMSD Rules most relevant to the 2020 FP.



Chapter 3: Infiltration and Inflow Control

Chapter 3 serves to limit infiltration and inflow to the sewer system in order to:

- ◆ Conserve sewerage system capacity
- ◆ Reduce the exposure of the public to pathogens carried by wastewater
- ◆ Minimize the probability, duration and magnitude of overflows

It prohibits the discharge of inflows such as foundation drainage, non-contact cooling water, and stormwater drainage to sanitary sewers. It establishes requirements for Sewer System Evaluation Surveys in response to high maximum daily flows as well as infiltration and inflow (I/I) reduction plans in response to these surveys. Also, this chapter provides MMSD with enforcement authority and the authority to set limits on acceptable wet weather peak flow from user communities.

Chapter 11: Discharge Regulations and Enforcement Procedures

As noted in under the *Industrial Pretreatment* subsection of Section 6.2.2, Chapter 11 facilitates compliance with MMSD WPDES permits and proper operation of the conveyance and treatment systems by regulating commercial and industrial pollutant discharges to the sewerage system. It describes the types of substances that may not be discharged and sets local limits for ammonia, metals, cyanide, and hexane extractable materials. It also requires significant industrial users to obtain MMSD-issued permits for discharges. Subchapters IV and V provide reporting requirements for those commencing or changing a discharge, and subsequent progress and upset, spill, slug, emergency, and hazardous waste reporting requirements.

Chapter 13: Surface Water and Stormwater

Chapter 13 promulgates surface water and stormwater regulations in order to:

- ◆ Reduce unsafe conditions, property damage, economic losses, and health effects caused by flooding
- ◆ Maximize the effectiveness of flood abatement facilities and watercourse improvements
- ◆ Reduce the number and magnitude of releases of sewage to the environment from sanitary and combined sewers and to protect sewage collection and treatment facilities from high flows
- ◆ Promote comprehensive watershed planning and intergovernmental cooperation
- ◆ Restore and enhance opportunities to use and enjoy watercourses

This rule states that MMSD policy is to reduce the regional flood risk along specified watercourses and to include features or use techniques within flood abatement projects that restore stream habitat, improve water quality, protect wetlands, and enhance public access to and use of watercourses, to the maximum extent practicable.

The chapter also requires runoff management for developments within the ultimate sewer service area that increase impervious area by one-half acre or more, with certain exceptions. Runoff



management can be accomplished as part of a watershed stormwater management plan or by restricting flow from individual developments to 0.5 cubic feet per second per acre during the 1% annual probability event and 0.15 cubic feet per second per acre during the 50% annual probability event. Compliance requirements include the submission of site development stormwater management plans and annual reports from cities and villages to MMSD.

Other Relevant Chapters

Three other chapters restrict the discharge of undesirable materials into the sewerage system. Chapter 14 prohibits the discharge of unintended materials into the sewer or watercourse system, and also prevents the interference with the free flow of either water or sewage within the system. Chapter 12 prohibits the disposal of septic tank effluent into a sanitary or combined sewer, and Chapter 16 designates that such effluent can be discharged to the system only at specific locations and with an MMSD permit.

Several additional chapters provide the framework for how MMSD manages its conveyance systems. Chapter 2 establishes the requirements for the planning, design, and construction of local sewers and ancillary facilities. Chapter 4 presents the rules for sewer extensions and addition of new service area to MMSD and allows MMSD to set limits on sewer extensions. Chapter 6 allows MMSD to restrict flows from connection points. Chapter 7 assigns the authority for the approval or denial of proposed sewer plans, and Chapter 17 discusses the rationale for assigning user fees.

6.3.2 Municipal Separate Storm Sewer System (MS4) Stormwater Permits

As described in Section 6.2.3, the state of Wisconsin administers the stormwater discharge permitting program authorized under 1987 amendments to the CWA. The following entities are required to obtain discharge permits under NR 216:

- ◆ An MS4 serving an incorporated area with a population of 100,000 or more.
- ◆ The owners and operators of MS4 that were notified by WDNR prior to August 1, 2004 that their system was required to have a WPDES permit.
- ◆ An MS4 within an urbanized area as defined by the U.S. Bureau of the Census.
- ◆ An MS4 serving a population of 10,000 or more with a population density of 1,000 or more per square mile as determined by the U.S. Bureau of the Census.
- ◆ Industries defined in NR 216.21.
- ◆ Construction sites where one acre or more of land is disturbed, except those associated with agricultural land uses, those for commercial buildings regulated by the Wisconsin Department of Commerce under Wis. Admin. Code COMM 61, and Wisconsin Department of Transportation (WisDOT) projects that are subject to Wis. Admin. Code TRANS 401 and the WisDOT and WDNR liaison cooperative agreement.

Tables 6-2 through 6-6 list the WPDES permitted stormwater facilities within the MMSD planning area by watershed as of February 2003. A full listing of these permittees can be found in Appendix G of Southeastern Wisconsin Regional Planning Commission (SEWRPC) Technical



Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Note: MS4 permits for the Menomonee River were scheduled to be issued in 2006.

Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Municipal Stormwater Permit ^a	City of Cudahy ^b	Citywide	Cudahy	S049875-2	241206790	15778
	City of Milwaukee	Citywide	Milwaukee	S049018-3	241003730	6159
	City of St. Francis ^b	Citywide	St. Francis	S049883-1	241208990	15775
	City of West Allis ^b	Citywide	West Allis	S049913-1	341073810	29417
Stormwater Auto Parts Recycling	Ace Auto Salvage	2393 S. 43rd Street	Milwaukee	S059145	241484980	13233
	Auto Paradise Imports, Inc.	4905 W. Burnham Street	Milwaukee	S059145	241779010	2707
	Burnham Auto Salvage, Inc.	4901 W. Burnham Street	Milwaukee	S059145	241788580	596
	KK Auto Salvage, Inc.	2003 S. Kinnickinnic Avenue	Milwaukee	S059145	241783850	13738
	South Side Auto Salvage, Inc.	2108 W. Holt Avenue	Milwaukee	S059145	241540310	2704
Stormwater Construction Site	Cherokee Point	41st Street and Morgan Avenue	Milwaukee	S067831	--	14373
	Electric Avenue Business Development	Electric Avenue	West Milwaukee	S067831	--	18235
	General Mitchell International Airport Parking Structure Addition	Within airport grounds-north of existing parking structure	Milwaukee	S067831	--	18498
	Loomis Center	3545-3555 S. 27th St. and 2901 W. Morgan Avenue	Milwaukee	S067831	--	18970
	Southgate Shopping Center	3333 S. 27th Street	Milwaukee	S067831	--	15404
St. Lukes Medical Center	2900 W. Oklahoma Avenue	Milwaukee	S067831	--	16434	
Stormwater Industrial Tier 1	Aelco Foundries	1930 S. 4th Street	Milwaukee	S067849	241027820	762
	Becker & Keller, Inc.	4333 W. Lincoln Avenue	Milwaukee	S067849	241998790	3234
	John Novak	1960 S. 67th Place	West Allis	S067849	241299116	16514
	Maynard Steel Casting Company	2856 S. 27th Street	Milwaukee	S067849	241005710	8076
	McCann Barrel	5311 S. 9th Street	Milwaukee	S067857	241234840	12484
	Milport Enterprises, Inc.	2829 S. 5th Court	Milwaukee	S067849	241213830	8264
	Milwaukee Bulk Terminals Coal	401 W. Greenfield Avenue	Milwaukee	S067849	241335160	3361
	Milwaukee Ductile Iron, Incl	1706 S. 68th Street	West Allis	S067849	241006260	5580
	Milwaukee Malleable & Grey Iron Works	2776 S. 29th Street	Milwaukee	S067849	241031780	7958
	Reliable Plating Works, Inc.	5320 S. 13th Street	Milwaukee	S067849	241288520	12466
Stormwater Industrial Tier 2	Acme Galvanizing, Inc.	2730 S. 19th Street	Milwaukee	S067857	241036950	189
	Advance Boiler & Tank Company	1711 S. Carferry Drive	Milwaukee	S067857	241015830	493
	Associated Spring	434 W. Edgerton Avenue	Milwaukee	S067857	241054880	3702
	Badger Die Casting Corporation	201 W. Oklahoma Avenue	Milwaukee	S067857	241022100	6699
	Brown-Wilbert Vault Company	3900 S. 13th Street	Milwaukee	S067857	241314920	7967
	Cargill International- Salt Division	1835 S. Carferry Drive	Milwaukee	S067857	241949070	11678
	Castech, Inc.	6325 W. National Avenue	Milwaukee	S067857	241896380	14387
	Dynamic Color Solutions, Inc.	2024 S. Lenox Street	Milwaukee	S067857	241258820	655
	Edward E. Gillen	1801 S. Carferry Drive	Milwaukee	S067857	241949950	11720
	Federal Express	5375 S. Third Street	Milwaukee	S067857	241382790	9192
	Froedtert Malt	2100 S. 43rd Street	Milwaukee	S067857	241013960	2149
	Froedtert Malt	3030 W. Grant Street	Milwaukee	S067857	241011100	6127
	General Mills/Gardetto's	4624 S. 6th Street	Milwaukee	S067857	241956110	1726
	Grover Piston Ring, Inc.	2759 S. 28th Street	Milwaukee	S067857	241544710	1396



TABLE 6-2 SHEET 1 OF 2
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE KINNICKINNIC RIVER WATERSHED**

2020 FACILITIES PLAN

6/6/07

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Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number	
Stormwater Industrial Tier 2 (continued)	Joy Mark, Inc.	2121 E. Norse Avenue	Cudahy	S067857	241879550	11727	
	Kempsmith Machine Company	1819 S. 71th Street	West Allis	S067857	241334500	1454	
	Ladish Company, Inc.	5481 S. Packard Avenue	Cudahy	S067857	241006920	5595	
	Laidlaw Transit, Inc.	4524 S. 13th Street	Milwaukee	S067857	241635020	13263	
	Mayfield Truck & Trailer Leasing	1011A W. Layton Avenue	Milwaukee	S067857	241748870	9903	
	Milwaukee Bus, Inc.	2761 S. Chase Avenue	Milwaukee	S067857	S241424810	9197	
	Milwaukee Cylinder	5877 S. Pennsylvania Avenue	Cudahy	S067857	241191170	3705	
	Milwaukee General Construction Company, Inc.	4580 S. 13th Street	Milwaukee	S067857	241910570	14635	
	Milwaukee Steel Treating	4669 W. Electric Avenue	Milwaukee	S067857	241406990	15343	
	Milwaukee Valve Company	2375 S. Burrell Street	Milwaukee	S067857	241034090	8666	
	Minergy Products, LLC	1975 S. Carferry Drive	Milwaukee	S067857	341005280	16098	
	National Recycling, Inc.	4244 S. 13th Street	Milwaukee	S067857	241048500	2548	
	National Tank Service of Wisconsin, Inc.	1813 S. 73rd Street	West Allis	S067857	241214820	3333	
	Nordberg, Inc.- Milwaukee	3073 S. Chase Avenue	Milwaukee	S067857	241008570	2437	
	Patrick Cudahy, Inc.	4801 S. Kingan Avenue	Cudahy	S067857	241009670	5646	
	Piper Metal Fabrication Corporation	2025 E. Birchwood Avenue	Milwaukee	S067857	241254640	2252	
	Plating Engineering Company	1928 S. 62nd Street	West Allis	S067857	241040800	413	
	Pressed Steel Tank Company, Inc.	1445 S. 66th Street	West Allis	S067857	241037940	6847	
	Product Service & Manufacturing Corporation	4530 W. Burnham Street	West Milwaukee	S067857	241777800	930	
	Regent Die & Tool Company	730 W. Armour Avenue	Milwaukee	S067857	241195130	19908	
	Rexworks, Inc.	445 W. Oklahoma Avenue	Milwaukee	S067857	241009560	669	
	Rite-Hite Corporation	5935 S. Pennsylvania Avenue	Cudahy	S067857	241252660	651	
	Roadrunner Freight Systems, Inc.	4850 S. Pennsylvania Avenue	Cudahy	S067857	241359800	1929	
	Sherwin Industries, Inc.	2129 W. Morgan Avenue	Milwaukee	S067857	241031450	441	
	So Lite Neon Sign Company, Inc.	1100 S. 5th Street	Milwaukee	S067857	241814100	946	
	Southeastern Wisconsin Products Company- Milwaukee	500 W. Edgerton Avenue	Milwaukee	S067857	241052680	2035	
	Tandem Transport, Inc.	2607 S. 5th Street	Milwaukee	S067857	241355180	2290	
	Tax Air Freight	5975 S. Howell Avenue	Milwaukee	S067857	241366510	11968	
	Unit Drop Forge Company, Inc.	1903 S. 70th Street	West Allis	S067857	241011760	6138	
	West Allis Machine Company, Inc.	1900 S. 70th Street	West Allis	S067857	241814210	403	
	Wisconsin Air National Guard 128th Air Refueling Group	1919 E. Grange Avenue	Milwaukee	S067857	241862390	3412	
	Stormwater Industrial Tier 3	Brelie Gear Company, Inc.	2715 S. Gladstone Place	Milwaukee	S049158	241729510	1461
		Cemex	2006 S. Kinnickinnick Avenue	Milwaukee	S049158	241096680	1352
Central Cartage		200 W. Oklahoma Avenue	Milwaukee	S049158	241817730	1020	
Commercial Heat Treating, Inc.		1952 S. 1st Street	Milwaukee	S049158	241223620	366	
Elite Finishing		3270 S. 3rd Street	Milwaukee	S049158	241243310	1952	
General Electric Medical Systems- Digital Branch		430 W. Grange Avenue	Milwaukee	S049158	241202500	1662	
Grebes Bakery		5132 W. Lincoln Avenue	West Allis	S049158	241063240	1302	
Klement Sausage Company, Inc.		2650 S. Chase Avenue	Milwaukee	S049158	241951600	3219	
Oilgear Company		2300 S. 51st Street	Milwaukee	S049158	241256730	5556	
Overnite Transportation Company		4924 S. 13th Street	Milwaukee	S049158	241119670	9312	
Spinweld, Inc.		6623 W. Mitchell Street	West Allis	S049158	241989990	3391	
Stormwater Scrap Recycling	A1 Recycling	2101 W. Morgan Avenue	Milwaukee	S058831	241640190	8002	
	Miller Compressing Company	900 S. Water Street	Milwaukee	S058831	241495870	8562	
	National Salvage, Ltd.	6709-37 W. National Avenue	West Allis	S058831	241638430	7965	

Note:

a) Each Municipal Stormwater Permit applies to the entire community and encompasses all the watersheds in the community.

b) These communities received their permits after February 2003.

Source: Wisconsin Department of Natural Resources and SEWRPC.



TABLE 6-2 SHEET 2 OF 2
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE KINNICKINNICK RIVER WATERSHED**

2020 FACILITIES PLAN

6/6/07

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Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number	
Municipal Stormwater Permit ^a	City of Mequon ^b	Citywide	Mequon	S061557	246000920	16125	
	City of Milwaukee	Citywide	Milwaukee	S049018-3	241003730	6159	
	City of New Berlin ^b	Citywide	New Berlin	S050059-1	--	--	
	City of West Allis ^b	Citywide	West Allis	S049913-1	341073810	29417	
	Village of Greendale ^b	Villagewide	Greendale	S050059-1	--	--	
	Town of Brookfield ^b	Townwide	Brookfield	S050105-1	--	--	
	Town of Lisbon ^b	Townwide	Lisbon	S050105-1	--	--	
	Stormwater Auto Parts Recycling	A Auto, Inc	5140 N. 124th Street	Milwaukee	S059145	241672640	14338
A & D Truck and Auto Parts		450 S. 11th Street	Milwaukee	S059145	241540530	2757	
Advantage Auto Parts		11840 W. Hampton Avenue	Milwaukee	S059145	241941480	14440	
Allis Auto Parts		682 S. 76th Street	Milwaukee	S059145	241485090	13231	
Al's Auto Sales & Salvage		12300 W. Rohr Avenue	Milwaukee	S059145	341018370	13984	
Brand Auto Parts		1144 W. Bruce Street	Milwaukee	S059145	241933230	13811	
Calumet Auto Parts, Inc.		8501 W. Calumet Road	Milwaukee	S059145	241320860	2764	
Dave's Services		641 S. 29th Street	Milwaukee	S059145	241928170	14336	
J & J Salvage Auto Wrecking Parts, Inc.		6780 N. Industrial Road	Milwaukee	S059145	241931580	13351	
Northwest Truck Parts, Inc.		8550 N. Granville Road	Milwaukee	S059145	241739300	13817	
Ron's Service & Auto Parts		W124 N9391 Boundary Road	Menomonee Falls	S059145	368007750	13819	
Stormwater Industrial Tier 1		Aldrich Chemical Company, Inc.–Emmber	230 S. Emmber Lane	Milwaukee	S067849	241222410	2516
		Aldrich Chemical Company Inc–St. Paul Avenue	940 St. Paul Avenue	Milwaukee	S067849	241046410	5378
	Ampco Metal Manufacturing, Inc.	1745 S. 38th Street	Milwaukee	S067849	241031670	8000	
	Badger Alloys, Inc.	5120 W. State Street	Milwaukee	S067849	241372120	1574	
	D. R. Diedrich & Company, Ltd.	2615 W. Greves Street	Milwaukee	S067849	241038490	7994	
	Frantz Company, Inc.	12314 W. Silver Spring	Milwaukee	S067849	241472770	8244	
	Grede Foundries, Inc.–Liberty Foundry	6432 W. State Street	Wauwatosa	S067849	241012310	8014	
	Milwaukee Gray Iron, LLC	1501 S. 83rd Street	West Allis	S067849	241006370	5581	
	Motor Castings Co.–Plant 1 West Allis	1323 S. 65th Street	West Allis	S067849	241008680	5636	
	Rheocast Company	N114 W19250 Clinton Drive	Germantown	S067849	267078240	8098	
	Thiele Tanning Company	123 N. 27th Street	Milwaukee	S067849	241042670	7990	
	Victoria, Inc.	W140 N5985 Lilly Road	Menomonee Falls	S067849	268374040	16544	
	Stormwater Industrial Tier 2	ABF Freight System, Inc.	11307 W. Rogers Street	West Allis	S067857	241396320	18469
A-C Equipment Services, Inc.		6623 W. Washington Avenue	West Allis	S067857	241946320	14246	
A C Tool & Mach Company, Inc.		W185 N11424 Whitney Drive	Germantown	S067857	267166240	312	
Accents Unlimited		1640 S. 83rd Street	West Allis	S067857	241318220	1639	
ADM Cocoa		12500 W. Carmen Avenue	Milwaukee	S067857	268257220	23659	
Advance Boiler & Tank		6600 W. Washington St., Suite 700	West Allis	S067857	341043780	19625	
Advanced Metal Treating, Inc.		4501 N. 127th Street	Butler	S067857	268086500	2158	
Ajax Industries, Ltd.		5830 N. 95 Court	Milwaukee	S067857	241308430	2153	



Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 2 (continued)	Alliant Food Service Corporation	W137 N9245 Hwy. 145	Menomonee Falls	S067857	268089690	7866
	Allis Tool & Machine Corporation--A T M 94th	647 S. 94th Place	Milwaukee	S067857	241307440	1410
	American Concrete Pipe Company--Milwaukee	5000 N. 124th Street	Milwaukee	S067857	241063020	8072
	Amtrak Passenger Station	433 W. St. Paul Avenue	Milwaukee	S067857	241194770	10000
	Arc Ron, Ltd.	W141 N9501 Fountain Boulevard	Menomonee Falls	S067857	268234340	676
	Argo Industries	4430 N. 127th Street	Brookfield	S067857	268552350	12593
	Arrow Tool & Stamping Company, Inc.	4548 W. Mitchell Street	West Milwaukee	S067857	241183140	8663
	A S I Technologies, Inc.	5848 N. 95th Court	Milwaukee	S067857	241536350	1871
	Atwater-General Corporation	N57 W13636 Carmen Avenue	Menomonee Falls	S067857	268560380	13153
	BDT Engineering	4810 N. 124th Street	Milwaukee	S067857	241195460	15436
	Becker Machine Company	N51 W13270 Brahm Court	Menomonee Falls	S067857	268280540	10872
	Best Block Company	W140 N5870 Lilly Road	Menomonee Falls	S067857	268009610	2426
	B & N Trucking	N56 W13180 Silver Spring Road	Menomonee Falls	S067857	268542780	11093
	Bohr Precision Machining	W194 N11160 Kleinmann Drive	Germantown	S067857	267172510	14721
	Bonsal American	N91 W13906 Warren Street	Menomonee Falls	S067857	268544980	11097
	Bradley Corporation	W142 N9101 Fountain Boulevard	Menomonee Falls	S067857	268011260	6704
	Brenntag Great Lakes	W14765 Bobolink Avenue	Menomonee Falls	S067857	999986020	1951
	Briggs Stratton Corp.--Wauwatosa	3300 N. 124th Street	Wauwatosa	S067857	241011870	6140
	Build All Corporation	N59 W14508 Bobolink Avenue	Menomonee Falls	S067857	268441360	10852
	Canadian Pacific Railway	504 S. Layton Boulevard	Milwaukee	S067857	241441750	8584
	Centerline Truck Repair, Inc.	9718 W. Flagg Avenue	Milwaukee	S067857	241296110	1088
	Central Ready Mix LP	5013 W. State Street	Milwaukee	S067857	241519410	8219
	CHR Hansen, Inc.	9015 W. Maple Street	West Allis	S067857	241013080	1345
	Citation Corporation--Plant 1	W139 N5470 Oak Lane	Menomonee Falls	S067857	268222240	14054
	Citation Corporation--Plant 2	W140 N5516 Lilly Road	Menomonee Falls	S067857	268439050	14052
	Citation Corporation--Plant 3	W137 N5500 Williams Place	Menomonee Falls	S067857	268358530	14050
	Citation Corporation--Plant 6	W137 N5427 Williams Place	Menomonee Falls	S067857	268438940	14053
	Coca-Cola Bottling Company of Wisconsin	11800 W. Brown Deer Road	Milwaukee	S067857	241045420	21892
	Construction Supply & Erection, Inc.	N112 W19515 Mequon Road	Germantown	S067857	267075380	7947
	Contemporary Products, Inc.--Plants 2,3,4	N57 W13282 Carmen Avenue	Menomonee Falls	S067857	268177360	9494
	Coreco	N116 W16800 Main Street	Germantown	S067857	267087150	663
	Crestwood Bakery	1710 S. 108th Street	West Allis	S067857	241078750	2313
	Custom Fleet Maintenance	9120 N. 107th Street	Milwaukee	S067857	241309860	2127
	Custom Machining Industries	N57 W13636 Carmen Avenue	Menomonee Falls	S067857	268561810	13296
	Custom Pak Products	N115 W19150 Edison Drive	Germantown	S067857	267065370	7971
	Custom Production Grinding	N56 W13500 Silver Spring Road	Menomonee Falls	S067857	268575340	11947
	DANA Victor Products Division	11500 W. Brown Deer Road	Milwaukee	S067857	241245180	364
	Derco Repair Service	8065 W. Fairlane Avenue	Milwaukee	S067857	241906390	20024
	Diecraft Tool, Inc.	N115 W19395 Edison Drive	Germantown	S067857	267171850	14327
	Dielectric Corporation	W141 N9230-40-50 Fountain Blvd.	Menomonee Falls	S067857	268284500	1343
	DST Inc	805 S. 72nd Street	West Allis	S067857	241386420	1196
	Duwe Metal Products, Inc.	N57 W13500 Carmen Avenue	Menomonee Falls	S067857	268560270	13154
	E G A Products, Inc.	4275 N. 127th Street	Brookfield	S067857	268017640	290
	Efco Finishing Corporation	5139 N. 124th Street	Butler	S067857	268164820	14719
	Ellsworth Adhesives	W186 N11687 Morse Drive	Germantown	S067857	267143250	10953



TABLE 6-3 SHEET 2 OF 7
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MENOMONEE RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 2 (continued)	Emmber Foods	1915 W. Canal Street	Milwaukee	S067857	241029140	10828
	Emmber Foods	200 S. Emmber Lane	Milwaukee	S067857	241255740	23056
	Entrust Tool & Design Company	N58 W14630 Shawn Circle	Menomonee Falls	S067857	268226420	11026
	Euro Machinery Specialists, Inc.	N59 W14272 Bobolink Avenue	Menomonee Falls	S067857	268563240	13294
	Fabricated Metal Products Company, Inc.	12510 W. Lisbon Road	Brookfield	S067857	268137760	1826
	Falk Corporation	3001 W. Canal Street	Milwaukee	S067857	241008240	5621
	Falk Corporation-Plant 2	12001 W. Capitol Drive	Milwaukee	S067857	241018140	2034
	Faustel, Inc.	W194 N11301 McCormick Drive	Germantown	S067857	267148640	1774
	Federal Express Milwaukee	11101 W. Plank Court	Wauwatosa	S067857	241382900	9191
	Federal/Whalen Moving & Storage LLC	W140 N9000 Lilly Road	Menomonee Falls	S067857	268548060	10806
	F P M Heat Treating	11200 Heather Avenue	Milwaukee	S067857	341024420	16557
	Galland Henning Nopak, Inc.	1025 S. 40th Street	Milwaukee	S067857	241237040	428
	Ganos Trucking/Trueline CNC	4155 N. 124th Street	Brookfield	S067857	998023180	15342
	Gehl Guernsey Farms, Inc.	N116 W15970 Main Street	Germantown	S067857	267005090	6454
	General Pattern, Inc.	4712 N. 125th Street	Butler	S067857	268197270	11040
	GKN Sinter Metals	N112 W18700 Mequon Road	Germantown	S067857	268013790	13247
	Great Lakes Aluminum, Inc.	119 S. 116th Street	West Allis	S067857	241454070	3606
	Gromax Precision Die & Manufacturing, Inc.	W185 N 11474 Whitney Drive	Germantown	S067857	267146770	1304
	Handschy Industries	N57 W13640 Reichert Avenue	Menomonee Falls	S067857	268009170	3691
	Harley-Davidson Motor Co. Operations, Inc.	11700 Capitol Drive	Wauwatosa	S067857	241005600	3448
	Harnischfeger Corporation-Milwaukee	4107 W. Orchard Street	Milwaukee	S067857	241043880	1881
	Helwig Carbon Products, Inc.	8900 W. Tower Avenue	Milwaukee	S067857	241370140	7116
	Hentzen Coatings, Inc.-Milwaukee	6937 W. Mill Road	Milwaukee	S067857	241017590	3330
	Huf North American	N113 W18950 Carnegie Drive	Germantown	S067857	267095400	354
	IDC Aerospace, LLC	8050 W. Fairlane Avenue	Milwaukee	S067857	341053680	21587
	Inland GM Diesel Manufacturing	13015 W. Custer Avenue	Butler	S067857	268462370	10886
	Innovative Packaging Corporation	9400 W. Heather Avenue	Milwaukee	S067857	241051470	15437
	International Concrete Products, Inc.	N104 W13561 Donges Bay Road	Germantown	S067857	267173940	15654
	International Food Solutions	N113 W18900 Carnegie Drive	Germantown	S067857	267057010	14535
	International Thermal Systems, LLC	4697 W. Greenfield Avenue	West Milwaukee	S067857	241473650	9444
	Johnson School Bus Service, Inc.	N87 W17391 Main Street	Menomonee Falls	S067857	268506480	11100
	Joy Farm Transportation, Inc.	7007 N. 115th Street	Milwaukee	S067857	241489270	16745
	J W Speaker Corporation	W185 N11315 Whitney Way	Germantown	S067857	267080330	2563
	Key Products, Inc.	10600 W. Glenbrook Court	Milwaukee	S067857	241263770	15156
	Krueger Bearings, Inc.	N54 W13667 Woodale Drive	Menomonee Falls	S067857	268358970	15439
	K S M Industries, Inc.	N115 W19025 Edison Drive	Germantown	S067857	267007510	875
	Laidlaw Transit, Inc.-Milwaukee	4150 W. Mitchell Street	Milwaukee	S067857	241896160	13065
	Laidlaw Transit-West Allis	7741 W. National Avenue	West Allis	S067857	241301170	13064
	Lake Shore Burial Vault Co., Inc.-Brookfield	12780 W. Lisbon Road	Brookfield	S067857	268479420	8206
	Lakeside Buses of Wisconsin, Inc.	7300 W. Green Tree Road	Milwaukee	S067857	241729070	9162
	Lesaffre Yeast Corporation	2702 W. Greves Street	Milwaukee	S067857	241031340	11541
	Lippert Corporation	W142 N8999 Fountain Boulevard	Menomonee Falls	S067857	268165150	8638
	Ludell Manufacturing Company	5200 W. State Street	Milwaukee	S067857	241415460	396
	Mac Metal Products of Wis., Inc.-Germantown	W190 N11225 Carnegie Drive	Germantown	S067857	267057670	3341
	Mahuta Tool Corporation	N118 W19137 Bunsen Drive	Germantown	S067857	267170970	11149



TABLE 6-3 SHEET 3 OF 7
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MENOMONEE RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 2 (continued)	Marathon Ashland Petroleum, LLC–Milwaukee	9125 N. 127 Street	Milwaukee	S067857	241078640	3620
	Marker Machine, Inc.	5240 N. 124th Street	Milwaukee	S067857	241318440	15758
	Marlow & Sons Machining, Inc.	N114 W18548 Clinton Drive	Germantown	S067857	267173280	14908
	Master Machine Company	8900 W. Schlinger Avenue	Milwaukee	S067857	241190510	352
	Masterson Company	4023 W. National Avenue	Milwaukee	S067857	241341650	7220
	Maul Baker Box Company, Inc.	5900 N. 94th Street	Milwaukee	S067857	241881310	8568
	Maysteel Corporation–Menomonee Falls Div.	N89 W14700 Patricia Drive	Menomonee Falls	S067857	268144250	1090
	Meyer Material Company	633 S. 84th Street	Milwaukee	S067857	999820910	8208
	Middle West Manufacturing Corporation	N93 W16591 Water Street	Menomonee Falls	S067857	268011040	9630
	Midwest Grinding Wheels, Inc.	7725 W. Tower Avenue	Milwaukee	S067857	241953910	149
	Midwest Products and Engineering ,Inc.	10597 W. Glenbrook Court	Milwaukee	S067857	241688040	9188
	Miller Brewing	4000 W. State Street	Milwaukee	S067857	241007030	5597
	Milwaukee County Institutions Power Plant	9250 Watertown Plank Road	Milwaukee	S067857	241027050	6633
	Milwaukee Electric Tool Corporation	13135 W. Lisbon Road.	Brookfield	S067857	268016540	1238
	Milwaukee Machine Works, Inc.	404 S. 116th Street	West Allis	S067857	241477720	15711
	Molded Rubber & Plastic Corporation	13161 W. Glendale Avenue	Butler	S049158	268007410	359
	Monarch Corporation	7050 N. 76th Street	Milwaukee	S067857	241316900	1296
	M & R Machining, Inc	N115 W18835 Edison Drive	Germantown	S067857	267173720	15806
	NTW, Inc. doing business as Pho-Tronics	8701 W. Bradley Road	Milwaukee	S067857	241169500	1219
	Onyx Waste Services Midwest, Inc.	N104 W13075 Donges Bay Road	Germantown	S067857	267058880	24455
	Perlick Corporation	8300 W. Good Hope Road	Milwaukee	S067857	241017370	245
	P & H Mining Equipment	4400 W. National Avenue	Milwaukee	S067857	241010990	6103
	Poblocki & Sons, LLC	922 S. 70th Street	West Allis	S067857	241794080	14217
	Power Test, Inc.	N60 W14630 Kaul Avenue	Menomonee Falls	S067857	268557850	12981
	Production Tool Corporation	12726 W. Arden Place	Butler	S067857	268166910	2369
	P & W Machine Division of Waukesha Foundry Company, Inc.	N51 W13333 Brahm Court	Menomonee Falls	S067857	268508460	2365
	Raabe Corporation	N92 W14701 Anthony Avenue	Menomonee Falls	S067857	268203430	2023
	Radio Oil Company, Inc.	435 S. 116th Street	West Allis	S067857	241174670	1468
	R B Tool Corporation	N92 W16062 Megal Drive	Menomonee Falls	S067857	268570280	14633
	R B P Chemical Corporation	150 S. 118th Street	West Allis	S067857	241253540	770
	Rexord Corporation–West Milwaukee Facility	4701 W. Greenfield Avenue	Milwaukee	S067857	241012200	6145
	Richards Manufacturing Company, Inc.	5127 N. 125th Street	Butler	S067857	268209480	52
	Riebau's Cabinets, Inc.	W186 N11676 Morse Drive	Germantown	S067857	267086050	14335
	Roband Corporation	N92 W15966 Megal Drive	Menomonee Falls	S067857	268401870	2152
	Scan Pac Manufacturing, Inc.	N84 W13510 Leon Road	Menomonee Falls	S067857	268013350	1833
	Schmitz Ready Mix–Milwaukee 124th	5400 N. 124th Street	Milwaukee	S067857	241967880	12433
	SCS of Wisconsin, Inc.	N59 W14200 Bobolink Avenue	Menomonee Falls	S067857	268125880	15613
	Select Machining Corporation	N60 W14752 Kaul Avenue	Menomonee Falls	S067857	268575670	15614
	Service Continuous, Inc.	10536 W. Glenbrook Court	Milwaukee	S067857	241003180	17584
	Service Heat Treating, Inc.	9320 N. 107th Street	Milwaukee	S067857	241042010	2363
	Share Corporation	7855 and 7821 N. Faulkner Road	Milwaukee	S067857	241325700	16464
	Singer Tool & Die, Inc.	4559 N. 128th Street	Butler	S067857	268262390	14552
	S K W Biosystems, Inc.–Germantown	W194 N11411 McCormick Drive	Germantown	S067857	267094080	2375
	S K Williams Company	4600 N. 124th Street	Wauwatosa	S067857	241011210	6130



TABLE 6-3 SHEET 4 OF 7
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MENOMONEE RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number	
Stormwater Industrial Tier 2 (continued)	Smurfit Stone Container Corporation	11900 N. River Lane	Germantown	S067857	267085830	8346	
	Snap On Tools Corporation–Milwaukee	7939 N. Faulkner Road	Milwaukee	S067857	241168070	1725	
	Solvox Manufacturing Company	11725 W. Fairview Avenue	Milwaukee	S067857	241249470	7322	
	Sonag Ready Mix, LLC	N59 W14909 Bobolink Avenue	Menomonee Falls	S067857	268450380	15902	
	Stonecast Products, Inc.	N112 W14343 Mequon Road	Germantown	S067857	267147870	456	
	Stork Cellramic, Inc.	8399 N. 87th Street	Milwaukee	S067857	241355620	89	
	Stroh Die Casting Company, Inc.	11123 W. Burleigh Street	Milwaukee	S067857	241051580	6728	
	Sun Chemical	2176 S. 116th Street	West Allis	S067857	241394010	8338	
	Sunlite Plastics, Inc.	W194 N11340 McCormick Drive	Germantown	S067857	267082640	5060	
	Super Excavators, Inc. & Trucking, Inc.	N59 W14601 Bobolink Avenue	Menomonee Falls	S067857	268177910	711	
	Super Steel Products Corporation	7900 W. Tower Avenue	Milwaukee	S067857	241026500	3212	
	Tank Transport, Inc.	9202 N. 107th Street	Milwaukee	S067857	241703110	716	
	Tapco	800 Wall Street	Elm Grove	S067857	268300890	10882	
	T J Hale Company	W139 N9499 Highway 145	Menomonee Falls	S067857	268219490	727	
	Trackside Services, Inc.	5888 N. 91st Street	Milwaukee	S067857	241251230	14244	
	Traditional Concrete Products	W142 N9110 Fountain Boulevard	Menomonee Falls	S067857	268028310	6763	
	Trombeta Corporation	N88 W13901 Main Street	Menomonee Falls	S067857	268565880	13999	
	Twinco Romax	4871 N. 119th Street	Milwaukee	S067857	241052130	10056	
	Union Pacific Railroad–Butler Yard	4823 N. 119th Street	Milwaukee	S067857	241012860	14099	
	United Parcel Service–Elm Grove	12400 W. Bluemound Road	Elm Grove	S067857	268123790	9287	
	United Parcel Service–Germantown	W190 N11350 Carnegie Drive	Germantown	S067857	267074170	9296	
	Universal Brixis, Inc.	5880 N. 91st Street	Milwaukee	S067857	241226150	15731	
	U-Tech Environmental Mfg. Supply, Inc.	W137 N5560 Williams Place	Menomonee Falls	S067857	268575450	15496	
	Van Waters & Rogers, Inc.	1707 S. 101st Street	West Allis	S067857	241213170	10661	
	Victory Steel Supply Company	679 S. 76th Street	Milwaukee	S067857	241032440	8579	
	Vulcan Industries Corporation	N113 W18830 Carnegie Drive	Germantown	S067857	267090340	14334	
	Wacker Corporation	N92 W15000 Anthony Avenue	Menomonee Falls	S067857	268237970	1163	
	Waste Management of Wisconsin, Inc.	W124 N8925 Boundary Road	Menomonee Falls	S067857	268361280	16651	
	Western Metal Specialty Division	1211 N. 62nd Street	Wauwatosa	S067857	241662410	1666	
	Wisconsin Electric Power Company–Valley Power Plant	1035 W. Canal Street	Milwaukee	S067857	241007800	5609	
	Wisconsin Hardcoat	N56 W 13460 W. Silver Spring Road	Menomonee Falls	S067857	268563790	13963	
	Wisconsin Machine Tool Corporation	445 S. Curtis Road	West Allis	S067857	241244190	15655	
	Wis-Pak Foods, Inc.	4700 N. 132nd Street	Butler	S067857	268016430	10858	
	Wrico Stamping Company of Wisconsin	W50 N13471 Overview Drive	Menomonee Falls	S067857	268316290	56	
	Yellow Freight Systems, Inc. of West Allis	11406 W. Rodgers Street	West Allis	S067857	241276640	9258	
	Zignego Ready Mix West–Plant 2	551 S. Curtis Road	West Allis	S067857	241322070	7097	
	Zuelzke Tool & Engineering Company, Inc.	8811 W. Dean Road	Milwaukee	S067857	241814320	188	
	Stormwater Industrial Tier 3	A Plus Machine Products Inc	5285 N. 124th Street	Butler	S049158	268547840	11008
		Ace Chemical Products, Inc.	8415 N. 87th Street	Milwaukee	S049158	241390050	2776
		Ace Precision Machining Corporation	W146 N5714 Enterprise Avenue	Menomonee Falls	S049158	268249410	42
Alto-Shaam, Inc.		W164 N9221 Water Street	Menomonee Falls	S049158	268128960	15659	
Amera Gear Company, Inc.		8828 W Dean Road	Milwaukee	S049158	241975580	260	
Amglga Composites, Inc.	10600 W. Mitchell Street	West Allis	S049158	241224390	3665		



Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 3 (continued)	Arandell Corporation	N82 W13118 Leon Road	Menomonee Falls	S049158	268012360	1242
	Benz Metal Products Inc	N58 W14789 Shawn Circle	Menomonee Falls	S049158	268266460	11016
	Berenz Packaging Corporation	N93 W16214 Megal Drive	Menomonee Falls	S049158	268156460	7941
	Butler Tool, Inc.	4731 N. 125th Street	Butler	S049158	268189460	14564
	Butler Wire & Metal Products	N60 W15288 Bobolink Avenue	Menomonee Falls	S049158	268575120	16011
	Carlisle Tire & Wheel Company–Midwest Div.	8480 N. 87th Street	Milwaukee	S049158	241381580	1561
	Contemporary Products, Inc.–Plant 1	N57 W15264 Reichert Avenue	Menomonee Falls	S049158	268276800	1684
	Desert Aire Corporation	8300 W. Sleske Court	Milwaukee	S049158	241954130	2241
	Dricken Development, Inc.	4430 N. 127th Street–Site A	Brookfield	S049158	268575010	15411
	Faust Woodworking, Inc.	5204 N. 126th Street	Butler	S049158	268128520	14565
	Fibreform Containers, Inc.	N115 W19255 Edison Drive	Germantown	S049158	267116080	9736
	Findley Adhesives, Inc.–Wauwatosa	11320 Watertown Plank Road	Wauwatosa	S049158	241275760	8032
	Gerett Products	W156 N9073 Pilgrim Road	Menomonee Falls	S049158	268007740	1667
	GKN Sinter Metals	N117 W18880 Fulton Drive	Germantown	S049158	267153150	14326
	GKN Sinter Metals	W160 N9359 Industrial Avenue	Menomonee Falls	S049158	268228620	267
	GKN Sinter Metals	N92 W15800 Megal Drive	Menomonee Falls	S049158	268230490	16495
	GKN Sinter Metals	W156 N9305 Tipp Street	Menomonee Falls	S049158	268225100	12049
	Glenroy, Inc.	W158 N9332 Nor-X-Way Avenue	Menomonee Falls	S049158	368009840	673
	Great Lakes Packaging Corporation	N112 W18810 Mequon Road	Germantown	S049158	267146990	1499
	Great Lakes Packaging Corporation	W190 N11260 Carnegie Drive	Germantown	S049158	267132030	20103
	Great Lakes Packaging Corp.–Germantown	W190 N11393 Carnegie Drive	Germantown	S049158	267094850	1715
	Hansen Storage Company–112th Street	2888 N. 112th Street	Milwaukee	S049158	241642830	1446
	Harley-Davidson Motor Co. Operations, Inc.	W156 N9000 Pilgrim Road	Menomonee Falls	S049158	268523790	1570
	Henri's Food Products Company, Inc.	8622 N. 87th Street	Milwaukee	S049158	241972390	12481
	Infatrol Manufacturing Corporation	6600 W. Washington St., Bldg. 400	West Allis	S049158	341035640	19966
	Johanning	8742 W. Kaul Avenue	Milwaukee	S049158	241963920	304
	Journal/Sentinel, Inc.	4041 W. Burnham Street	Milwaukee	S049158	341055880	21787
	Koch Pipeline Company LP	9343 N. 107th Street	Milwaukee	S049158	241016160	1866
	Krete Industries, Inc.	3425 N. 124th Street	Brookfield	S049158	268462150	2115
	Lamers Bus Lines, Inc.	12800 W. Custer Avenue	Butler	S049158	268548170	10910
	Lone Star Industries, Inc.	745 W. Canal Street	Milwaukee	S049158	241903530	10052
	Luitink Manufacturing Company	W140 N8700 Lilly Road	Menomonee Falls	S049158	268139410	12959
	Mercury Marine–Plant 11	4240 N. 127th Street	Brookfield	S049158	268285600	1925
	Metal Improvement Company, Inc.	8201 N. 87th Street	Milwaukee	S049158	241482560	850
	M P Iding Company, Inc.	3420 W. Pierce Street	Milwaukee	S049158	241776150	2151
	Peacock Colors, Inc.	4514 N. 127 Street	Butler	S049158	268166360	1557
	Pepsi-Cola General Bottlers	5500 N. Lovers Lane Road	Milwaukee	S049158	241356280	9268
	Perfect Screw Products Corporation	6751 N. National Avenue	West Allis	S049158	241317890	881
	Precision Fabricators & Engineering, Inc.	W164 N9138 Water Street	Menomonee Falls	S049158	268526170	10860
	Quad/Graphics, Inc.	555 S. 108th Street	West Allis	S049158	241757340	6450
	R & B Wagner, Inc.	10600 W. Brown Deer Road	Milwaukee	S049158	241717960	14333
	Riteway Bus Service, Inc.–Richfield	W201 N13900 Fond du Lac Avenue	Germantown	S049158	267038200	779
	Silgan Containers Manufacturing Corporation	N90 W14600 Commerce Drive	Menomonee Falls	S049158	268008400	12688
	Smith & Nephew Rolyan–Rehabilitation Div.	N104 W13464 Donges Bay Road	Germantown	S049158	267129280	3382
	Tompa Woodwork	N60 W14708 Kaul Avenue	Menomonee Falls	S049158	268559500	13150



Permit Type	Facility	Address	Municipality	Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 3 (continued)	Trans-Coil, Inc.	7878 N. 86th Street	Milwaukee	S049158	241990100	12209
	U S Postal Service–Milwaukee Distribution Ctr.	345 W. St. Paul Avenue	Milwaukee	S049158	241371350	8586
	United Tool, Inc.	8219 W. Bradley Road	Milwaukee	S049158	241989880	347
	Winters Grinding Service., Inc.	W166 N5925 Greenway Circle	Menomonee Falls	S049158	268563020	27
	Wood Specialties, Inc.	N94 W14555 Garwin Mace Drive	Menomonee Falls	S049158	268462040	477
Stormwater Scrap Recycling	AMG Resources Midwest Corporation	11000 W. Brown Deer Place	Milwaukee	S058831	241828840	8566
	H & R Scrap Metal Company, Inc.	9000 W. Fond du Lac Avenue	Milwaukee	S058831	241396650	13032
	Industrial Recyclers	9400 N. 124th Street	Milwaukee	S058831	241047180	14757
	Miller Compressing Company–Mainyard	1640 Bruce Street	Milwaukee	S058831	241213720	8561
	Peter Wolin Company, Inc.	8520 W. Kaul Avenue	Milwaukee	S058831	241220980	2740
	Peltzl Menomonee Falls, Recycle America Alliance	N60 W16280 Kohler Lane	Menomonee Falls	S058831	268199360	24532
	Stimac Brothers Corporation	600 S. 44th Street	Milwaukee	S058831	241517870	12692
	West Allis Salvage Company, Inc.	1911 S. 80th Street	West Allis	S058831	241820150	13039

Note:

- a) Each Municipal Stormwater Permit applies to the entire community and encompasses all the watersheds in the community.
- b) These communities received their permits after February 2003.

Source: Wisconsin Department of Natural Resources and SEWRPC.



TABLE 6-3 SHEET 7 OF 7

**WPDES PERMITTED STORMWATER FACILITIES
IN THE MENOMONEE RIVER WATERSHED**

2020 FACILITIES PLAN

6/6/07

FP_6.T003.07.06.06.cdr

Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Municipal Stormwater Permit ^a	City of Glendale ^b	Citywide	Glendale	S061565	341073150	--
	City of Milwaukee	Citywide	Milwaukee	S049018	241003730	6159
	Village of Bayside ^b	Villagewide	Bayside	S061565	341073040	--
	Village of Brown Deer ^b	Villagewide	Brown Deer	S061565	341073260	--
	Village of Fox Point ^b	Villagewide	Fox Point	S061565	241034430	--
	Village of River Hills ^b	Villagewide	River Hills	S061565	341074140	--
	Village of Shorewood ^b	Villagewide	Shorewood	S061565	341073590	--
	Village of Thiensville ^b	Villagewide	Thiensville	S061557	246055920	--
	Village of Whitefish Bay ^b	Villagewide	Whitefish Bay	S061565	341074250	--
Stormwater Auto Parts Recycling	Affordable Auto Salvage, Inc.	3384 N. Green Bay Avenue	Milwaukee	S059145	241763500	2706
	C&C Weddie Auto Company, Inc.	4030 W. Douglas Avenue	Milwaukee	S059145	241707620	14370
	Mikis Auto Salvage, Inc.	4384 N. Green Bay Avenue	Milwaukee	S059145	341018260	13959
	Milwaukee Cycle Salvage, Inc.	5754 N. Teutonia	Milwaukee	S059145	341018150	13958
	Seven Stars Auto	3626 W. Mill Road	Milwaukee	S059145	241783960	13987
Stormwater Construction Site	Aster Woods	Northwest Corner of Eastbrook Drive and N. Port Washington Road	Mequon	S067831	--	19356
	County Breeze Estates	Bonniwell Road at Bonniwell Court	Mequon	S067831	--	23915
	Dean School Detention Basin	Dean Road and 51st Street	Brown Deer	S067831	--	15783
	Fairbrook Subdivision	Southwest Corner Bonniwell Road and Oriole Lane	Mequon	S067831	--	22366
	Graceland Cemetery	43rd Street and Mill Road	Milwaukee	S067831	--	16517
	Green Tree Properties	6767 60th Street	Milwaukee	S067831	--	14120
	Kilbourn Park	Commerce Street between Holton Street and Bremen Street	Milwaukee	S067831	--	23188
	Lincoln Creek--Reach 4	35th Street to Sherman Boulevard	Milwaukee	S067831	--	16953
	Lincoln Creek--Reach 5	Sherman Boulevard to Hampton Avenue	Milwaukee	S067831	--	16963
	Lincoln Creek Flood Control--Reach 3	Lincoln Creek between 32nd Street and 35th Street	Milwaukee	S067831	--	16291
	Riverworks Parcel 2	N. Richards Street and E. Vienna Avenue	Milwaukee	S067831	--	12937
	School Services & Leasing	6301 W. Mill Road	Milwaukee	S067831	241551200	12445
	The Highlands	North side of Highland Road 1.75 miles west of IH 43	Mequon	S067831	--	22505
	Trinity Creek Fish Habitat	East of Baehr Road and Trinity Creek	Mequon	S067831	--	22470
	Trostel Square Apartments	Commerce Drive north of Pleasant Street	Milwaukee	S067831	--	16647
	Vogel Property	Northeast corner of County Line Road and Baehr Road	Mequon	S067831	--	22648
Windsor Estates	South of Mequon Trail Apartments	Mequon	S067831	--	22376	
Stormwater Industrial Tier 1	Benz Oil, Inc.	2724 W. Hampton Avenue	Milwaukee	S067849	241335380	7925
	Benz Oil, Inc.--Butler	2724 W. Hampton Avenue	Milwaukee	S067849	268137870	8263
	Delta HA, Inc.	6263 N. Teutonia Avenue	Milwaukee	S067849	241167850	8287
	Elementis LTP L.P.	546 S. Water Street	Milwaukee	S067849	241247710	603
	Hercules, Inc.	52228 N. Hopkins Street	Milwaukee	S067849	241041900	2263
	PAK Technologies Chemical Special	5024 N. 37th Street	Milwaukee	S067849	241332410	2008
	Stainless Foundry Engineering, Inc.	5150 N. 35th Street	Milwaukee	S067849	241019350	8416
	Treat All Metals, Inc.	5140 N. Port Washington Road	Milwaukee	S067849	2410104770	518
	Wisconsin Paperboard Corporation	1514 E. Thomas Avenue	Milwaukee	S067849	241032640	7988
Stormwater Industrial Tier 2	Ace Iron & Steel Corporation--Milwaukee	5118 N. 24th Street	Milwaukee	S067857	241080840	836
	Airsan Corporation	4554 Woolworth Avenue	Milwaukee	S067857	241320200	190



TABLE 6-4 SHEET 1 OF 4
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MILWAUKEE RIVER WATERSHED**

2020 FACILITIES PLAN

6/6/07

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Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 2 (continued)	American Ornamental Iron, Inc.	4330 W. Green Tree Road	Milwaukee	S067857	241956000	21786
	Badger Coating, Inc.	1700 W. Cornell Street	Milwaukee	S067857	241018690	2493
	Badger Meter Company	4545 W. Brown Deer Road	Milwaukee	S067857	241015500	6463
	Barry Trucking, Inc.	120 E. National Avenue	Milwaukee	S067857	241324710	1206
	Bee Bus Line, Inc.	4330 N. 35th Street	Milwaukee	S067857	241997360	17842
	Bentley World Packaging	4080 N. Port Washington Road	Milwaukee	S067857	241942360	15149
	Brady USA, Inc.–Coated Products Division	2230 W. Florist Avenue	Glendale	S067857	241029030	3150
	Commerce Industrial Chemicals, Inc.–Woolworth	3420 W. Mill Road	Milwaukee	S067857	241150690	1988
	Dri-Tech, Inc.	8111 W. Bradley Road	Milwaukee	S067857	241776260	1118
	Elias Grinding Company, Inc.	3713 N. Holton Street	Milwaukee	S067857	241776260	1118
	EOG Environmental	5611 W. Hemlock Street	Milwaukee	S067857	241389170	2370
	ER Wagner	4611 N. 32nd Street	Milwaukee	S067857	241019790	847
	F. Barknow, Inc.	3830 N. Fratney Street	Milwaukee	S067857	241370690	2189
	Forman Metal Company	7500 N. Teutonia Avenue	Milwaukee	S067857	241632050	22342
	Fred Usinger, Inc.	1030 N. Old World Third Street	Milwaukee	S067857	241006040	538
	General Metalworks Corporation	10245 N. Enterprise Drive	Mequon	S067857	246038650	15960
	George Herrings & Son	219 Heidel Road	Thiensville	S067857	246131600	1615
	Gossen Corporation	2030 W. Bender Road	Glendale	S067857	241235940	2096
	Hayes Brake, LLC	5800 W. Donges Bay Road	Mequon	S067857	246021270	3617
	Hayes Brake, LLC	5800 W. Donges Bay Road	Mequon	S067857	246021270	3617
	IGC Technologies	4039 W. Green Tree Road	Milwaukee	S067857	241770660	21790
	ITW Shakeproof–Milwaukee Plant	3704 N. Palmer Street	Milwaukee	S067857	241043550	7445
	Jefferson Smurfit Corporation	2800 W. Custer Avenue	Milwaukee	S067857	241025290	7939
	Kleen Test Products	8225 W. Parkland Court	Milwaukee	S067857	241169830	21531
	KW MFG, Inc.	8619 Lynx Avenue	Milwaukee	S067857	241813770	732
	Laidlaw Transit–Glendale	5901 N. Glen Park Road	Glendale	S067857	241934220	13066
	Liphatech	3101 W. Custer Avenue	Milwaukee	S067857	241050700	14034
	Longview Fibre Company	3832 N. Third Street	Milwaukee	S067857	241751950	7948
	Maxon Industries, Inc.	3204 W. Mill Road	Milwaukee	S067857	241360900	1081
	Milisco Manufacturing Company	9009 N. 51st Street	Brown Deer	S067857	241026830	2278
	Milwaukee Gear Company, Inc.	51510 N. Port Washington Road	Milwaukee	S067857	241167960	1953
	Milwaukee Precision Corporation	8236 Parkland Court	Milwaukee	S067857	241363650	16313
	N. Josten & Company, Inc.	4905 N. 32nd Street	Milwaukee	S067857	241234070	301
	Nohl Corporation	5901 W. Bender Court	Milwaukee	S067857	341058410	1286
	Nohl Corporation	6360 N. 60th Street	Milwaukee	S067857	241052460	3435
	North America Clutch Corporation	3131 W. Mill Road	Milwaukee	S067857	241257390	3653
	North Side Coal & Oil	104 W. Capitol Drive	Glendale	S067857	241293010	3228
	NRE Wheel Works, Inc.	5300A N. 33rd Street	Milwaukee	S067857	241850290	23788
	Pechiney Plastic Packaging, Inc.	6161 N. 64th Street	Milwaukee	S067857	241334060	1046
	Phoenix Products	6161 N. 64th Street	Milwaukee	S067857	241334060	24394
	Press Color, Inc.–Glendale	2315 W. Camden Road	Glendale	S067857	241775930	1614
	Production Stamping Corporation	301 E. Vienna Avenue	Milwaukee	S067857	341040590	19047
	RES Manufacturing Company	7801 N. 73rd Street	Milwaukee	S067857	241136720	1983
	Rexnord-Stearns Division	120 N. Broadway	Milwaukee	S067857	241256840	12483
	Richards Street Service	4101 N. Richards Street	Glendale	S067857	241460230	14540
	Rose Industries	7044 N. Teutonia Avenue	Milwaukee	S067857	241344620	16957
	Schmitz Ready Mix–Milwaukee	11050 N. Industrial Drive	Mequon	S067857	246090130	7444
	School Services & Leasing	6301 W. Mill Road	Milwaukee	S067857	241551200	12445
	Smurfit Flexible Packaging	7074 W. Packland Court	Milwaukee	S067857	241033430	1611
	Snider Mold Company	6303 W. Industrial Drive	Mequon	S067857	246077480	15712
SPI Lighting, Inc.	10400 N. Enterprise Drive	Mequon	S067857	246072860	1278	
SPX Dock Products	6720 N. Teutonia Avenue	Milwaukee	S067857	24108390	1422	



TABLE 6-4 SHEET 2 OF 4
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MILWAUKEE RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 2 (continued)	Standard Tar Products Company, Inc.	6060 W. Douglas Avenue	Greenfield	S067857	241373770	15886
	Sterling, Inc.	5200 W. Clinton Avenue	Milwaukee	S067857	241248700	1257
	Strattec Security Corporation	3333 W. Good Hope Road	Glendale	S067857	241006810	12050
	Super Steel Products Corporation	7100 W. Calumet Road	Milwaukee	S067857	241017040	2562
	Supreme Casting	7901 N. 73rd Street	Milwaukee	S067857	241989000	12185
	Supreme Cores	5737 W. Mill Road	Milwaukee	S067857	241053010	15727
	Telsmith, Inc.–Mequon	10910 N. Industrial Drive	Mequon	S067857	246013350	2536
	TJ Brooks Company	2233 W. Mill Road	Milwaukee	S067857	241324820	939
	Tower Automotive Products Company	3533 N. 27th Street	Milwaukee	S067857	241012970	6176
	Twinco Romax Wisconsin Company	3100 W. Mill Road	Milwaukee	S067857	241022760	3478
	Visa Lighting	1717 Civic Drive	Glendale	S067857	241269160	14030
	Vulcan Lead, Inc.	3111 W. Mill Road	Milwaukee	S067857	241932130	11505
	Vulcan Lean, Inc.	3111 W. Mill Road	Milwaukee	S067857	241932020	11514
	Waldorf Corporation	1900 W. Cornell Street	Milwaukee	S067857	241017920	8544
	Western Products Division–Douglas Dynamic Inc.	7777 N. 73rd Street	Milwaukee	S067857	241033650	743
	Wisconsin Thermoset Molding, Inc.	900 E. Vienna Avenue	Milwaukee	S067857	241440760	473
	Stormwater Industrial Tier 3	Advanced Die Casting Company–Milwaukee	3760 N. Holton Street	Milwaukee	S049158	241046300
American Woodworking, Inc.		4997 N. 33rd Street	Milwaukee	S049158	241360240	2766
Banner Tool & Engineering Corporation		7254 N. Teutonia Avenue	Milwaukee	S049158	241241220	362
Brady Corporation		727 W. Glendale Avenue	Glendale	S049158	241037720	3149
Brady Worldwide–Good Hope Road Operations		6555 W. Good Hope Road	Milwaukee	S049158	241480910	3370
Commerce Industrial Chemicals, Inc.–Milwaukee		5611 W. Woolworth Avenue	Milwaukee	S049158	241325260	1987
Continental Equipment Corporation		6103 N. 76th Street	Milwaukee	S049158	241015170	811
Danisco Cultor USA, Inc.		4253 N. Port Washington Road	Glendale	S049158	341033440	16509
Fredman Bag Company		5801 W. Bender Road	Milwaukee	S049158	241276750	1596
G. Manufacturing Corporation		4832 N. 125th Street	Butler	S049158	268541350	11975
G.B. Electrical, Inc., an Applied Power Company		6101 N. Baker Road	Milwaukee	S049158	241363430	383
Hansen Storage Company 1		500 S. Water Street	Milwaukee	S049158	241953250	1447
Hansen Storage Company–Milwaukee		8100 N. Teutonia Avenue	Brown Deer	S049158	241954240	1426
Hydro Platers, Inc.		3525 W. Kiehnau Avenue	Milwaukee	S049158	241231760	969
INX International Ink Company–Milwaukee		5501 W. Mill Road	Milwaukee	S049158	241222850	8101
Johnson Controls Battery Group, Inc.		5400 N. Teutonia Avenue	Milwaukee	S049158	241033320	12482
Kleen Test Products		5600 W. Mequon Road	Mequon	S049158	246060970	20082
Kopfmann Company, Inc.		3142 W. Mill Road	Milwaukee	S049158	241741940	885
Kracor, Inc.		5625 W. Clinton Avenue	Milwaukee	S049158	241418430	2209
Lalemand Biochem International		6120 W. Douglas Avenue	Milwaukee	S049158	241316350	16680
Mainline Pattern Corporation		3424 W. Elm Street	Milwaukee	S049158	241627100	2296
Molecular Biology Resources, Inc.		5143 N. 60th Street	Milwaukee	S049158	241294020	660
North America Clutch Corporation		4360 N. Green Bay Avenue	Milwaukee	S049158	241620060	16708
Osmonics Autocontrol		5730 N. Glen Park Road	Milwaukee	S049158	241022210	6689
Packaging Corporation of America	5600 W. Good Hope Road	Milwaukee	S049158	241168510	8482	



TABLE 6-4 SHEET 3 OF 4
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MILWAUKEE RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 3 (continued)	Pereles Bros.	5840 N. 60th Street	Milwaukee	S049158	241016490	269
	Riteway Bus Service, Inc.	5873 N. 55th Street	Milwaukee	S049158	241417220	16811
	Roll Ink Corporation	4010 W. Douglass Avenue	Milwaukee	S049158	241772850	8258
	Roller Fabrics, Inc.	6600 W. Calumet Road	Milwaukee	S049158	241961940	3457
	RPS, Inc.	918 N. Deerbrook Trail	Brown Deer	S049158	341034100	15104
	Signicast Corporation- Milwaukee	9000 N. 55th Street	Milwaukee	S049158	241025510	2242
	Waukee Engineering Company, Inc.	5600 W. Florist Avenue	Milwaukee	S049158	241394890	1510
	Wisconsin Color Press	5400 W. Good Hope Road	Milwaukee	S049158	241374980	2130
	Stormwater Scrap Recycling	Auto & Scrap Recyclers, Inc. Aztak	3800 W. Mill Road	Milwaukee	S058831	241529970
8300 W. Glorist Avenue			Milwaukee	S058831	241346930	13027

Note:

- a) Each Municipal Stormwater Permit applies to the entire community and encompasses all the watersheds in the community.
- b) These communities receiving their permits after February 2003.

Source: Wisconsin Department of Natural Resources and SEWRPC.



TABLE 6-4 SHEET 4 OF 4
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE MILWAUKEE RIVER WATERSHED**

2020 FACILITIES PLAN

6/6/07

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Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Municipal Stormwater Permit ^a	City of Cudahy ^b	Citywide	Cudahy	S049875-01	241206790	15778
	City of Franklin ^b	Citywide	Franklin	S050059-01	341111430	31265
	City of Milwaukee ^b	Citywide	Milwaukee	S049018	241003730	6159
	City of Oak Creek ^b	Citywide	Oak Creek	S049905-01	241899020	15779
	City of South Milwaukee ^b	Citywide	South Milwaukee	S049891-01	241208880	15777
Stormwater Auto Parts Recycling	Auto Paradise, Inc. Roz Auto Salvage	6102 S. 13th Street 5848 S. 13th Street	Milwaukee Milwaukee	S059145 S059145	241472880 241784070	14270 10767
Stormwater Construction Site	J&L Terminals Warehouse 128th Air Refueling Wing, Apron Replacement Flying J Travel Plaza	6055 S. 6th Street South half of existing apron on 128th grounds 8650 S. 20th Street	Milwaukee Milwaukee Oak Creek	S067831 S067831 S067831	-- -- --	12944 19051 26044
Stormwater Industrial Tier 1	EGS Electrical Group- Appleton Henkel Surface Technologies, Inc.	2105 5th Avenue 420 W. Marquette Avenue	South Milwaukee Oak Creek	S067849 S067849	241015390 241165210	922 6917
Stormwater Industrial Tier 2	Ace World Wide & Storage Company, Inc. Bucyrus International, Inc. Delphi Automotive Systems James Cape & Sons Lamers Bus Lines, Inc. Miltec, Inc. Pelman Iron & Metal Company Riteway Bus Service, Inc. United Parcel Service- Oak Creek US Air Force 440th USF Holland Watkins Motor Lines	1900 E. College Avenue 1100 Milwaukee Avenue 7929 S. Howell Avenue 6th Street and College Avenue 1122 W. Boden Court 6870 S. 10th Street 5510 S. Whitnall Avenue 7433 S. 10th Street 6800 S. 6th Street 300 E. College Avenue 6161 S. 6th Street 6757 S. 13th Street	Cudahy South Milwaukee Oak Creek Milwaukee Milwaukee Oak Creek Cudahy Oak Creek Oak Creek Milwaukee Milwaukee Milwaukee	S067857 S067857 S067857 S067857 S067857 S067857 S067857 S067857 S067857 S067857 S067857 S067857	241308210 241008130 241045750 241496750 241975690 241331640 241989440 341075020 241304910 241176980 341058740 241462540	1935 5617 1367 22727 9174 684 13300 22628 9291 9497 22226 23789
Stormwater Industrial Tier 3	Beier Trucking, Inc. Millwood, Inc.	6227 S. Packard Avenue 5831 S. Pennsylvania Avenue	Cudahy Cudahy	S049158 S049158	241596410 --	237 22223
Stormwater Scrap Recycling	S&M Recycling	1200 Minnesota Avenue	South Milwaukee	S058831	241788470	13307

Note:

- a) Each Municipal Stormwater Permit applies to the entire community and encompasses all the watersheds in the community.
- b) These communities received their permits after February 2003.

Source: Wisconsin Department of Natural Resources and SEWRPC.



**TABLE 6-5
WPDES PERMITTED STORMWATER FACILITIES
IN THE OAK CREEK WATERSHED**

2020 FACILITIES PLAN

6/6/07

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Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Municipal Stormwater Permit ^a	City of Franklin ^b	Citywide	Franklin	S050059-01	341111430	31265
	City of Milwaukee	Citywide	Milwaukee	S049018	241003730	6159
	City of Oak Creek ^b	Citywide	Oak Creek	S049905-01	241899020	15779
	City of West Allis ^b	Citywide	West Allis	S049913-1	341073810	29417
	Village of Greendale ^b	Villagewide	Greendale	S050059-1	--	--
	Village of Hales Corners ^b	Villagewide	Hales Corners	S050059-01	341111760	31272
Stormwater Auto Parts Recycling	Durham Auto Savings and Sales, Inc. Hwy 45 Auto Salvage	10568 S 124th Street	Franklin	S059145	241791550	13235
		10386 S. 124th Street	Franklin	S059145	241537670	13730
Stormwater Construction Site	124th Street Gas Pipe Replacement	Road right of way at 124th Street and Lincoln Avenue	West Allis	S067831	--	26474
	88 Units Multi Family	9251 S. 51st Street	Franklin	S067831	--	14312
	Armman Heights Subdivision	Oakwood Road and S. 13th Street	Oak Creek	S067831	--	17901
	Autumn Ridge Condominiums	9251 S. 51st Street	Franklin	S067831	--	15014
	Berkshire	6000 S. 51st Street	Franklin	S067831	--	19320
	Coury Development	Not provided	Franklin	S067831	--	15258
	Creekside Corporate Park	9800 Block of S. 13th Street	Oak Creek	S067831	--	18763
	Farmington Hills	Pennsylvania Avenue and Forest Hill Avenue	Oak Creek	S067831	--	18116
	Forest Hill Highlands	W. Loomis Road and Forest Hill Avenue	Franklin	S067831	--	17290
	Forest Hill Highlands- Silverwood Heights	W. Loomis Road and Forest Hill Avenue	Franklin	S067831	--	17290
	Fort Howard Steel	7200 S. 6th Street	Oak Creek	S067831	--	15690
	Franklin Loop Gas Project	S. 51st Street and Puetz Road	Franklin	S067831	--	18423
	Franklin Square	Ryan Road and 51st Street	Franklin	S067831	--	16396
	Fredach Property	11540 W. Coldspring Road	Greenfield	S067831	--	28649
	Georgetown West	10740 S. Howell Avenue	Oak Creek	S067831	--	16131
	Jenna Prairie Estates	Hwy 100	Oak Creek	S067831	--	23666
	Kaitlin Woods Phase II	9300 W. Elm Court	Franklin	S067831	--	16498
	Le Pine Enterprises, Inc.	9540 S. Pennsylvania Avenue	Oak Creek	S067831	--	15767
	Martin Luther King School Athletic Field Additions	5201 S. 76th Street	Greendale	S067831	--	17906
	Meadow Creek Estates III Subdivision	10408 S. Katie Drive	Oak Creek	S067831	--	13670
	Meadowmere Village	Puetz Road and Shepard Avenue	Oak Creek	S067831	--	15562
	North Shore Bike Trail	Drexel to County Line Road	Oak Creek	S067831	--	19905
	Oak Creek Commerce Center	7400 S. Howell Avenue	Oak Creek	S067831	--	15848
	Oakwood Lakes Subdivision	Oakwood Road	Oak Creek	S067831	--	15091
	Princeton Pines Subdivision	Not provided	Franklin	S067831	--	15144
	Reinders Warehouse	545 W. Ryan Road	Oak Creek	S067831	--	17745
	Riverview Estates	Not provided	Oak Creek	S067831	--	16343
	S. 10th Street Reconstruction	Drexel Avenue to Rawson Avenue	Oak Creek	S067831	--	17138
	Stonehedge Subdivision	Rawson Avenue and Loomis Avenue	Franklin	S067831	--	16882
	The Chateau Condominiums	Puetz Road and Apple Creek Drive	Oak Creek	S067831	--	16395
	Tuckaway Pines	8050 S. 76th Street	Franklin	S067831	--	19169
	Vesta, Inc.	5400 W. Franklin Drive	Franklin	S067831	--	18767
	Victory Creek Estates	Drexel Avenue between 31st Street and 51st Street	Franklin	S067831	--	16394
	Village Market	STH 100 and Forest Home Avenue	Hales Corners	S067831	--	22697
	Wellness Center Development	Loomis Road and St. Martins Road	Franklin	S067831	--	17905
	Whitnall Grove	Not provided	Franklin	S067831	--	15752
Willowbrook	Oakwood Road and Chicago Road	Oak Creek	S067831	--	22986	
Woodland Ridge of Greenfield	South of Howard Avenue, west of S. 84th St.	Greenfield	S067831	--	22776	



TABLE 6-6 SHEET 1 OF 2
**WPDES PERMITTED STORMWATER FACILITIES
 IN THE ROOT RIVER WATERSHED**
 2020 FACILITIES PLAN
 6/6/07

Permit Type	Facility	Address	Municipality	WPDES Permit Number	Facility Identification	Facility Identification Number
Stormwater Industrial Tier 1	Dic Imaging Products, USA, Inc.	7300 S. 10th Street	Oak Creek	S067849	241332080	1805
	Mid America Steel Drum Company, Inc.	8570 S. Chicago Road	Oak Creek	S067849	241213500	1458
	Midland Metal Treating, Inc.	5512 W. Airways Avenue	Franklin	S067849	241042340	1508
	Schmitz Ready Mix, Inc.	3131 W. Elm Street	Oak Creek	S067849	--	20740
	Woodmill Products, Inc.	9563 S. 60th Street	Franklin	S067849	241844020	8367
Stormwater Industrial Tier 2	Air Products and Chemicals, Inc.	701 W. Oakwood Road	Oak Creek	S067857	241168290	3453
	American Building Restoration Products	9720 S. 60th Street	Franklin	S067857	--	10734
	American Freightways	10613 S. 27th Avenue	Franklin	S067857	241319430	20653
	Arrow Millwork	6450 Industrial Loop	Greendale	S067857	--	562
	Baker and Baker, Inc.	7350 S. 10th Street	Oak Creek	S067857	241022980	1669
	Bay View Industries	7821 S. 10th Street	Oak Creek	S067857	--	358
	Behrens Moving Company	500 W. Rawson Avenue	Oak Creek	S067857	241815750	2075
	Burmeister Woodwork Company	11025 W. Forest Home Avenue	Hales Corners	S067857	241087440	3237
	Carri-Crete Corporation	13360 W. College Avenue	New Berlin	S067857	268352370	12834
	Cemedyme USA, Inc.	7655 S. 6th Street	Oak Creek	S067857	241044320	3338
	Chrometech of Wisconsin, Inc.	10020 S. 54th Street	Franklin	S067857	241321960	3499
	General Automotive Manufacturing, LLC.	5215 W. Airways Avenue	Franklin	S067857	241961720	17442
	Imprex, Inc.	3260 S. 108th Street	Greenfield	S067857	341017930	11458
	Jensen Environmental Management, Inc.	W144 S6347 College Court	Muskego	S067857	268486020	13049
	Krones, Inc.	9600 S. 58th Street	Franklin	S067857	241189520	2560
	Laidlaw Transit, Inc.-- Muskego	W146 S6365 Tess Corners Road	Muskego	S067857	268208490	13141
	Meyer Material-- Oak Creek Yard 46	841 Rawson Avenue	Oak Creek	S067857	241323500	19254
	Morris Material Handling, Inc.	315 W. Forest Hill Avenue	Oak Creek	S067857	241230440	1880
	Oak Creek Pallet Company	2730 E. Ryan Road	Oak Creek	S067857	241775490	8302
	PPG Industries, Inc.	10800 S. 13th Street	Oak Creek	S067857	241014620	6269
	Prime Manufacturing Corporation	7730 S. 6th Street	Oak Creek	S067857	241094370	11277
	Roadway Express T313	6880 S. Howell Avenue	Oak Creek	S067857	241902870	10917
	Superior Die Set Corporation	900 W. Drexel Avenue	Oak Creek	S067857	--	860
Stormwater Industrial Tier 2 (continued)	Superior Services, Inc.	W144 S6350 College Court	Muskego	S067857	268313540	11307
	Tri Par Tool and Die Company	4239 W. Loomis Road	Greenfield	S067857	--	2540
	Zenar Crane Corporation	730 S. 6th Street	Oak Creek	S067857	241197990	419
	Zierden Company	7355 S. 1st Street	Oak Creek	S067857	241108100	177
Stormwater Industrial Tier 3	5801 W. Airways Avenue	5801 W. Airways Avenue	Franklin	S049158	241679240	10898
	All Glass Aquarium Company, Inc. - Plant 1	9675 S. 60th Street	Franklin	S049158	241413810	2014
	All Glass Aquarium Company, Inc. - Plant 2	5401 W. Oakwood Park Drive	Franklin		241422610	1660
	BandK Transportation, Inc.	2500 W. Southbranch Boulevard	Oak Creek		241815640	3487
	Chocolate House, Inc.- Manufacturing Office	4121 S. 35th Street	Greenfield		241990210	1340
	F. J. Powalka Company	13007 W. Forest Drive	New Berlin		268166030	1824
	Milwaukee Steel Converting Corporation	7200 S. 6th Street	Oak Creek		241279280	1285
	Rexnord Elastomer Products-- New Berlin	5555 S. Moorland Road	New Berlin		268546960	11229
	Scott's Topsoil, Inc.	S72 W12453 Tess Corners Drive	Muskego		268090350	10862
	Sumitomo Electric Carbide Manufacturing	5635 S. Westridge Drive	New Berlin		268527380	1810
Stormwater Scrap Recycling	ALS Auto Salvage, Inc.	10942 S. 124th Street	Franklin		241560770	8082

Note:

- a) Each Municipal Stormwater Permit applies to the entire community and encompasses all the watersheds in the community.
- b) These communities received their permits after February 2003.

Source: Wisconsin Department of Natural Resources and SEWRPC.



6.3.3 Water Quality Standards

The WDNR has established water quality standards as statements of the physical, chemical, and biological characteristics of waters that must be maintained for the water to be suitable for specified uses. Water quality standards for a given water body are determined by the conditions required to support the use objectives designated for that water body. Wis. Admin. Code NR 102.05(1)(a) states that it is intended that, “no waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the department that such a change is justified as a result of necessary economic and social development, provided that no new or increased effluent interferes with or becomes injurious to any assigned uses made of or presently possible in such waters.” The level of protection provided by this “anti-degradation policy” is determined in part by the resource value of the specific waters. Wis. Admin. Code NR 102.10 and NR 102.11 designate outstanding resource waters and exceptional resource waters. Any discharge that may be allowed to such waters can generally not be above background levels. None of the waters designated either outstanding or exceptional is located within the MMSD planning area.

The application of the basic categories of water use objectives requires specification of a design low flow at or above which the water quality standards commensurate with each water use are to be met. The water use objectives state that compliance with the supporting standards is to be evaluated on the basis of streamflow as low as the seven-day, 10-year low flow, which is defined as the minimum seven-day mean low flow expected to occur once on the average for every 10 years. That is, for a given water use objective, the stream water quality is to be such as to satisfy the supporting standards for all streamflow conditions at or above the seven-day, 10-year low flow.

Standards also allow for a mixing zone where flows enter a water body. Water quality standards do not generally apply within the mixing zone, which is not uniformly prescribed but established by the WDNR based on factors such as effluent quality and quantity, available dilution, temperature, current, type of outfall, channel configuration, and restrictions to fish movement (NR 102.05 (3)). For streams, mixing zones are no larger than 25% of the cross-sectional area or volume of flow and not more than 50% of the width, where possible (NR 102.05 (3) (c)).

More information regarding these standards and their application within the MMSD planning area can be found in Chapter VII of SEWRPC Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds*.

General Standards

Wis. Admin. Code NR 102.04 (1) establishes general water quality standards that are applicable in all waters at all times and under all flow conditions. These are:

- ◆ Substances that will cause objectionable deposits on the shore or in the bed of a body of water shall not be present in such amounts as to interfere with public rights in waters of the state
- ◆ Floating or submerged debris, oil, scum, or other material shall not be present in such amounts as to interfere with public rights in waters of the state
- ◆ Materials producing color, odor, taste, or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state

- ◆ Substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life

Fish and Other Aquatic Life Water Use Objectives

The WDNR has developed water quality standards, or criteria, to support the following water use objectives or classifications relating to fish and aquatic life (NR 102.04 (3)):

- ◆ Coldwater Biological Communities: Surface waters classified under this category are capable of supporting a community of coldwater fish and other aquatic life or serve as spawning areas for coldwater sport fish species. This category includes, but is not restricted to, surface waters identified as trout waters by the WDNR. Also included in this classification are coldwater streams that, although too small to support sport fish, are capable of supporting an abundant and diverse population of forage fish and macroinvertebrates which are intolerant of pollution.(14)
- ◆ Warmwater Sport Fish Communities: Surface waters placed under this classification are capable of supporting a warmwater sport fishery or they serve as spawning areas for warmwater sport fish species such as walleyed pike, bluegill, largemouth bass, and smallmouth bass. Also present are aquatic macroinvertebrates which are relatively intolerant of pollution.(15)
- ◆ Warmwater Forage Fish Communities: This category includes surface waters with natural water quality and habitat capable of supporting an abundant, usually diverse, community of forage fish (shiners, minnows) or aquatic macroinvertebrates (insects, clams, crayfish) which are relatively intolerant of pollution. These streams are generally too small to support sport fish species. Streams capable of supporting valuable populations of pollution-tolerant forage fish are also included in this classification.(16)
- ◆ Limited Forage Fish Communities (Intermediate Surface Waters): Surface waters within this classification are of limited capacity, naturally poor water quality and deficient habitat. These intermediate surface waters are capable of supporting only a limited community of pollution-tolerant forage fish and aquatic macroinvertebrates.(17)
- ◆ Limited Aquatic Life (Marginal Surface Waters): Surface waters with this classification have a severely limited capacity, naturally poor water quality, and deficient habitat. These marginal surface waters are only capable of supporting a limited community of aquatic life.(18)

The first three classifications apply to fish and aquatic life waters (FAL). The standards applied to these waters include a minimum dissolved oxygen content of 5 mg/L, a maximum temperature of 89°F and a pH range of 6.0 to 9.0 (NR 102.04 (4)). For coldwater communities, more restrictive dissolved oxygen and temperature standards apply. The last two classifications apply to “variance waters,” a group that also includes “special variance waters.” The standards for variance waters within the planning area are described later in this section.

Other Standards

In addition to the standards previously described, the WDNR has developed standards for two recreational use classifications (NR 102.04 (5)):



- ◆ Full recreational use
- ◆ Limited recreational use

The criterion used to judge attainment of the recreational use standard is fecal coliform level. To meet full recreational use the membrane filter fecal coliform count may not exceed 200 per 100 ml as a geometric mean based on not less than 5 samples per month, nor exceed 400 per 100 ml in more than 10% of all samples during any month (NR 102.04 (5) (a)).

The WDNR has also developed standards for public health and welfare, and for wildlife protection (NR 102.04 (6)). To protect public health and welfare, all surface waters shall meet the human threshold and human cancer criteria specified in Wisconsin regulations. The applicable criteria vary depending on whether the surface water is used for public drinking water supplies and vary with the type of fish and other aquatic life subcategory. Taste and odor standards are applied to waters designated for cold water, warm water sport fisheries, or public drinking water supply. Wildlife protection objectives are assessed based on the concentrations of specific identified toxic chemicals. The specific standards and criteria for these are presented in Chapter VI of SEWRPC Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds*. Also, NR 102.12 requires that all surface waters draining to the Great Lakes be protected from the impacts of persistent, bioaccumulating toxic substances by avoiding or limiting to the maximum extent practicable increases in these substances.

Use Objectives for Milwaukee Metropolitan Sewerage District Planning Area Streams and Rivers

The following discussion is a summary of Chapters V through X of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*. Additional information can be found in those chapters in both narrative and tabular formats.

The use objective for most of the streams and rivers in the planning area watersheds has been designated as FAL. Certain stream reaches have been designated for limited forage fish communities (LFF), limited aquatic life (LAL), or special variance waters. Rivers and streams are classified as “Full Recreational Use,” except those with a special variance designation, which are classified as “Limited Recreational Use.” All rivers and streams are also expected to meet the wildlife standards, or criteria (NR 102.04 (7)). The public health and welfare standards for non-drinking water supplies (NR 102.04 (6)) apply to these rivers and streams. The use designations for the rivers and streams, including those which have special variance designations, are described below.

Kinnickinnic River

The mainstem Kinnickinnic River (that is, the principal waterway, as opposed to its tributaries) is designated a special variance water, but the tributary streams within the watershed have been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-KK in Appendix 4A, *Water Quality Model Data*. Chapter V of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds* states that despite improved water quality, due in part from the reduction in combined and sanitary sewer overflows, the recommended use objectives were only partially

achieved in much of the watershed during 1998-2001. The most common indicators of impaired use were high fecal coliform bacteria levels along the mainstem, concentrations of mercury in water that exceeded the human threshold concentration for public health and welfare and the wildlife criterion for surface water quality, and copper concentrations that occasionally exceeded the USEPA's maximum concentration criterion. Additionally, total phosphorus levels commonly exceeded regional water quality management plan recommendations and surface water temperature at two water quality monitoring stations occasionally exceeded their relevant standard. Fish consumption advisories suggest impaired beneficial use due to the presence of PCBs and mercury. More information is available in Chapter V of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Menomonee River

The lower portion of Underwood Creek, all of Honey Creek, the Menomonee River mainstem downstream of the confluence with Honey Creek, and the canals in the estuary have been designated special variance waters. The rest of the Menomonee River watershed streams have been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-ME in Appendix 4A, *Water Quality Model Data*. In Chapter VI of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*, analyses of water quality conditions during the period 1998-2001 indicate that the recommended water use objectives were only being partially achieved in much of the Menomonee River watershed. Certain water quality monitoring stations occasionally failed to meet standards for dissolved oxygen or temperature, but fecal coliform standards were commonly exceeded at mainstem water quality monitoring stations and in Honey Creek. Also, total phosphorus concentrations commonly exceeded the levels recommended in the regional water quality management plan along the mainstem, and occasionally exceeded these levels in the Little Menomonee River and Willow Creek. Testing for PCB congeners within the water column revealed concentrations that exceeded the human cancer criterion for public health and welfare at six water quality monitoring stations; this standard was exceeded more often in the estuary than in the reaches upstream of the estuary. In addition, concentrations of mercury in water samples taken from the Menomonee River often exceeded both the human threshold concentration for public health and welfare and the wildlife criterion for surface water quality. Also, concentrations of copper in water samples occasionally exceeded the USEPA's criterion maximum concentration. Concentrations of PCBs in fish tissue have declined, but remain above the threshold used by the WDNR to trigger fish consumption advisories. More information is available in Chapter VI of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Milwaukee River

Most of the Milwaukee River watershed lies to the north of the MMSD planning area. Within the MMSD planning area Lincoln Creek, Indian Creek, and the reach of the mainstem river downstream of the former site of the abandoned North Avenue Dam are classified as special variance waters. The rest of the streams and rivers have been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-MI in Appendix 4A, *Water Quality Model Data*. Chapter VII of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*



discusses the water quality characteristics of waterbodies within the Milwaukee River watershed relative to beneficial use objectives. The analyses of water quality presented in that chapter indicate that beneficial uses were only being partially achieved in much of the watershed for the period 1975-2004. This was because during this period the stream reaches for which data are available substantially met the standards for ammonia, dissolved oxygen, and water temperature, but less frequently met the regulatory standard for fecal coliform bacteria and the planning standard for phosphorus. Coliform bacteria were out of compliance with the standard in the majority of standards.

The WDNR has listed two sections of the mainstem of the Milwaukee River within the MMSD planning area as impaired. The 25-mile section of the river upstream of the former North Avenue Dam is considered impaired due to bacterial contamination and fish consumption advisories necessitated by high concentrations of PCBs in the tissue of fish collected from this reach. Fecal coliform bacteria concentrations in that reach exceeded 200 cells per ml in the majority of samples, and the percentage of samples that complied with the standard at water quality monitoring stations in this section of the river ranged between 20 and 55%. The 3.1-mile reach between the confluence with Lake Michigan and the site of the former North Avenue Dam is considered impaired due to aquatic toxicity, bacterial contamination, fish consumption advisories necessitated by high concentrations of PCBs in the tissue of fish collected from this reach, and lack of compliance with standards for dissolved oxygen concentration. Bacteria, metals, phosphorus and PCBs from contaminated sediment and a combination of point and nonpoint sources are cited as factors contributing to the impairment of this section of the river.

In only one tributary, the West Branch Milwaukee River, were dissolved oxygen concentrations frequently below the standard. Fecal coliform concentrations frequently exceeded the applicable standard in four tributaries; Indian Creek, Lincoln Creek, the North Branch Milwaukee River, and Southbranch Creek. In the North Branch Milwaukee River and Southbranch Creek, concentrations of fecal coliform bacteria were out of compliance in the majority of samples. Two tributaries in the planning area are listed as impaired by the WDNR. Both Lincoln Creek and Indian Creek downstream of IH-43 are considered impaired due to aquatic toxicity, degraded habitat, lack of compliance with standards for dissolved oxygen concentration, and high temperatures.

More information is available in Chapter VII of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Oak Creek

Oak Creek and its two unnamed tributary streams have been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-OC in Appendix 4A, *Water Quality Model Data*. Due to levels of fecal coliform that exceed water quality standards along the mainstem, SEWRPC determined that recommended water use objectives were only partially achieved in the Oak Creek watershed for the period 1998-2001. See Chapter VIII of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*. Also, concentrations of total phosphorus in the mainstem Oak Creek and the Mitchell Field Drainage Ditch commonly exceeded the levels recommended in the regional water quality management plan, and dissolved oxygen levels in the mainstem upstream from the confluence with the North Branch of Oak Creek were below the standard in a substantial portion (approximately 43%) of the samples. Concentrations of



mercury in water commonly exceeded both the human threshold concentration for public health and welfare and the wildlife criterion for surface water quality, and about 5-10% of samples had copper concentrations that exceeded the USEPA's criterion maximum concentration. More information is available in Chapter VIII of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Root River

Only a portion of the Root River watershed lies within the MMSD planning area; several tributaries flow northward into the planning area upstream of River Mile 23.8, at which point the Root River mainstem flows south and out of the planning area. The Root River mainstem and many of its tributaries have been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-RT in Appendix 4A, *Water Quality Model Data*. Within the MMSD planning area, two tributary reaches have been designated LFF waters: Tess Corners Creek and Hales Corners Creek downstream from the former Hales Corners Sewage Treatment Plant. Four reaches within the planning area have been designated LAL waters: an unnamed tributary between former Rawson Homes Sewage Treatment Plant and Root River, Hales Corners Creek upstream of the former Hales Corners Sewage Treatment Plant, diffuse surface drainage from the former New Berlin Memorial Hospital Sewage Treatment Plant to Root River tributary, and tributary to Root River downstream from the former New Berlin Memorial Hospital Sewage Treatment Plant.(19)

Chapter VIII of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds* suggests that the recommended water use objectives were only partially achieved in the majority of streams in the watershed during the period 1998-2004.^a Dissolved oxygen concentrations from water quality monitoring stations along the mainstem of the Root River upstream of Grange Avenue and from the water quality monitoring station along the Root River Canal were commonly below the relevant standard, indicating frequent violation of the standard. Fecal coliform bacterial standards were commonly exceeded at water quality monitoring stations along the mainstem of the Root River and at the water quality monitoring station along the Root River Canal. The concentrations of total phosphorus in the mainstem of the Root River and the Root River Canal also commonly exceeded the recommended levels from the regional water quality management plan. Concentrations of mercury in water samples taken from the Root River often exceeded both the human threshold concentration for public health and welfare and the wildlife criterion for surface water quality. Concentrations of copper in water samples occasionally exceeded the USEPA's criterion maximum concentration. Finally, concentrations of mercury and PCBs in tissue of fish collected in the Root River below the Horlick Dam (outside of the MMSD planning area) were above the threshold used by the WDNR for issuing fish consumption advisories in all samples. More information is available in Chapter IX of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

^a Relative to the Kinnickinnic River, Menomonee River, and Oak Creek watersheds, the baseline period examined for the Root River was extended to 2004 in order to take advantage of data collected specifically for the regional water quality plan update in 2004 by the USGS and by the City of Racine Health Department during the period 1998-2005.

Lake Michigan Direct Tributaries

Fish Creek and the three unnamed tributary streams to Lake Michigan have all been designated as FAL waters by default because no specific use classification is identified in NR 102. See Figure 4A-1-DD in Appendix 4A, *Water Quality Model Data*. SEWRPC is in the process of summarizing the water quality and beneficial use attainment of these tributaries; that summary will be available in Chapter X of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

Lake Michigan and Beaches

Wis. Admin. Code NR 104.25 requires that all Lake Michigan waters meet the standards for water supplies and the standards for recreational use and fish and aquatic life. Water quality criteria necessary to meet public health and welfare standards can be found in Table IV-3 of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*. In addition, NR 102 provides thermal standards for discharges to Lake Michigan. Outside of defined mixing zones, thermal discharges may not raise receiving water temperature more than 3°F above the existing natural temperature. Wis. Admin. Code NR 102 also establishes temperature limits at the edge of the mixing zone, although Milwaukee Harbor is specifically noted as not having to meet these limits.

The federal Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 required states with coastal or Great Lakes recreation waters to establish water quality criteria and standards for pathogens and pathogen indicators at least as stringent as those set forth in the January 1986 USEPA report titled *Ambient Water Quality for Bacteria—1986*. If a state did not adopt sufficiently restrictive standards and criteria by the 2004 deadline, the BEACH Act authorized USEPA to propose regulations for pathogens and pathogen indicators. The state of Wisconsin had not adopted such criteria by the deadline and the USEPA promulgated criteria for Wisconsin that call for an *Escherichia coli* geometric mean standard of 126 counts per 100 ml and a single sample maxima ranging from 235 counts per 100 ml to 575 counts per 100 ml, depending on the frequency of use of the recreational waters. Also, an enterococci geometric mean standard of 33 counts per 100 ml and a single sample maximum ranging from 61 to 151 counts per 100 ml were established (40 CFR Part 131.41).

The SEWRPC is in the process of summarizing the water quality and beneficial use attainment in Lake Michigan and the beaches; that summary will be available in Chapter X of SEWRPC Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds*.

MMSD Planning Area Special Variance Waters

Individual reaches in three of the watersheds within the planning area have been designated by NR 104 as special variance waters. This includes portions of the mainstem and selected tributaries of the Kinnickinnic, Menomonee, and Milwaukee Rivers.

Kinnickinnic River

The entire mainstem Kinnickinnic River has been designated a variance water under NR 104.06(2)(a)(8). This variance requires the waters to meet the FAL standards except that the dissolved oxygen shall not be lowered to less than 2 mg/L at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not



less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10% of all samples during any month.

Menomonee River

Honey Creek, Underwood Creek downstream of Juneau Boulevard, and the Menomonee River downstream of its confluence with Honey Creek have been designated as variance waters under NR 104.06(2)(a)(6), NR 104.06(2)(a)(1) and NR 104.06(2)(a)(7), respectively. These waters must meet the FAL standards except that the dissolved oxygen shall not be lowered to less than 2 mg/L at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10% of all samples during any month.

The South Burnham Canal and South Menomonee Canal are both variance waters under NR 104.06(2)(b)(2). The water quality standards for these areas coincide with the FAL standards except that the dissolved oxygen may not be lowered to less than 2 mg/L at any time, nor may the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 89°F at any time at the edge of the mixing zones established under NR 102.05(3).

Milwaukee River

The lowest reach of the Milwaukee River, from the abandoned North Avenue Dam to the confluence with Lake Michigan, and two tributaries, Indian Creek and Lincoln Creek, have been designated as variance waters. The river was designated under NR 104.06(2)(b)(1), and the two tributaries were designated under NR 104.06(2)(a)(5) and NR 104.06(2)(a)(9), respectively. The water quality standards for the special variance river reach coincide with the FAL standards except that the dissolved oxygen may not be lowered to less than 2 mg/L at any time, nor may the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 89°F at any time at the edge of the mixing zones established under NR 102.05(3). The variances for the Milwaukee River tributaries require that they meet the FAL standards except that the dissolved oxygen shall not be lowered to less than 2 mg/L at any time, nor shall the membrane filter fecal coliform count exceed 1,000 per 100 ml as a monthly geometric mean based on not less than 5 samples per month nor exceed 2,000 per 100 ml in more than 10% of all samples during any month.

6.3.4 Nonpoint Source Performance Standards

Wis. Admin. Code NR 151, promulgated in September 2002 and revised in July 2004, sets forth performance standards for controlling nonpoint source pollution from agricultural and nonagricultural land and from transportation facilities. Agricultural standards are required to be met on all new cropland; existing cropland is required to meet the standards only if cost sharing funds are available. Nonagricultural performance standards address construction and post construction phases of new development and redevelopment, developed urban areas, and non-municipal property fertilizing.

Wis. Admin. Code NR 151 requires that municipalities with WPDES stormwater discharge permits reduce the amount of total suspended solids in stormwater runoff from existing developed areas to the maximum extent practicable, amounting to a minimum reduction of 20%

by March 10, 2008, and 40 % by October 1, 2013. In addition to this minimum reduction, permitted municipalities must implement the following:

- ◆ Public information and education programs relative to specific aspects of nonpoint source pollution control
- ◆ Municipal programs for collection and management of leaf and grass clippings
- ◆ Site-specific programs for application of lawn and garden fertilizers on municipally-controlled properties with over five acres of pervious surface

By March 10, 2008, incorporated municipalities with average population densities of over 1,000 people or more per square mile that are not required to obtain municipal stormwater discharge permits must implement these same three programs.

In addition, all construction sites that have one acre or more of land disturbance must achieve an 80% reduction in the sediment load generated by the site, or to the maximum extent practicable. Transportation facility performance standards are set forth in both NR 151 and TRANS 401.

6.3.5 Groundwater Management Inventories

This section summarizes information provided by SEWRPC in Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*. Groundwater is a key element of the natural resource base that not only sustains lake levels and wetlands and provides the base flows of streams, but also once comprised a major source of water supply in the MMSD planning area. Groundwater is present within three major aquifers in this area:

- ◆ Sand and gravel deposits in the glacial drift
- ◆ Shallow dolomite strata in the underlying bedrock
- ◆ Deeper sandstone, dolomite, siltstone and shale strata

Because of their proximity to the land's surface and hydraulic interconnection, the first two aquifers are commonly referred to collectively as the "shallow aquifer," while the latter is referred to as the deep aquifer. Like surface water, groundwater is susceptible to depletion in quantity and to deterioration in quality as a result of urban and rural development.

The SEWRPC is developing an inventory of the groundwater resources within the MMSD planning area as part of its regional water supply planning project. Although groundwater pumping was historically a major source of water supply for the municipalities and industries of Milwaukee County, pumping peaked between 1950 and 1960, after which groundwater use began to decline in the County. With some exceptions, municipal and industrial users have generally switched to water withdrawn from Lake Michigan.

The SEWRPC inventory has tentatively identified 230 active high-capacity well systems within the MMSD planning area. Of these, 86 are in the city of Mequon and the village of Thiensville (Ozaukee County), 68 are in Waukesha County, 57 are in Milwaukee County and 19 are in the village of Germantown (Washington County). The most prevalent use for these systems is residential water supply (95 systems). Institutional use (schools and government facilities) accounts for 45 systems, irrigation (primarily golf courses) for 36 systems, industrial use for 23 systems, commercial use for 19 systems, and agricultural and recreational uses for 6 systems each. More information can be found in Chapter III of SEWRPC Planning Report No. 52, *A*

Regional Water Supply Plan for Southeastern Wisconsin and in Chapter XI of SEWRPC Technical Report No. 39, Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds.

6.3.6 U.S. Army Corps of Engineers Dredging Program

As part of its mission to maintain rivers and harbors, the COE dredges portions of the Milwaukee Harbor, its outlet to Lake Michigan and the lower reaches of the Milwaukee, Kinnickinnic, and Menomonee Rivers. This dredging is undertaken to maintain sufficient depth for commercial navigation and recreational boating. Milwaukee Harbor is not dredged on a regular schedule; instead the COE regularly surveys the navigation channel and issues advisories when depths become reduced. When the COE determines that dredging may be necessary, that project is prioritized for funding under the operations budget of the COE's Detroit District. Dredging projects are conducted based on priority and available funding. Dredging in this area occurred most recently in December 2001; since 1990, nearly 317,000 cubic yards of sediment have been removed from the watercourses in this way.(20)

Since 1976, dredged material from this area has been placed in the Milwaukee Confined Disposal Facility (CDF). The Milwaukee CDF is a 44-acre site adjacent to JIWWTP that was constructed under Section 123 of Public Law 91-611. This facility was developed because levels of pollutants such as polycyclic aromatic hydrocarbons (PAHs) in sediments from portions of the rivers and harbor make material dredged from these areas unsuitable for in-water placement. The CDFs are diked structures that are the most commonly used means to manage contaminated sediments dredged for navigation and environmental remediation. The Milwaukee CDF is a 44-acre site adjacent to JIWWTP that was constructed under Section 123 of Public Law 91-611. Dredged materials are placed inside the CDF dike and solid particles settle out within the facility as water flows passively through the dike. Once dewatered, the dredged material may be reused for other purposes such as landfill capping, if appropriate.(21)

References

- (1) U.S. Environmental Protection Agency, *National Combined Sewer Overflow Control Strategy*, August 10, 1989 (54 Federal Register 37370)
- (2) U.S. Environmental Protection Agency, *CSO Control Policy*, April 19, 1994 (59 Federal Register 18688)
- (3) National Pollutant Discharge Elimination System, *Compliance Inspection Manual*, Chapter 12, USEPA (July 2004)
- (4) Milwaukee Metropolitan Sewerage District, *Documentation of Implementation of the Nine Minimum Combined Sewer Overflow Controls* (December 1, 2003)
- (5) Milwaukee Metropolitan Sewerage District, *Combined Sewer Overflows Summary of Historic Planning and Implementation Long-Term Control* (August 25, 2003) 03-188-5
- (6) Code of Federal Regulations, Title 40 - *Protection of the Environment*, Part 403
- (7) Wisconsin Administrative Code Chapter Natural Resources 211, *General Pretreatment Requirements*
- (8) Milwaukee Metropolitan Sewerage District, *Source Reduction Effectiveness Analysis* (May 2005)
- (9) Ibid.
- (10) Milwaukee Metropolitan Sewerage District, WPDES Permit # WI-0036820-02-0, page 81
- (11) Southeastern Wisconsin Regional Planning Commission, Planning Report No. 44, *A Comprehensive Plan for the Des Plaines River Watershed* (June 2003), Chapter 9: Water Law and Federal, State and Local Regulations Related to Water Resource Planning
- (12) U.S. Coast Guard [Internet]; available from <http://www.uscg.mil/d9/wwm/mso/milwaukee/>
- (13) Milwaukee Metropolitan Sewerage District Rules, [Internet]; available from <http://www.mmsd.com/rules/index.cfm>, accessed 6 November, 2006
- (14) Southeastern Wisconsin Regional Planning Commission, Planning Report No. 44, *A Comprehensive Plan for the Des Plaines River Watershed* (June 2003), Chapter 9: Water Law and Federal, State and Local Regulations Related to Water Resource Planning
- (15) Ibid.
- (16) Ibid.
- (17) Ibid.
- (18) Ibid.
- (19) Southeastern Wisconsin Regional Planning Commission, Technical Report No. 39, *Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds* (DRAFT Report – not yet published) Chapter 9

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- (20) U.S. Army Corps of Engineers Detroit District [Internet]; available from www.lre.usace.army.mil/kd/go.cfm?destination=Page&Pge_ID=1525
- (21) U.S. Army Corps of Engineers Great Lakes & Ohio River Division, *Confined Disposal Facilities on the Great Lakes* (Chicago, IL: October 1998)