

*REPORT ON POINT SOURCE PROGRESS IN HYPOXIA
TASK FORCE STATES*

FEBRUARY 2016

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INTRODUCTION

The Hypoxia Task Force

Every summer, a large hypoxic zone forms in the Gulf of Mexico. This zone, where the amount of dissolved oxygen is too low for many aquatic species to survive, is fueled primarily by excess nutrients (nitrogen and phosphorus) from the Mississippi-Atchafalaya River Basin (MARB) and is also affected by temperature and salinity stratification (layering) of waters in the Gulf that prevents mixing.

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (the Hypoxia Task Force [HTF]) is a federal/state/tribal partnership established in 1997 to gain a better understanding of the causes and effects of the northern Gulf of Mexico hypoxic zone and to reduce its size, severity, and duration. The HTF is comprised of representatives from six federal agencies (the United States [U.S.] Environmental Protection Agency [EPA], U.S. Department of Agriculture [USDA], U.S. Department of Commerce, U.S. Department of the Interior, U.S. Army Corps of Engineers) and twelve states (Arkansas, Illinois, Indiana, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Ohio, Wisconsin, and Tennessee); the National Tribal Water Council represents tribal interests.

In 2001, the HTF committed to a specific goal for reducing the areal extent of the Gulf hypoxic zone by 2015¹. In 2007, EPA's Science Advisory Board reported that in order to achieve this goal, a dual nutrient strategy targeting at least a 45 percent reduction in both riverine total nitrogen load and in riverine total phosphorus load was needed. In 2008, HTF states committed to develop State Nutrient Reduction Strategies (Strategies) to reduce nutrient loads to the Gulf of Mexico and to water bodies within the Basin. These Strategies are a road map for each state to target those watersheds with significant contributions of nitrogen and phosphorus to the Gulf and a vehicle for coordination with other states, partners, and stakeholders. The state Strategies are complemented by a federal strategy for collaborating with HTF states to achieve HTF's goals.

In 2014, given the size of the MARB, the many actions that need to be funded and implemented, the reservoir of excess nutrients in soils and groundwater and other factors, the HTF recognized that it will take additional time to meet its water quality goal for the Gulf. In February 2015, the HTF released a revised goal framework, which extended the timeframe for reducing the size of the hypoxic zone from 2015 to the year 2035. The Task Force also added an interim target of achieving a 20% reduction in nutrient loading by the year 2025. The HTF also committed to develop and report on several common measures for point source nutrient reductions. In subsequent work, the HTF agreed to use the following common point source measures to track progress toward the interim load reduction target: the number and percentage of major sewage treatment plants, including publicly owned treatment works (POTWs), issued National Pollutant Discharge Elimination System (NPDES) permits with: 1) monitoring requirements for nitrogen and/or phosphorus; and 2) numeric discharge limits for nitrogen and/or phosphorus. The Task Force chose these measures because data and methodology limitations preclude swift adoption of a common approach for directly measuring load reduction. While the HTF evaluates options for developing

¹ By the year 2015, subject to the availability of additional resources, reduce the 5-year running average areal extent of the Gulf of Mexico hypoxic zone to less than 5,000 square kilometers through implementation of specific, practical, and cost-effective voluntary actions by all States, Tribes, and all categories of sources and removals within the Mississippi/Atchafalaya River Basin to reduce the annual discharge of nitrogen into the Gulf.

a potential load reduction measure, the Task Force agreed to track adoption of monitoring requirements in permits, which allows for more accurate calculation of load reduction and can inform decisions on where additional permit limits are needed; permit limits are one important tool for reducing loads.

This progress report presents the HTF's approach for tracking these common measures and documents progress made through September 30, 2014 (the end of federal fiscal year 2014). As documented in Appendix C to this report, some states have made additional progress since this date and some are using additional, state-specific approaches to make and track progress towards reducing point source loads.

The HTF is working to develop measures of progress on reducing loads from nonpoint sources and intends to issue a separate report on Nonpoint Source Measures.

For more information about the Hypoxia Task Force, see the following web links:

- <http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/c1feec0ba93871db85257dea005f017f!OpenDocument>
- <https://epa.gov/ms-htf/htf-2015-report-congress>

STATUS OF NITROGEN AND PHOSPHORUS MONITORING AND LIMITS AT MAJOR SEWAGE TREATMENT PLANTS

Data Source and Methodology

To document the status of state progress on implementing nitrogen and phosphorus monitoring requirements and discharge limits at major sewage treatment plants, the HTF evaluated and agreed to use National Pollutant Discharge Elimination System (NPDES) permit data from EPA's Integrated Compliance Information System (ICIS). ICIS is a web-based data system that stores information on NPDES permits, such as discharge limits and monitoring requirements (see <http://www.epa.gov/enviro/facts/pes-icis/index.html>).

EPA downloaded data from ICIS in February 2015, shortly after the late-January 2015 deadline EPA set for states to enter their permitting data from federal fiscal year 2014 (which ended September 30, 2014) into ICIS. These data provided a common baseline for this report. To obtain the number of NPDES permits with nitrogen and/or phosphorus limits and/or monitoring requirements, EPA first identified NPDES permits with a Source Identification Classification (SIC) code of 4952, which is assigned to facilities engaged in the collection and disposal of wastes transported through a sewer system. For any permits with a missing SIC code, EPA identified permits with "POTW" (publicly owned treatment works) entered as the "Facility Type Indicator". EPA filtered this set of facilities (SIC Code 4952 plus POTWs) to include only the subset of these sewage treatment plants that are classified as major dischargers (generally, "majors" discharge greater than one million gallons per day; in aggregate, these facilities typically discharge a very large proportion of the wastewaters discharged in a state). EPA then identified which of these major sewage treatment plants were permitted by EPA (e.g., on Tribal lands and some large military installations) and tallied these federally-permitted facilities separately from the state-by-state counts.

For this first progress report, EPA did not apply a geographic filter within state boundaries. Thus, this report includes data in some states for major sewage treatment plants that do not discharge to the Gulf of Mexico. For example, some of the permitted facilities in Ohio, Indiana, Wisconsin, and Minnesota discharge to the Great Lakes. For future reports, the HTF will examine the possibility of removing facilities that discharge to waterbodies outside of the Mississippi River Basin and Gulf of Mexico.

From the universe of major sewage treatment plants, EPA tallied facilities with discharge monitoring and/or limits for various forms of nitrogen (excluding ammonia²) or phosphorus. Appendix A documents the parameters included in counts of nutrient monitoring requirements and/or limits.

Data Verification and Reconciliation

Three states (Mississippi, Illinois, and Iowa) worked with EPA on a pilot effort to compare state NPDES program data with data in the ICIS database. Mississippi NPDES program data closely matched ICIS data, with only minor discrepancies identified (e.g., differences in SIC codes or major-versus-minor discharger designations for a small number of facilities). Illinois data had similar, minor discrepancies as well as another difference: Illinois' NPDES program tracks discharge limits that take effect in future years, after the end of the current five-year permit term, while ICIS does not. Therefore, the number of permits with

² Ammonia was excluded because permit authorities generally limit ammonia due to its near-field toxic effect. Ammonia treatment often involves a process that yields other forms of nitrogen which are then discharged.

nutrient limits in Illinois' data system was larger than in ICIS. Illinois has also reissued a number of additional permits with monitoring requirements since late January 2015, the deadline EPA set for states to enter their 2014 data into ICIS. Iowa's NPDES program data differed significantly from ICIS because of technical issues in transferring data from the state's data system into ICIS. EPA and Iowa are continuing to work to resolve this issue.

After completing the pilot effort, EPA worked with the nine remaining states to compare their NPDES program data to ICIS. In general, state data matched the data in ICIS and any discrepancies identified were reconciled. EPA encouraged states to ensure that any data discrepancies identified during this review were corrected in ICIS, allowing for transparency and consistent reporting between EPA's ICIS data system and this HTF report.

Summary Status Report

The NPDES permit data documented in EPA's ICIS data system are presented below in Tables 1 and 2. These data provide a snapshot of point source nitrogen and phosphorus monitoring requirements and discharge limits as of September 2014, the end of federal fiscal year 2014, and reflect progress made in previous years³. Table 1 presents the total number and percentage of major sewage treatment plants that monitor for nitrogen and/or phosphorus. Table 2 presents the number and percentage of major sewage treatment plants with nitrogen and/or phosphorus discharge limits. Appendix B contains the full state-specific NPDES permit data extracted from ICIS. Some notable findings from these data include the following:

- Across all twelve HTF states, 57 percent of permits for major sewage treatment plants included monitoring requirements for both nitrogen and phosphorus; 74 percent of permits for major sewage treatment plants included monitoring requirements for at least one nitrogen or phosphorus parameter.
- About one-third of the permits for major sewage treatment plants in HTF states have limits for nitrogen or phosphorus; most of these have phosphorus limits. Only five percent of the permits for major sewage treatment plants include limits for both nitrogen and phosphorus.

³ As discussed above, some state permit data are not available in ICIS (Iowa's data and, for Illinois, limits that take effect in a future permit term).

Table 1. Number and percent of major sewage treatment plants with nitrogen (N) and/or phosphorus (P) monitoring requirements for monitoring only purposes or for compliance with an effluent limit.

State	Universe	Monitoring (Both N and P)		Monitoring N		Monitoring P		Total Permits with Nutrient Monitoring (N or P)	
		#	%	#	%	#	%	#	%
Arkansas	78	61	78%	2	3%	8	10%	71	91%
Illinois	217	151	70%	1	<1%	13	6%	165	76%
Indiana	133	14	11%	0	0%	89	67%	103	77%
Iowa	100	46	46%	0	0%	0	0%	46	46%
Kentucky	88	70	80%	1	1%	15	17%	86	98%
Louisiana	105	13	12%	0	0%	0	0%	13	12%
Minnesota	75	64	85%	0	0%	11	15%	75	100%
Mississippi	65	65	100%	0	0%	0	0%	65	100%
Missouri	123	19	15%	5	4%	5	4%	29	24%
Ohio	205	205	100%	0	0%	0	0%	205	100%
Tennessee	108	87	81%	1	1%	0	0%	88	81%
Wisconsin	86	5	6%	0	0%	81	94%	86	100%
Federally Issued Permits	27	8	30%	1	4%	2	7%	11	41%
All States	1,410	808	57%	11	1%	224	16%	1,043	74%

Table 2. Number and percent of major sewage treatment plants with numeric discharge limits for nitrogen (N) and/or phosphorus (P).

State	Universe	Limits (Both N and P)		Limits (N only)		Limits (P only)		Total Permits with Nutrient Limits (N or P)	
		#	%	#	%	#	%	#	%
Arkansas	78	7	9%	2	3%	9	12%	18	23%
Illinois	217	12	6%	1	<1%	55	25%	68	31%
Indiana	133	0	0%	0	0%	44	33%	44	33%
Iowa	100	0	0%	5	5%	0	0%	5	5%
Kentucky	88	0	0%	0	0%	24	27%	24	27%
Louisiana	105	0	0%	0	0%	0	0%	0	0%
Minnesota	75	0	0%	0	0%	53	71%	53	71%
Mississippi	65	21	32%	0	0%	0	0%	21	32%
Missouri	123	0	0%	2	2%	8	7%	10	8%
Ohio	205	5	2%	0	0%	102	50%	107	52%
Tennessee	108	22	20%	1	1%	5	5%	28	26%
Wisconsin	86	0	0%	0	0%	86	100%	86	100%
Federally Issued Permits	27	1	4%	3	11%	1	4%	5	19%
All States	1,410	68	5%	14	1%	387	27%	469	33%

The HTF recognizes that counts of monitoring requirements and permit limits may not fully reflect all of the work that states have done to reduce nutrient discharges from their point sources, nor fully explain the approaches states used to make progress. Thus, Task Force states were invited to provide state-specific, supplemental information. Seven states chose to provide additional information about their work, which is included in Appendix C. Highlights from Appendix C include:

- Illinois: Routinely issues NPDES permits to major municipal sewage treatment plants with a 1.0 mg/L phosphorus limit and requires these facilities to submit a feasibility study that identifies the method, timeframe, and costs of reducing phosphorus discharge to a level meeting potential future effluent standards of 0.5 mg/L and 0.1 mg/L.
- Indiana: Majors are limited to 1 mg/L total phosphorus.
- Iowa: Requires monitoring of total nitrogen and total phosphorus at all municipal and industrial majors and industrial minors that utilize biological treatment for process wastewater, and requires feasibility studies for technology upgrade. As part of its 45% reduction goal for both nitrogen and phosphorus, nutrient reduction at point sources will result in reductions of 4% of total statewide nitrogen and 16% of phosphorus.
- Minnesota: Established 1 mg/L total phosphorus standard for new or expanded wastewater treatment plants with potential above 1,800 pounds/year; require smaller facilities to develop phosphorus management plans. Achieved a 66% statewide phosphorus load reduction from 2001 to 2013.
- Ohio: Requires feasibility reports for major dischargers to achieve 1 mg/L phosphorus. Several nutrient water quality trading projects are underway, including Ohio River Basin.
- Wisconsin: Established a 1 mg/L total phosphorus technology based standard in the late 1990's. This has now been complemented with water quality based effluent limits derived either from Total Maximum Daily Loads (TMDLs) or calculated limits based on promulgated phosphorus water quality criteria. Typical limits range from 0.04 mg/L to 0.1 mg/L for total phosphorus.

NEXT STEPS

Developing Additional Measures of Point Source Progress

The HTF continues to explore other potential common measures of progress, including load reduction tracking. Load reductions are the most direct measure of progress toward the 2025 interim load reduction target of reducing nutrient loads by 20 percent relative to the average nutrient loads from the Mississippi-Atchafalaya River Basin during the 1980 to 1996 period. However, a number of issues need to be worked through, including identification of a common approach for documenting or estimating baseline loads from point sources. The HTF will also evaluate the potential for common adoption of one or more of the state-specific measures for use in future progress reports.

Making More Progress on Monitoring and Permit Limits for Nitrogen and Phosphorus

HTF members will continue working to increase the number of major sewage treatment plants with monitoring requirements for nitrogen and phosphorus. Increased monitoring will help to calculate load reductions and inform where additional permit limits for nitrogen and/or phosphorus are needed.

Releasing Future Reports on Point Source Progress

The Task Force intends to release a similar progress report in two years and every two years thereafter. As NPDES permits are reissued on a five-year cycle, this time frame will allow about 40 percent of the permits for major sewage treatment plants in the HTF states to be renewed with monitoring requirements (where they are not in place now) and, as appropriate, permit limits for nitrogen and/or phosphorus.

REFERENCES

United States Environmental Protection Agency (EPA). 2015. *States Develop New Strategies to Reduce Nutrient Levels in Mississippi River, Gulf of Mexico*.

<http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/c1feec0ba93871db85257dea005f017f!OpenDocument>.

United States Environmental Protection Agency (EPA). 2015. Mississippi River/Gulf of Mexico Watershed Nutrient Task Force 2015 Report to Congress: First Biennial Report. <https://www.epa.gov/ms-htf/htf-2015-report-congress>

Appendix A NUTRIENT PARAMETERS INCLUDED IN THE NPDES PERMIT COUNTS

Parameter Code	Parameter Description	Pollutant Code	Chemical Abstract Service Number
00600	Nitrogen, total [as N]	2817	7727-37-9
00602	Nitrogen, Dissolved	99999	
00605	Nitrogen, organic total [as N]	2817	7727-37-9
00607	Nitrogen, organic, dissolved [as N]	2817	7727-37-9
00613	Nitrite nitrogen, dissolved [as N]	2806	14797-65-0
00615	Nitrogen, nitrite total [as N]	2806	14797-65-0
00618	Nitrogen, nitrate dissolved	5713	14797-55-8
00620	Nitrogen, nitrate total [as N]	5713	14797-55-8
00621	Nitrate nitrogen, dry weight	5713	14797-55-8
00623	Nitrogen, Kjeldahl, dissolved [as N]	2817	7727-37-9
00625	Nitrogen, Kjeldahl, total [as N]	2817	7727-37-9
0625D	Nitrogen, Kjeldahl, total [as N] [per discharge]	2817	7727-37-9
00630	Nitrite + Nitrate total [as N]	10354	
00631	Nitrite plus nitrate dissolved 1 det.	10354	
00640	Nitrogen, inorganic total	2817	7727-37-9
00650	Phosphate, total [as PO4]	5878	14265-44-2
00653	Phosphate total soluble	5878	14265-44-2
00655	Phosphate, poly [as PO4]	5878	14265-44-2
00660	Phosphate, ortho [as PO4]	5878	14265-44-2
00662	Phosphorous, total recoverable	5889	7723-14-0
00664	Dock discharge of phosphorus	5889	7723-14-0
00665	Phosphorus, total [as P]	5889	7723-14-0
0665S	Phosphorus, total [as P] [per season]	5889	7723-14-0
00666	Phosphorus, dissolved	5889	7723-14-0
00667	Phosphorus, dissolved reactive [drp as P]	5889	7723-14-0
00670	Phosphorous, total organic [as P]	5889	7723-14-0
00671	Phosphate, ortho, dissolved [as P]	5878	14265-44-2
01299	Nitrogen-nitrate in water, [pct]	5713	14797-55-8
04157	Phosphorus [reactive as P]	5889	7723-14-0
04175	Phosphate, ortho [as P]	5878	14265-44-2
49579	Nitrogen, total Kjeldahl	2817	7727-37-9
50785	Phosphorus, ortho	5889	7723-14-0
51084	Nitrogen, total available [water]	2817	7727-37-9
51086	Nitrogen, nitrate [NO3], [water]	5713	14797-55-8
51087	Nitrogen, Kjeldahl, total [TKN] [water]	2817	7727-37-9
51092	Phosphate, total [P2O5], water	11195	17101-36-9
51100	Nitrogen, total, as NO3, [water]	5713	14797-55-8
51425	Nitrogen, Total As N	99999	N/A
51426	Phosphorus, Total As P	99999	N/A
51445	Nitrogen, Total	2817	7727-37-9

Parameter Code	Parameter Description	Pollutant Code	Chemical Abstract Service Number
51447	Nitrogen, Nitrite Total	2806	14797-65-0
51448	Nitrogen, Nitrate Total	5713	14797-55-8
51449	Nitrogen, Kjeldahl Total	2817	7727-37-9
51450	Nitrite Plus Nitrate Total	10354	N/A
51451	Phosphorus, Total	5889	7723-14-0
51489	Nitrogen, Total as NO3 + NH3	12586	N/A
51622	Limiting Nutrient [Nitrogen or Phosphorus]	99999	N/A
51662	Nitrogen, Kjeldahl, Total [TKN], insoluble	2817	7727-37-9
51663	Phosphorus, insoluble	5889	7723-14-0
51675	Annual Nitrate Nitrogen Discharged	5713	14797-55-8
51699	Phosphorus, Total [Avg Seasonal Load Cap]	5889	7723-14-0
51764	Phosphorus Adsorption	5889	7723-14-0
70505	Phosphate, total, color method [as P]	5889	7723-14-0
70506	Phosphate, dissolved color method [as P]	5878	14265-44-2
70507	Phosphorous, in total orthophosphate	5889	7723-14-0
71850	Nitrogen, nitrate total [as NO3]	5713	14797-55-8
71888	Phosphorus, total soluble [as PO4]	5878	14265-44-2
81393	Nitrogen, total Kjeldahl, % removal	2817	7727-37-9
81639	Nitrogen Kjeldahl, total [TKN]	2817	7727-37-9
82386	Nitrogen, oxidized	2817	7727-37-9
82539	Nitrogen, Kjeldahl	2817	7727-37-9

Appendix B STATE-SPECIFIC, FACILITY LEVEL ICIS SPREADSHEETS

Arkansas

Table B-1. Arkansas major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
FAYETTEVILLE, CITY OF-PAUL NOLAND WWTP	AR0020010	✓	✓	✓	
FORREST CITY, CITY OF	AR0020087	✓	✓		
SILOAM SPRINGS, CITY OF	AR0020273	✓	✓	✓	
NLR WASTEWATER UTILITY-FAULKNER LAKE	AR0020303	✓	✓		
NLRWU-FIVE MILE CREEK	AR0020320	✓	✓		
ARKADELPHIA WASTEWATER TREATMENT PLANT	AR0020605	✓	✓		
BATESVILLE WW TREATMENT PLANT	AR0020702	✓	✓		
MOUNTAIN HOME, CITY OF-WWTP	AR0021211	✓	✓		✓
ALMA, CITY OF	AR0021466	✓	✓		
VAN BUREN, CITY OF-MAIN PLANT	AR0021482	✓	✓		
OSCEOLA WW TREATMENT PLANT	AR0021580	✓	✓		
SEARCY, CITY OF WWTF	AR0021601	✓	✓		
CABOT WASTEWATER TREATMENT FACILITY	AR0021661	✓	✓		
DEQUEEN, CITY OF	AR0021733	✓	✓	✓	✓
GREEN FOREST, CITY OF-WWTP	AR0021741	✓	✓	✓	✓
FORT SMITH, CITY OF-MASSARD	AR0021750				
RUSSELLVILLE WATER & SEWER SYSTEM-CITY CORPORATION	AR0021768	✓	✓		✓
NASHVILLE, CITY OF	AR0021776	✓	✓		
BERRYVILLE WW TREATMENT PLANT	AR0021792	✓		✓	
LRWU-ADAMS FIELD WASTEWATER TREATMENT FACILITY	AR0021806	✓	✓		
MONTICELLO, CITY OF-WEST PLANT	AR0021822	✓	✓		
MONTICELLO, CITY OF - EAST PLANT	AR0021831	✓	✓		
WYNNE, CITY OF	AR0021903	✓	✓		
MARION, CITY OF	AR0021971	✓	✓		
HUNTSVILLE, CITY OF	AR0022004	✓	✓	✓	✓
WEST HELENA, CITY OF - WATER UTILITIES	AR0022021	✓	✓		
WEST MEMPHIS, CITY OF - WWTF	AR0022039	✓	✓		
SPRINGDALE WASTEWATER TREATMENT FACILITY	AR0022063	✓		✓	
BEEBE, CITY OF	AR0022101				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
CLARKSVILLE LIGHT & WATER	AR0022187	✓	✓		
DERMOTT, CITY OF (SOUTH POND)	AR0022250				
DECATUR, CITY OF	AR0022292	✓	✓	✓	✓
CAMDEN WATER UTILITIES	AR0022365	✓	✓		
HEBER SPRINGS WASTEWATER TREATMENT PLANT	AR0022381	✓	✓	✓	✓
BENTONVILLE WW TREATMENT PLANT	AR0022403	✓	✓	✓	✓
GREENWOOD, CITY OF	AR0022454	✓	✓		
BLYTHEVILLE, CITY OF-WEST WWTF	AR0022560	✓	✓		
BLYTHEVILLE, CITY OF-SOUTH	AR0022578	✓	✓		
FORT SMITH, CITY OF - "P" STREET WWTP	AR0033278	✓	✓		
PINE BLUFF BOYD POINT WW TREATMENT FAC	AR0033316	✓	✓		
MAUMELLE SUBURBAN IMPROVE DISTRICT #500	AR0033626				
EL DORADO WATER UTILITIES - SOUTH PLANT	AR0033723		✓		
PARAGOULD CITY LIGHT AND WATER	AR0033766	✓	✓		
HOT SPRINGS, CITY OF	AR0033880	✓	✓	✓	
EL DORADO WATER - NORTH PLANT	AR0033936		✓		
DUMAS, CITY OF-WWTP	AR0033987	✓	✓		
BRYANT, CITY OF - WWTP	AR0034002	✓	✓		
MALVERN WW TREATMENT PLANT	AR0034126	✓	✓		
HOT SPRINGS VILLAGE POA-MILL CREEK WWTP	AR0034291	✓	✓	✓	
HARRISON, CITY OF	AR0034321	✓			
STUTTGART WW TREATMENT PLANT	AR0034380	✓	✓		
TRUMANN, CITY OF - WWTP	AR0035602	✓			
BENTON, CITY OF	AR0036498	✓	✓		
MENA WASTEWATER TREATMENT PLANT	AR0036692	✓	✓		
NEWPORT, CITY OF-WASTEWATER FACILITY	AR0037044	✓	✓		
SHERWOOD, CITY OF - NORTH FACILITY	AR0037176	✓	✓		
JONESBORO, CITY WATER AND LIGHT (CWL) - WESTSIDE WWTP	AR0037907	✓	✓		
NLRWU-WHITE OAK BAYOU	AR0038288	✓	✓		
HOPE, CITY OF-BOIS D'ARDC WWTP	AR0038466	✓	✓		
LRWU-FOURCHE CREEK WWTP	AR0040177	✓	✓		
VAN BUREN, CITY OF-NORTH WWTP	AR0040967	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
JACKSONVILLE, CITY OF	AR0041335	✓			
ASHDOWN WW TREATMENT PLANT	AR0042951				
HELENA MUNICIPAL WATER AND SEWER	AR0043389	✓	✓		
ROGERS, CITY OF	AR0043397	✓		✓	
JONESBORO, CITY OF - CITY WATER & LIGHT EASTSIDE WWTP	AR0043401	✓	✓		
WARREN WATER & SEWER	AR0043427				
MAGNOLIA, CITY OF-BIG CREEK WWTP	AR0043613	✓	✓		
WALNUT RIDGE WW TREATMENT PLNT	AR0046566				
CONWAY, CITY OF-TUCKER CREEK WWTP	AR0047279	✓	✓		
CLINTON WEST WW TREATMENT FACILITY	AR0048747	✓	✓	✓	✓
BARLING, CITY OF	AR0048801	✓	✓		
CLINTON EAST WW TREATMENT FACILITY	AR0048836	✓	✓		
EL DORADO WATER UTILITIES	AR0049743	✓			
NORTHWEST ARKANSAS CONSERVATION AUTHORITY -REGIONAL WWTP	AR0050024	✓	✓	✓	
FAYETTEVILLE/WEST SIDE WWTP	AR0050288	✓		✓	
LITTLE ROCK WASTEWATER-LITTLE MAUMELLE WWTP	AR0050849	✓	✓		
CONWAY-TUPELO BAYOU WWTP	AR0051951	✓	✓		
Total	78	69	63	16	9

Illinois

Table B-2. Illinois major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
PLANO STP, CITY OF	IL0020052	✓	✓	✓		
WOOD DALE NORTH STP, CITY OF	IL0020061	✓	✓			
GENEVA STP, CITY OF	IL0020087	✓		✓		**
WAUCONDA WWTF	IL0020109	✓	✓	✓		
HARVARD STP, CITY OF	IL0020117	✓	✓	✓		
MILAN STP, VILLAGE OF	IL0020214	✓	✓			
MANHATTAN STP, VILLAGE OF	IL0020222	✓	✓	✓		
FLORA STP, CITY OF	IL0020273	✓	✓			
HAMPSHIRE STP, VILLAGE OF	IL0020281	✓	✓	✓		
ANTIOCH STP, VILLAGE OF	IL0020354	✓	✓	✓		
CARY WWTP, VILLAGE OF	IL0020516	✓	✓	✓	✓	**
FRANKFORT WEST WWTP	IL0020532	✓	✓			**
NEW LENOX STP #1, VILLAGE OF	IL0020559	✓	✓	✓		**
PRINCETON STP, CITY OF	IL0020575					
FOX RIVER GROVE STP	IL0020583	✓	✓	✓	✓	**
LITCHFIELD STP, CITY OF	IL0020621	✓	✓			**
DANVILLE SD	IL0020788	✓	✓			
LINDENHURST SD STP	IL0020796					**
FOX METRO WRD STP	IL0020818					**
FOX LAKE NW REGIONAL WRF	IL0020958	✓	✓	✓		
MARSEILLES WWTP, CITY OF	IL0021059	✓	✓			
CITY OF MCHENRY - CENTRAL WWTP	IL0021067					
CASEYVILLE TOWNSHIP	IL0021083	✓	✓	✓		
MORRIS - MAIN STP	IL0021113	✓	✓			
CREST HILL WEST STP, CITY OF	IL0021121					
BLOOMINGDALE-REEVES WRF	IL0021130					
SOUTH BELOIT STP, CITY OF	IL0021156	✓	✓	✓	✓	**
SWANSEA STP, VILLAGE OF	IL0021181	✓	✓	✓		
CREVE COEUR WWTP, VILLAGE OF	IL0021237	✓	✓			
MONMOUTH MAIN STP	IL0021253					
BONNIE BRAE FOREST MANOR SD	IL0021261	✓	✓			
GREATER PEORIA SANITARY AND SEWAGE DISTRICT	IL0021288	✓	✓			
PARIS SOUTH STP	IL0021377					
GLENBARD WASTEWATER AUTH-MAIN	IL0021547					
BARRINGTON STP, VILLAGE OF	IL0021598	✓				**
O'FALLON STP, CITY OF	IL0021636	✓	✓			
CHARLESTON STP, CITY OF	IL0021644	✓	✓			
JACKSONVILLE STP, CITY OF	IL0021661	✓	✓			
LAKE IN THE HILLS SD STP	IL0021733	✓	✓	✓		
KANKAKEE RIVER METRO AGENCY	IL0021784					
GENESEO STP, CITY OF	IL0021814	✓	✓			
BENSENVILLE SOUTH STP	IL0021849					**

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
BELLEVILLE STP #1, CITY OF	IL0021873	✓	✓	✓		
SPRINGFIELD MSD-SUGAR CRK STP	IL0021971	✓				**
SPRINGFIELD SD- SPRING CREEK	IL0021989		✓		✓	
STREATOR STP, CITY OF	IL0022004	✓	✓			
LCDPW-DES PLAINES RIVER STP	IL0022055	✓	✓	✓	✓	**
LCDPW-NEW CENTURY TOWN STP	IL0022071	✓	✓	✓	✓	**
RANTOUL EAST STP	IL0022128	✓	✓	✓		
WATSEKA STP, CITY OF	IL0022161	✓	✓			
MOMENCE STP, CITY OF	IL0022179					
PANA STP	IL0022314	✓	✓	✓		
BENTON NORTHWEST STP, CITY OF	IL0022365	✓	✓			
MUNDELEIN STP, VILLAGE OF	IL0022501	✓	✓	✓	✓	**
JOLIET EASTSIDE STP, CITY OF	IL0022519					**
BATAVIA STP, CITY OF	IL0022543	✓		✓		**
FLAGG CREEK WRD MCELWAIN STP	IL0022586					**
CARLINVILLE STP, CITY OF	IL0022675					
ST CHARLES EASTSIDE WWTF, CITY OF	IL0022705	✓	✓			**
DEKALB SANITARY DISTRICT WWTP	IL0023027	✓	✓			
GALESBURG SANITARY DISTRICT	IL0023141	✓	✓			
MENDOTA STP	IL0023221	✓	✓			
MURPHYSBORO STP, CITY OF	IL0023248	✓	✓			**
SALEM STP, CITY OF	IL0023264	✓	✓	✓		
ALGONQUIN WWTP, VILLAGE OF	IL0023329	✓	✓	✓		
WEST CHICAGO REGIONAL STP	IL0023469					
VANDALIA STP	IL0023574	✓		✓		
FREEPORT STP, CITY OF	IL0023591	✓	✓			
CLINTON SD STP	IL0023612	✓	✓			
CAIRO STP, CITY OF	IL0023825					
VILLAGE OF MOKENA WWTP	IL0024201	✓	✓			**
JERSEYVILLE STP, CITY OF	IL0024465	✓	✓			
AQUA ILLINOIS-UNIV PARK	IL0024473	✓	✓	✓		**
DIXON CORRECTIONAL CENTER STP	IL0024724	✓	✓			
HOOPESTON STP	IL0024830	✓	✓			
MANTENO WPCC, VILLAGE OF	IL0025089	✓	✓			
BEARDSTOWN SD STP	IL0025135					**
COLUMBIA STP, CITY OF	IL0025143	✓	✓			
STOOKEY TOWNSHIP MAIN STP	IL0025232	✓	✓			
WILMINGTON STP, CITY OF	IL0026085	✓	✓	✓		
GREENVILLE STP, CITY OF	IL0026298	✓	✓			
EDWARDSVILLE, CITY OF	IL0026310	✓	✓			
CAROL STREAM WRC, VILLAGE OF	IL0026352	✓	✓			**
DIXON STP, CITY OF	IL0026450	✓	✓			
ST. CHARLES WESTSIDE SWWTF	IL0026808	✓		✓		**
ROCK RIVER WRD	IL0027201	✓	✓			
MT. VERNON STP, CITY OF	IL0027341	✓	✓	✓		
ADDISON SOUTH-A.J. LAROCCA STP	IL0027367	✓	✓			

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
ALTON STP, CITY OF	IL0027464	✓	✓			
BARTLETT WWTP, VILLAGE OF	IL0027618	✓	✓			
BELVIDERE STP, CITY OF	IL0027685	✓	✓			
THORN CREEK BASIN SD STP	IL0027723	✓	✓			
BLOOMINGTON/NORMAL WRD STP	IL0027731	✓	✓			
CANTON WEST STP, CITY OF	IL0027839	✓	✓			
CARBONDALE NORTHWEST WWTP	IL0027871	✓	✓			
CITY OF CARBONDALE SOUTHEAST STP	IL0027898	✓	✓			
CARMI WWTP, CITY OF	IL0027910	✓	✓			
CARPENTERSVILLE MAIN STP	IL0027944	✓		✓		**
CENTRALIA STP, CITY OF	IL0027979	✓	✓			
MWRDGC STICKNEY WRP	IL0028053	✓		✓		**
MWRDGC CALUMET WRP	IL0028061	✓		✓		**
MWRDGC LEMONT WRP	IL0028070					**
MWRDGC TERRENCE J O'BRIEN WTR RECLAMATION PLANT	IL0028088	✓	✓			**
COLLINSVILLE STP, CITY OF	IL0028215	✓	✓	✓		
CITY OF CRYSTAL LAKE WWTP #2	IL0028282	✓	✓	✓		
DECATUR SD MAIN STP	IL0028321					
DEERFIELD WRF, VILLAGE OF	IL0028347	✓	✓			
DOWNERS GROVE SD WTC	IL0028380					**
DUQUOIN STP, CITY OF	IL0028517	✓	✓	✓		
EAST DUNDEE WWTP, VILLAGE OF	IL0028541	✓	✓			**
EAST MOLINE REGIONAL WWTP	IL0028550	✓	✓			
EAST PEORIA STP #1, CITY OF	IL0028576	✓	✓			
EFFINGHAM STP, CITY OF	IL0028622	✓	✓			
FOX RIVER WRD - ALBIN D. PAGORSKI WRF	IL0028657					**
FOX RIVER WRD - NORTH WRF	IL0028665	✓	✓	✓		**
ELMHURST STP, CITY OF	IL0028746	✓	✓			
GLENDALE HEIGHTS, VILLAGE OF	IL0028967					
HARRISBURG STP, CITY OF	IL0029149	✓	✓	✓		
HERRIN STP, CITY OF	IL0029165	✓	✓			
HIGHLAND STP, CITY OF	IL0029173	✓	✓			
HILLSBORO STP	IL0029203	✓	✓			
HUNTLEY EAST STP, VILLAGE OF	IL0029238					**
KEWANEE STP	IL0029343					
LASALLE STP, CITY OF	IL0029424					
LAWRENCEVILLE WWTP, CITY OF	IL0029467	✓	✓			
LIBERTYVILLE STP, VILLAGE OF	IL0029530					**
LINCOLN STP, CITY OF	IL0029564	✓	✓			**
LOCKPORT STP, CITY OF	IL0029611	✓	✓	✓		
MACOMB STP, CITY OF	IL0029688	✓	✓			
MARION SE STP, CITY OF	IL0029734	✓		✓		
MATTOON STP, CITY OF	IL0029831	✓	✓			
METROPOLIS STP, CITY OF	IL0029874					

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
MOLINE SOUTH STP, CITY OF	IL0029939					
MOLINE STP - NORTH SLOPE PLANT	IL0029947	✓	✓			
CITY OF MONTICELLO STP	IL0029980	✓	✓			
MORTON STP #2, VILLAGE OF	IL0030015					
MOUNT CARMEL STP, CITY OF	IL0030023	✓	✓			
NSSD-CLAVEY ROAD STP	IL0030171	✓		✓		
NSSD-WAUKEGAN STP	IL0030244	✓		✓		
OTTAWA STP, CITY OF	IL0030384	✓	✓			
PONTIAC STP, CITY OF	IL0030457	✓	✓			
QUINCY STP, CITY OF	IL0030503					
PERU STP #1, CITY OF	IL0030660	✓	✓			
PITTSFIELD STP	IL0030686	✓	✓			
ROBINSON STP, CITY OF	IL0030732	✓	✓	✓		
ROCHELLE WATER RECLAMATION	IL0030741	✓	✓			
ROCK ISLAND MAIN STP, CITY OF	IL0030783	✓	✓			
ROSELLE-J.L. DEVLIN STP	IL0030813					
SALT CREEK SD STP	IL0030953	✓	✓			
SANDWICH STP, CITY OF	IL0030970	✓	✓			
SPRING VALLEY WWTP	IL0031216	✓	✓			
SYCAMORE STP - NORTH PLANT	IL0031291	✓	✓			
TAYLORVILLE SD STP	IL0031356	✓	✓			
TROY STP, CITY OF	IL0031488	✓	✓			
URBANA-CHAMPAIGN SD-NE STP	IL0031500					
URBANA-CHAMPAIGN SD	IL0031526	✓	✓	✓		
WEST FRANKFORT STP, CITY OF	IL0031704	✓	✓			
WHEATON SANITARY DISTRICT WWTF	IL0031739	✓	✓			
DCDPW-WOODRIDGE GREEN VALLEY	IL0031844					**
WOOD RIVER STP, CITY OF	IL0031852					
WOODSTOCK - NORTH STP, CITY OF	IL0031861	✓	✓	✓		
NORTHERN MORAINNE WW RECLAMATION DIST WWTP	IL0031933	✓	✓	✓		**
BOLINGBROOK STP #1, VILLAGE OF	IL0032689					
BOLINGBROOK WRF #2, VILLAGE OF	IL0032735	✓	✓			
IL AMERICAN WTR CO-SANTA FE	IL0032760					**
GRANITE CITY REGIONAL STP	IL0033481					
JOLIET WEST STP, CITY OF	IL0033553					**
ADDISON NORTH STP, VILLAGE OF	IL0033812					
NAPERVILLE-SPRINGBROOK WRC	IL0034061	✓	✓			**
WOOD DALE SOUTH STP	IL0034274	✓	✓			
WOODSTOCK SOUTH STP, CITY OF	IL0034282	✓	✓			**
HANOVER PARK STP #1, VLLAGE OF	IL0034479					
PEKIN STP #1, CITY OF	IL0034495	✓	✓	✓	✓	
NSSD-GURNEE STP	IL0035092	✓		✓		
FOX RIVER WRD - WEST WRF	IL0035891	✓	✓	✓	✓	**
MWRDGC HANOVER PARK WRP	IL0036137					**
MONMOUTH NORTH STP	IL0036218	✓	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
MWRDGC-JOHN E. EGAN WRP	IL0036340					**
ROCK ISLAND SW STP, CITY OF	IL0036382					
YORKVILLE-BRISTOL SD STP	IL0036412	✓	✓	✓	✓	**
GODFREY STP, VILLAGE OF	IL0036421	✓	✓			
ILLINOIS AMERICAN WATER CO	IL0038202					
WASHINGTON STP #2	IL0042412	✓	✓	✓		
FRANKFORT NORTH STP	IL0045403					**
EAST PEORIA #3 STP, CITY OF	IL0046213	✓	✓			
NEW LENOX STP #2, VILLAGE OF	IL0046264					**
METROPOLITAN WRDGC-KIRIE	IL0047741					
ST. CLAIR TOWNSHIP LINCOLNSHIRE STP	IL0048232	✓	✓			
ROMEDEVILLE WASTEWATER TREATMENT FACILITY	IL0048526	✓	✓	✓	✓	
ROSELLE-J BOTTERMAN STP	IL0048721					
OLNEY STP, CITY OF	IL0048755	✓	✓			
CRYSTAL LAKE WWTP #3	IL0053457	✓	✓	✓		
MINOOKA STP, VILLAGE OF	IL0055913	✓	✓	✓		
IL AMERICAN WTR CO-OAK VALLEY	IL0055981	✓	✓	✓		
COLONA-GREEN ROCK REGIONAL-STP	IL0059757	✓	✓			
STERLING-ELKHORN CREEK STP	IL0060569	✓	✓			
ELBURN WWTP, VILLAGE OF	IL0062260	✓	✓	✓	✓	**
CREST HILL EAST STP, CITY OF	IL0064998	✓	✓			
SAUGET-ABRTF	IL0065145					
DUPAGE COUNTY PUBLIC WORKS-KNOLLWOOD STP	IL0065188					**
MCHENRY SOUTH WWTP, CITY OF	IL0066257	✓	✓	✓		
GILBERTS STP, VILLAGE OF	IL0068764	✓	✓	✓		
VILLAGE OF BOLINGBROOK STP #3	IL0069744	✓	✓			**
HUNTLEY WEST STP, VILLAGE OF	IL0070688	✓	✓	✓		
LCDPW - MILL CREEK WRF	IL0071366	✓	✓	✓	✓	
POPLAR GROVE SOUTH STP, VILLAGE OF	IL0071447	✓	✓	✓		
VILLAGE OF FRANKFORT - REGIONAL WWTP	IL0072192	✓	✓	✓		
CHESTER STP	IL0072931	✓	✓			
BLOOMINGTON-NORMAL WRD SE WWTP	IL0073504	✓	✓			
PLAINFIELD N STP, VILLAGE OF	IL0074373	✓	✓	✓		
GALENA SOUTH WWTF	IL0075191	✓	✓			
PERU STP #2	IL0075507	✓	✓			
JOLIET AUX SABLE CREEK WWTP	IL0076414					**
CITY OF WATERLOO STP	IL0077551	✓	✓	✓		
WONDER LAKE WATER RECLAMATION FACILITY	IL0077836	✓	✓	✓		
ROCK FALLS, CITY OF	IL0078301	✓	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N	**
ITASCA, VILLAGE OF - PROSPECT AVENUE WWTP	IL0079073	✓	✓	✓		
Total	217	164	152	67	13	

**Additional limits and/or monitoring requirements will be effective in the future (36 to 132 months based on compliance schedules, or indeterminate dates dependent on completion of plant expansion).

Indiana

Table B-3. Indiana major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
ALEXANDRIA WWTP	IN0020044	✓			
DANVILLE WWTP, TOWN OF	IN0020079	✓			
PORTLAND WWTP	IN0020095				
GREENFIELD WWTP	IN0020109	✓			
GREENSBURG WWTP	IN0020133	✓			
YORKTOWN WWTP, TOWN OF	IN0020150	✓			
NOBLESVILLE WWTP, CITY OF	IN0020168	✓			
MONTICELLO WWTP	IN0020176	✓		✓	
EDINBURGH WWTP	IN0020184				
MARTINSVILLE WWTP	IN0020303	✓			
NORTH MANCHESTER WWTP	IN0020362	✓			
SCOTTSBURG WWTP	IN0020397				
SELLERSBURG MUNICIPAL WWTP	IN0020419				
BREMEN WWTP	IN0020427	✓			
CHANDLER MUNICIPAL WWTP	IN0020435	✓			
NORTH VERNON WWTP	IN0020451				
CHARLESTOWN MUNICIPAL WWTP	IN0020508	✓	✓		
LINTON WWTP	IN0020575	✓			
SANTA CLAUS WASTEWATER TREATMENT PLANT	IN0020605	✓			
KENDALLVILLE WWTP	IN0020656	✓		✓	
AUBURN WWTP	IN0020672	✓		✓	
LEBANON WWTP	IN0020818				
JASPER WWTP	IN0020834				
CORRYDON WWTP	IN0020893	✓			
UNION CITY WWTP	IN0020982	✓			
PLYMOUTH WWTP	IN0020991				
TELL CITY WWTP	IN0021016	✓	✓		
WINCHESTER WWTP	IN0021024				
GREENCASTLE WASTEWATER TREATMENT PLANT	IN0021032	✓			
ELLETTSVILLE MUNICIPAL WWTP	IN0021083				
SYRACUSE, TOWN OF	IN0021172	✓		✓	
FRANKLIN WWTP, CITY OF	IN0021181	✓			
PLAINFIELD WATER POLLUTION CONTROL FACILITY	IN0021202	✓			
BRAZIL WWTP	IN0021211				
BROWNSBURG WWTP	IN0021245				
RUSHVILLE WWTP	IN0021270				
ANGOLA WWTP	IN0021296	✓	✓	✓	
CUMBERLAND WWTP	IN0021300	✓			
DELPHI MUNICIPAL WWTP	IN0021377	✓			
NAPPANEE WWTP, CITY OF	IN0021466	✓		✓	
TIPTON WWTP	IN0021474	✓		✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
HARTFORD CITY WWTP	IN0021628	✓			
SALEM WWTP	IN0021644				
ROCHESTER WASTEWATER TREATMENT PLANT	IN0021661	✓			
BARGERSVILLE WWTP, TOWN OF	IN0022314	✓			
BLUFFTON WWTP	IN0022411	✓		✓	
BOONVILLE MUNICIPAL WWTP	IN0022420	✓			
BUTLER WWTP	IN0022462	✓		✓	
CARMEL WWTP	IN0022497	✓			
CHESTERTON WWTP	IN0022578	✓		✓	
CLINTON MUNICIPAL WWTP	IN0022608				
COLUMBIA CITY WWTP	IN0022624	✓			
EAST CHICAGO SANITARY DISTRICT	IN0022829	✓		✓	
FRANKFORT WWTP, CITY OF	IN0022934	✓			
FRENCH LICK MUNICIPAL WWTP	IN0022951	✓			
GARRETT WWTP	IN0022969	✓		✓	
GARY SANITARY DISTRICT	IN0022977	✓		✓	
GAS CITY WWTP	IN0022985	✓		✓	
HAMMOND WASTEWATER FACILITY	IN0023060	✓		✓	
HUNTINGBURG MUNICIPAL WWTP	IN0023124	✓			
HUNTINGTON WWTP	IN0023132	✓		✓	
INDIANAPOLIS BELMONT & SOUTHPORT ADVNCD WTP	IN0023183	✓	✓		
JEFFERSONVILLE WWTP	IN0023302	✓	✓		
LIGONIER WWTP	IN0023582	✓		✓	
LOGANSPOUT MUNICIPAL WWTP	IN0023604	✓		✓	
LOWELL WWTP	IN0023621				
MICHIGAN CITY - J. B. GIFFORD WWTP	IN0023752	✓		✓	
MOORESVILLE, TOWN OF	IN0023825				
NEW ALBANY WWTP	IN0023884	✓	✓		
NEWBURGH WWTP	IN0023892	✓	✓		
NEW CASTLE WWTP	IN0023914	✓			
OAK PARK CONSERVANCY DISTRICT	IN0023965	✓	✓		
PORTAGE UTILITY SERVICE FACILITY WWTP	IN0024368	✓		✓	
PRINCETON WWTP	IN0024392	✓			
RENSELAER WWTP	IN0024414				
SCHERERVILLE WWTP	IN0024457	✓			
SEYMOUR WWTP, CITY OF	IN0024473	✓			
SOUTH BEND MUNICIPAL WWTP	IN0024520	✓		✓	
SOUTH DEARBORN RSD	IN0024538	✓	✓		
SULLIVAN WWTP	IN0024554	✓			
ELDEN KUEHL POLLUTION CON FAC	IN0024660	✓		✓	
WABASH WWTP	IN0024741	✓			
WEST LAFAYETTE WWTP	IN0024821	✓		✓	
PERU UTILITIES - GRISSOM DIVISION	IN0024902	✓			
AUSTIN WWTP	IN0025135				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
LA PORTE WWTP	IN0025577				
MARION WWTP, CITY OF	IN0025585	✓		✓	
TERRE HAUTE WWTP, CITY OF	IN0025607				
RICHMOND WWTP, CITY OF	IN0025615	✓		✓	
BEDFORD WASTEWATER TREATMENT PLANT	IN0025623	✓		✓	
MUNCIE WATER POLLUTION CONTROL FACILITY	IN0025631				
MISHAWAKA WWTP	IN0025640	✓		✓	
WASHINGTON WWTP	IN0025658	✓			
MADISON WWTP	IN0025666	✓	✓		
ELKHART WWTP	IN0025674	✓		✓	
GOSHEN WWTP	IN0025755	✓		✓	
CROWN POINT WWTP	IN0025763	✓		✓	
SOUTH HAVEN SEWER WORKS WWTP (AQUA INDIANA, INC.)	IN0030651	✓		✓	
VINCENNES WWTP	IN0031020	✓		✓	
FORT WAYNE WWTP	IN0032191	✓		✓	
PERU UTILITIES WWTP	IN0032328	✓			
CONNERSVILLE WWTP, CITY OF	IN0032336				
LAFAYETTE WWTP	IN0032468	✓		✓	
ANDERSON WWTP	IN0032476				
COLUMBUS WWTP, CITY OF	IN0032573				
ELWOOD WWTP, CITY OF	IN0032719				
SHELBYVILLE WATER RESOURCE RECOVERY FACILITY	IN0032867				
KOKOMO WWTP	IN0032875	✓			
EVANSVILLE WESTSIDE WWTP	IN0032956	✓	✓		
CRAWFORDSVILLE WWTP	IN0032964	✓			
SPEEDWAY WWTP	IN0032972	✓	✓		
EVANSVILLE EASTSIDE WWTP	IN0033073	✓	✓		
UTILITY CENTER MAIN ABOITE WWTP	IN0035378	✓			
MOUNT VERNON WWTP	IN0035696	✓	✓		
BLOOMINGTON S DILLMAN RD WWTP	IN0035718	✓		✓	
BLOOMINGTON N BLUCHER POOLE WWTP	IN0035726	✓			
ZIONSVILLE WWTP	IN0036951	✓		✓	
BATESVILLE WWTP	IN0039268	✓		✓	
DECATUR WWTP	IN0039314	✓		✓	
DYER WASTEWATER TREATMENT PLANT	IN0039331	✓			
PRINCE'S LAKES WWTP	IN0042366				
AQUA INDIANA, INC. (UTILITY CENTER) MIDWEST WWTP	IN0042391				
CLARKSVILLE WWTP	IN0047058	✓		✓	
FALL CREEK REG. WASTE DISTRICT	IN0049026	✓		✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
WEST CENTRAL CONSERVANCY DIST	IN0051632	✓			
FISHERS CHEENEY CREEK WWTP	IN0055484	✓			
CLAY TOWNSHIP REG. WASTE. DIST.	IN0055760	✓		✓	
HENDRICKS COUNTY RSD	IN0057614	✓			
CITIZENS WASTEWATER OF WESTFIELD LLC WWTP	IN0059544	✓		✓	
WARSAW #2 WWTP	IN0060917	✓			
HOBART WASTEWATER TREATMENT PLANT	IN0061344	✓		✓	
STEBEN LAKES RWD	IN0061557	✓		✓	
PLAINFIELD SOUTH WWTP, TOWN OF	IN0062456				
Total	133	103	14	44	0

Iowa

Table B-4. Iowa major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
ADEL CITY OF STP	IA0041921	✓	✓		
ALGONA CITY OF STP	IA0022055				
AMES WATER POLLUTION CONTROL FACILITY	IA0035955	✓	✓		
ANAMOSA CITY OF STP	IA0025895	✓	✓		
ATLANTIC CITY OF STP	IA0029025	✓	✓		
BOONE CITY OF STP	IA0058076	✓	✓		
BRITT CITY OF STP	IA0023582				
BURLINGTON CITY OF STP	IA0043079	✓	✓		
CARLISLE CITY OF STP	IA0024554				
CARROLL, CITY OF STP	IA0021377				
CEDAR FALLS CITY OF STP	IA0036633	✓	✓		✓
CEDAR RAPIDS CITY OF STP	IA0042641				
CENTERVILLE CITY OF STP (EAST)	IA0027472				
CHARITON CITY OF STP	IA0028924				
CHARLES CITY, CITY OF STP	IA0022039	✓	✓		✓
CHEROKEE CITY OF STP	IA0059005	✓	✓		
CLARINDA CITY OF STP	IA0035190				
CLEAR LAKE SANITARY DISTRICT	IA0058441				
CLINTON CITY OF STP	IA0035947	✓	✓		
CORALVILLE CITY OF STP	IA0020788				
COUNCIL BLUFFS CITY OF STP	IA0036641	✓	✓		
CRESCO CITY OF STP	IA0021334				
CRESTON CITY OF STP	IA0035238				
DAVENPORT CITY OF STP	IA0043052	✓	✓		
DECORAH CITY OF STP	IA0035220	✓	✓		
DENISON MUNICIPAL UTILITIES-STP	IA0023302	✓	✓		
DES MOINES METROPOLITAN WRF	IA0044130	✓	✓		
DEWITT CITY OF STP	IA0035271				
DUBUQUE CITY OF STP	IA0044458	✓	✓		
EAGLE GROVE, CITY OF STP	IA0034380	✓	✓		
ELDORA CITY OF STP	IA0025933	✓	✓		
ELDRIDGE CITY OF STP (SOUTH SLOPE)	IA0063231	✓	✓		
EMMETSBURG CITY OF STP	IA0021580	✓	✓		
ESTHERVILLE CITY OF STP	IA0023744				
EVANSDALE CITY OF STP	IA0022004				
FAIRFIELD, CITY OF STP	IA0035076				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
FOREST CITY OF STP	IA0021563	✓	✓		✓
FORT DODGE CITY OF STP	IA0044849				
FORT MADISON CITY OF STP	IA0027219	✓	✓		
GMU WASTEWATER TREATMENT FACILITY	IA0021946	✓	✓		
GREENFIELD CITY OF STP	IA0021369	✓	✓		
GRIMES, CITY OF STP	IA0035939				
GRINNELL, CITY OF STP	IA0031186	✓	✓		
GRUNDY CENTER CITY OF STP	IA0024511	✓	✓		
HARLAN CITY OF STP	IA0021342	✓	✓		
HUMBOLDT CITY OF STP	IA0047791	✓	✓		
INDEPENDENCE CITY OF STP	IA0036510				
INDIANOLA CITY OF STP (NORTH)	IA0027669				
IOWA CITY, CITY OF (SOUTH) STP	IA0070866	✓	✓		
IOWA FALLS CITY OF STP	IA0023442				
IOWA GREAT LAKES SANITARY DISTRICT STP	IA0059765				
JEFFERSON CITY OF STP	IA0021300				
JESUP, CITY OF STP (SOUTH)	IA0075302				
KEOKUK CITY OF STP	IA0042609	✓	✓		
KNOXVILLE CITY OF STP	IA0035866				
LE MARS CITY OF STP	IA0036536				
MAQUOKETA CITY OF STP	IA0024481				
MARSHALLTOWN CITY OF WATER POLLUTION CONTROL	IA0038610				
MASON CITY, CITY OF STP	IA0057169				
MELCHER-DALLAS CITY OF STP	IA0047783				
MITCHELLVILLE CITY OF STP	IA0021997				
MONTEZUMA CITY OF STP	IA0036935				
MONTICELLO CITY OF STP	IA0026034	✓	✓		
MOUNT PLEASANT CITY OF STP (MAIN)	IA0047970	✓	✓		
MOUNT VERNON CITY OF STP	IA0023710				
MUSCATINE CITY OF STP	IA0023434	✓	✓		
NEVADA CITY OF STP	IA0031704				
NEW HAMPTON CITY OF STP	IA0028525	✓	✓		
NEWTON CITY OF STP	IA0027723	✓	✓		
NORTH LIBERTY CITY OF STP	IA0032905				
OELWEIN CITY OF STP	IA0032344	✓	✓		
ORANGE CITY OF STP	IA0032751				
OSCEOLA CITY OF STP	IA0041815				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
OSKALOOSA CITY OF STP (NORTHEAST)	IA0038539				
OSKALOOSA CITY OF STP (SOUTHWEST)	IA0038521				
OTTUMWA CITY OF STP	IA0058611				
PELLA CITY OF STP	IA0043869				
PERRY CITY OF STP	IA0032379				
RED OAK CITY OF STP	IA0040266	✓	✓		
ROCKWELL CITY, CITY OF STP	IA0033138				
SHELDON CITY OF STP	IA0032662				
SHENANDOAH CITY OF STP	IA0032328				
SIOUX CENTER CITY OF STP	IA0033731				
SIOUX CITY, CITY OF STP	IA0043095				
SPENCER, CITY OF STP	IA0021059				
STORM LAKE CITY OF STP	IA0032484				
TAMA CITY OF STP	IA0043681	✓	✓		
TIPTON CITY OF STP (WEST)	IA0032727				
TOLEDO CITY OF STP	IA0033103	✓	✓		
VINTON CITY OF STP	IA0035891				
WALCOTT CITY OF STP (SOUTH)	IA0061891	✓	✓		
WASHINGTON CITY OF STP	IA0032433				
WATERLOO CITY OF STP	IA0042650	✓	✓		✓
WAUKEE CITY OF STP	IA0032794	✓	✓		
WAUKON CITY OF STP	IA0033081				
WAVERLY CITY OF STP	IA0033197	✓	✓		✓
WEBSTER CITY, CITY OF STP	IA0036625				
WEST BURLINGTON CITY OF STP	IA0033669	✓	✓		
WEST LIBERTY CITY OF STP	IA0031691	✓	✓		
WINTERSSET CITY OF STP	IA0034291	✓	✓		
Total	100	46	46	0	5

Kentucky

Table B-5. Kentucky major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
GREENVILLE STP	KY0020010	✓	✓		
HAZARD STP	KY0020079	✓	✓		
RWRA MAX RHOADS WWTP	KY0020095	✓	✓		
CORBIN STP	KY0020133	✓	✓		
GEORGETOWN STP #1	KY0020150	✓	✓		
MAYSVILLE STP	KY0020257	✓	✓		
SHELBYVILLE STP	KY0020427	✓		✓	
VERSAILLES STP	KY0020621	✓	✓		
HENDERSON STP	KY0020711	✓	✓		
RUSSELLVILLE STP	KY0020877	✓	✓		
LANCASTER WWTP	KY0020974	✓	✓	✓	
LAWRENCEBURG STP	KY0021067		✓	✓	
GLASGOW STP	KY0021164	✓			
BENTON STP	KY0021172	✓	✓		
MAYFIELD STP	KY0021211	✓	✓		
BARDSTOWN STP	KY0021237	✓	✓		
LONDON STP	KY0021270	✓	✓	✓	
MORGANFIELD WWTP	KY0021440	✓	✓		
SD #1 DRY CREEK	KY0021466	✓			
LEXINGTON TOWN BRANCH STP	KY0021491	✓			
LEXINGTON WEST HICKMAN STP	KY0021504	✓		✓	
ELIZABETHTOWN VALLEY CRK WWTP	KY0022039	✓	✓		
ASHLAND STP	KY0022373	✓			
RADCLIFF STP	KY0022390	✓	✓		
BOWLING GREEN STP	KY0022403	✓	✓		
MORRIS FORMAN WQTC MSD	KY0022411	✓			
HITE CREEK WQTC MSD	KY0022420	✓		✓	
PADUCAH/MCCRACKEN JSA PADUCAH	KY0022799	✓	✓		
FRANKFORT MUNICIPAL STP	KY0022861	✓	✓	✓	
LEITCHFIELD STP	KY0022934	✓	✓		
CENTRAL CITY STP	KY0023540	✓	✓		
BARBOURVILLE STP	KY0024082				
COLUMBIA/ADAIR CO STP	KY0024317	✓	✓	✓	
STANFORD STP	KY0024619	✓	✓		
SCOTTSVILLE STP	KY0024783	✓	✓		
JEFFERSONTOWN WQTC MSD	KY0025194	✓		✓	
PIKEVILLE WWTP	KY0025291	✓	✓		
PADUCAH/MCCRACKEN JSA REIDLAND	KY0025810	✓	✓		
IRVINE STP	KY0025909	✓	✓		
HARLAN STP	KY0026093	✓	✓		
LEBANON STP	KY0026549	✓	✓	✓	
SOMERSET STP	KY0026611	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
SHEPHERDSVILLE STP	KY0027359	✓	✓		
PRESTONSBURG STP	KY0027413	✓	✓		
HARRODSBURG STP	KY0027421	✓	✓		
FRANKLIN STP	KY0027456	✓	✓		
LOUISA STP	KY0027961	✓	✓		
WILLIAMSBURG STP	KY0028347	✓	✓		
PRINCETON STP	KY0028401	✓			
WILMORE STP	KY0028428	✓	✓		
MANCHESTER STP	KY0029122	✓	✓		
GREENUP JOINT SEWER AGENCY	KY0033553	✓	✓		
MT WASHINGTON STP	KY0033804	✓	✓		
STRODES CREEK STP	KY0037991	✓	✓	✓	
GREENUP CO ENVIRONMENTAL COMM	KY0048348	✓	✓		
MOREHEAD STP	KY0052752	✓	✓		
CAMPBELLSVILLE STP	KY0054437	✓	✓		
DANVILLE STP	KY0057193	✓	✓	✓	
RUSSELL CO REGIONAL STP	KY0062995	✓			
CRAB ORCHARD STP	KY0065897	✓	✓		
HOPKINSVILLE HAMMOND WOOD STP	KY0066532	✓			
BEE CREEK WWTP	KY0072761	✓	✓	✓	
MIDDLESBORO STP	KY0072885	✓	✓		
OWENSBORO EAST STP	KY0073377	✓	✓		
DEREK R GUTHRIE WQTC MSD	KY0078956	✓	✓		
BEREA MUNICIPAL UTILITIES WWTP	KY0079898	✓	✓	✓	
GEORGETOWN STP #2	KY0082007	✓	✓	✓	
PARIS STP	KY0090654	✓	✓		
ROLL COATER INC	KY0092118				
MADISONVILLE STP WEST SIDE	KY0098043	✓	✓		
CEDAR CREEK WQTC MSD	KY0098540	✓		✓	
HENDERSON SOUTH STP #2	KY0100293	✓	✓		
JESSAMINE CRK ENV CONTROL #1	KY0100404	✓	✓		
FLOYDS FORK WQTC MSD	KY0102784	✓		✓	
RICHMOND SILVER CREEK STP	KY0103357	✓	✓		
HONEY BRANCH REGIONAL STP	KY0103578	✓	✓		
JERRY L RILEY STP	KY0104027	✓	✓	✓	
MT STERLING HINKSTON CRK STP	KY0104400	✓	✓	✓	
CARROLLTON REGIONAL WWTP	KY0104931	✓	✓	✓	
EASTERN REGIONAL STP	KY0105031	✓	✓	✓	
NORTHERN MADISON CO SD	KY0105376	✓	✓		
OHIO CO REGIONAL STP	KY0105791	✓	✓	✓	
CYNTHIANA STP (NEW)	KY0105856	✓		✓	
OHIO RIVER STP	KY0106143	✓	✓		
RICHMOND OTTER CREEK STP	KY0107107	✓	✓	✓	
WESTERN REG WATER RECLAM FAC	KY0107239	✓	✓		
WINCHESTER MUNICIPAL UTILITES	KY0108740	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
WILLIAMSTOWN REGIONAL WRF	KY0109991	✓	✓		
Total	88	85	71	24	0

Louisiana

Table B-6. Louisiana major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
FRANKLIN, CITY OF WWTP	LA0006289				
BASTROP, CITY OF	LA0020109				
BUNKIE, CITY OF	LA0020257				
BASTROP, CITY OF - MAIN PLANT	LA0020443				
PORT ALLEN, CITY OF- WASTEWATER TREATMENT PLANT	LA0020541				
RAYVILLE WWTF	LA0020559				
BROUSSARD, CITY OF	LA0020613	✓	✓		
FERRIDAY, TOWN OF- WASTEWATER TREATMENT FACILITY	LA0020630				
PLAQUEMINE, CITY OF- SOUTH WASTEWATER TREATMENT FACILITY	LA0020648				
ST. CHARLES PARISH COUNCIL - LULING OXIDATION POND	LA0032131	✓	✓		
AMERICAN WATER OPERATIONS AND MAINTENANCE, INC. - SOUTH FORT POLK WWTP	LA0032221				
AMERICAN WATER OPERATIONS AND MAINTENANCE, INC. - NORTH FORT POLK WWTP	LA0032239				
HAMMOND, CITY OF- SOUTH SLOUGH WETLAND WASTEWATER ASSIMILATION PROJECT	LA0032328	✓	✓		
VIDALIA, CITY OF- WASTEWATER TREATMENT PLANT	LA0032794				
THIBODAUX, CITY OF- WASTEWATER TREATMENT FACILITY	LA0032948	✓	✓		
BREAUX BRIDGE, CITY OF	LA0033014	✓	✓		
SPRINGHILL, CITY OF	LA0033227				
JENA, TOWN OF	LA0033260				
OAKDALE, CITY OF	LA0033430	✓	✓		
PINEVILLE, CITY OF- WASTEWATER TREATMENT PLANT	LA0033464				
RUSTON, CITY OF- NORTHSIDE WASTEWATER TREATMENT PLANT	LA0036323				
LAKE CHARLES, CITY OF-PLANT A	LA0036340				
LAKE CHARLES, CITY OF	LA0036366				
LAFAYETTE CONSOLIDATED GOVERNMENT - SOUTH WWTP	LA0036374				
LAFAYETTE CONSOLIDATED GOVERNMENT - EAST WWTP	LA0036382				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
LAFAYETTE CONSOLIDATED GOVERNMENT - NORTHEAST WWTP	LA0036391				
OPELOUSAS, CITY OF- CANDY STREET WWTP	LA0036404				
BATON ROUGE, CITY OF	LA0036412				
BATON ROUGE, CITY OF	LA0036421				
BATON ROUGE, CITY OF	LA0036439				
WESTWEGO, CITY OF- WASTEWATER TREATMENT PLANT	LA0038059				
SEWERAGE AND WATER BOARD OF NEW ORLEANS- EAST BANK STP	LA0038091	✓	✓		
SEWERAGE AND WATER BOARD OF NEW ORLEANS- WEST BANK STP	LA0038105				
MINDEN, CITY OF	LA0038130				
MANDEVILLE, CITY OF	LA0038288	✓	✓		
DERIDDER, CITY OF- WASTEWATER TREATMENT PLANT	LA0038407				
AMITE CITY, TOWN OF- AMITE CITY STP	LA0038431				
HOMER, TOWN OF- WASTEWATER TREATMENT PLANT	LA0038521				
NEW ROADS, CITY OF- WASTEWATER TREATMENT PLANT	LA0038555				
DEQUINCY, TOWN OF	LA0038709				
MONROE, CITY OF	LA0038741				
VILLE PLATTE, CITY OF	LA0038814				
GRAMBLING, CITY OF	LA0038822				
MANSFIELD, CITY OF- SEWAGE TREATMENT FACILITY	LA0038962				
RAYNE, CITY OF	LA0039055				
ABBEVILLE, CITY OF	LA0039748				
DELHI, TOWN OF - WWTP	LA0039802				
ST. BERNARD PARISH-MUNSTER AND DRAVO WWTP	LA0040177				
JEANERETTE, CITY OF	LA0040193				
TERREBONNE PH GOVT-HOUMA NORTH	LA0040207	✓	✓		
TERREBONNE PH GOVT-HOUMA-SOUTH	LA0040274				
ST. MARTINVILLE, CITY OF	LA0040941	✓	✓		
ALEXANDRIA, CITY OF - WWTP	LA0041009				
CROWLEY, CITY OF- WASTEWATER TREATMENT FACILITY	LA0041254				
GRETNA, CITY OF- WASTEWATER TREATMENT PLANT	LA0041262				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
SHREVEPORT, CITY OF- LUCAS WWTP	LA0041394				
EUNICE, CITY OF- WASTEWATER TREATMENT FACILITY	LA0041751				
JENNINGS, CITY OF- WWTP	LA0041769				
JEFFERSON PARISH DEPARTMENT OF SEWERAGE- MARRERO WWTP	LA0042048				
JEFFERSON PARISH DEPARTMENT OF SEWERAGE- BRIDGE CITY WWTP	LA0042064				
JEFFERSON PARISH DEPARTMENT OF SEWERAGE- HARVEY WWTP	LA0042081				
SHREVEPORT, CITY OF- NORTH REGIONAL WWTP	LA0042188				
LAFAYETTE CONSOLIDATED GOVERNMENT - AMBASSADOR CAFFERY STP	LA0042561				
LEESVILLE, CITY OF	LA0043575				
WINNFIELD, CITY OF- WASTEWATER TREATMENT PLANT	LA0043915				
DONALDSONVILLE, CITY OF	LA0043931				
HARAHAN, CITY OF	LA0043940				
WEST MONROE, CITY OF- WASTEWATER TREATMENT PLANT	LA0043982				
PLAQUEMINES PARISH GOVERNMENT- BELLE CHASSE WWTP	LA0044032				
PLAQUEMINES PARISH GOVERNMENT- BURAS WWTP	LA0044041				
PLAQUEMINES PARISH GOVERNMENT- PORT SULPHUR WWTP	LA0044059				
PONCHATOULA, CITY OF- WASTEWATER TREATMENT FACILITY	LA0044695				
MARKSVILLE, CITY OF	LA0045144				
COAST WATERWORKS, INC.- EDEN ISLES	LA0045446				
DENHAM SPRINGS, CITY OF	LA0045730	✓	✓		
BOGALUSA, CITY OF- WASTEWATER TREATMENT PLANT	LA0046515				
SLIDELL, CITY OF	LA0047180				
ST TAMMANY PARISH-CROSS GATE	LA0048941				
BOSSIER CITY- POTW	LA0053716				
YOUNGSVILLE, TOWN OF- WASTEWATER TREATMENT FACILITY	LA0055328				
WALKER, TOWN OF	LA0059951	✓	✓		
ST. JOHN THE BAPTIST PARISH - WOODLAND WWTP	LA0064092				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
SEWERAGE DISTRICT #1 OF IBERIA PARISH & CITY OF NEW IBERIA- TETE BAYOU WWTP	LA0065251				
BOSSIER, CITY OF- WWTP	LA0065978				
MORGAN CITY, CITY OF- WASTEWATER TREATMENT PLANT	LA0065986				
UTILITIES, INC. OF LA- ARROWWOOD REGIONAL WWTP	LA0066559				
VINTON, TOWN OF- TREATMENT PLANT	LA0066621				
JEFFERSON PARISH DEPARTMENT OF SEWERAGE- EAST BANK WWTP	LA0066630				
KENNER, CITY OF	LA0066800				
SULPHUR, CITY OF-WWTP	LA0067083				
LIVINGSTON PARISH SD NO. 1 & 2	LA0067784				
ST. MARY PARISH WARDS 5 & 8 JOINT SEWER COMMISSION	LA0068381				
H2O SYSTEMS, INC.- GREENLEAVES TREATMENT FACILITY	LA0068730				
ST. JOHN THE BAPTIST PARISH - RIVER ROAD WWTP	LA0069868				
ST. CHARLES PARISH COUNCIL - HAHNVILLE STP	LA0073521				
ST. CHARLES PARISH COUNCIL-- DESTREHAN WWTP	LA0073539				
ST JOHN THE BAPTIST PARISH - GARYVILLE WWTP	LA0079596				
COVINGTON, CITY OF- SEWERAGE TREATMENT FACILITY	LA0084336				
TALLULAH, CITY OF- WASTEWATER TREATMENT PLANT	LA0086576	✓	✓		
NATCHITOCHE, CITY OF	LA0095222				
GONZALES, CITY OF- WASTEWATER TREATMENT PLANT	LA0109576				
LAKE CHARLES, CITY OF- STP	LA0118770				
ST. TAMMANY PARISH GOVERNMENT - CASTINE REGIONAL SEWAGE TREATMENT PLANT	LA0120154				
NEW IBERIA, CITY OF	LA0120201				
CONSOLIDATED WATERWORKS/SEWERAGE DISTRICT NO 1	LA0126152				
Total	105	13	13	0	0

Minnesota

Table B-7. Minnesota major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
CHISHOLM	MN0020117	✓	✓	✓	
MONTEVIDEO	MN0020133	✓	✓		
LUVERNE WWTF	MN0020141	✓	✓		
NEW PRAGUE	MN0020150	✓	✓	✓	
DETROIT LAKES	MN0020192	✓	✓	✓	
SAINT MICHAEL WWTF	MN0020222	✓	✓	✓	
NORTH KOOCHICHING SSB	MN0020257	✓	✓	✓	
MELROSE TREATMENT FACILITY	MN0020290	✓	✓	✓	
CAMBRIDGE WWTF	MN0020362	✓	✓		
REDWOOD FALLS	MN0020401	✓	✓		
ELY WWTF	MN0020508	✓	✓	✓	
MONTICELLO_WWTP	MN0020567	✓	✓		
LAKE CITY	MN0020664	✓	✓	✓	
STEWARTVILLE	MN0020681	✓	✓		
LITTLE FALLS WASTEWATER PLANT	MN0020761	✓			
ELK RIVER WWTF	MN0020788	✓	✓		
WASECA	MN0020796	✓	✓	✓	
CROOKSTON WASTEWATER FACILITY	MN0021423	✓	✓		
THIEF RIVER FALLS	MN0021431	✓	✓		
EAST GRAND FORKS WWTF	MN0021814	✓	✓		
GRAND RAPIDS	MN0022080	✓	✓		
MARSHALL	MN0022179	✓	✓		
WINDOM WWTF	MN0022217	✓	✓		
GLENCOE	MN0022233	✓			
TWO HARBORS	MN0022250	✓	✓	✓	
BEMIDJI WASTEWATER FACILITY	MN0022462	✓	✓	✓	
ST. PETER WASTEWATER FACILITY	MN0022535	✓	✓	✓	
AUSTIN WWTF	MN0022683	✓	✓		
COLD SPRING WWTF	MN0023094	✓	✓	✓	
LITCHFIELD WWTF	MN0023973	✓	✓	✓	
MADELIA WASTEWATER PLANT	MN0024040	✓	✓	✓	
NORTHFIELD WWTP	MN0024368	✓	✓	✓	
PRINCETON	MN0024538	✓	✓	✓	
RED WING WWTP	MN0024571	✓	✓	✓	
ROCHESTER WWTF	MN0024619	✓	✓	✓	
SAINT JAMES	MN0024759	✓	✓	✓	
WILLMAR WWTF	MN0025259	✓	✓	✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
WINNEBAGO WWTF	MN0025267	✓	✓	✓	
ZUMBROTA_WASTEWATER PLANT	MN0025330	✓	✓		
BECKER WWTF	MN0025666	✓	✓	✓	
ROGERS WWTF	MN0029629	✓	✓	✓	
MCWS-METRO	MN0029815	✓	✓	✓	
MCWS-BLUE LAKE	MN0029882	✓		✓	
MCWS-EAGLE POINT	MN0029904	✓		✓	
MCES-HASTINGS	MN0029955	✓			
MCWS-ST. CROIX VALLEY	MN0029998	✓	✓	✓	
MCWS-SENECA	MN0030007	✓		✓	
NEW ULM	MN0030066	✓	✓	✓	
FAIRMONT	MN0030112	✓	✓	✓	
FARIBAULT	MN0030121	✓	✓	✓	
WINONA WWTF	MN0030147	✓	✓		
VIRGINIA WASTEWATER SYSTEM	MN0030163	✓	✓	✓	
MANKATO WWTP	MN0030171	✓	✓	✓	
HIBBING SOUTH WWTF	MN0030643	✓	✓	✓	
WORTHINGTON INDUSTRIAL	MN0031178	✓	✓	✓	
WORTHINGTON WWTF	MN0031186	✓	✓	✓	
BUFFALO	MN0040649	✓	✓	✓	
ALEXANDRIA LAKE AREA SSD	MN0040738	✓	✓	✓	
ST CLOUD WWTF	MN0040878	✓	✓	✓	
ALBERT LEA WASTEWATER FACILITY	MN0041092	✓	✓		
MCWS-EMPIRE	MN0045845	✓		✓	
DOVER/EYOTA/SAINT CHARLES ASD	MN0046868	✓	✓		
MOORHEAD	MN0049069	✓			
BRAINERD/BAXTER WASTEWATER FAC	MN0049328	✓	✓	✓	
WESTERN LAKE SUPERIOR WWTF	MN0049786	✓		✓	
FERGUS FALLS	MN0050628	✓	✓	✓	
DELANO	MN0051250	✓		✓	
OWATONNA WWTF	MN0051284	✓	✓	✓	
PLAINVIEW-ELGIN SD	MN0055361	✓	✓	✓	
CHISAGO LAKES JOINT STC	MN0055808	✓	✓	✓	
HUTCHINSON	MN0055832	✓	✓	✓	
OTSEGO EAST WWTF	MN0064190	✓		✓	
LONG PRAIRIE MUNICIPAL WWTF	MN0066079	✓	✓	✓	
ANNANDALE/MAPLE LAKE WWTF	MN0066966	✓	✓	✓	
MINN RIVER VALLEY PUC	MN0068195	✓	✓	✓	
Total	75	75	64	53	0

Mississippi

Table B-8. Mississippi major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
NEW ALBANY POTW	MS0020044	✓	✓		
MERIDIAN POTW	MS0020117	✓	✓		
LAUREL POTW NUMBER 2	MS0020176	✓	✓		
GREENVILLE POTW	MS0020184	✓	✓		
PASCAGOULA POTW	MS0020249	✓	✓		
HATTIESBURG - SOUTH LAGOON	MS0020303	✓	✓		
CLARKSDALE POTW	MS0020311	✓	✓		
FOREST POTW	MS0020362	✓	✓	✓	✓
BELZONI POTW	MS0020371	✓	✓		
YAZOO CITY POTW	MS0020389	✓	✓		
GRENADA POTW	MS0020397	✓	✓	✓	✓
POPLARVILLE POTW	MS0020494	✓	✓	✓	✓
CLEVELAND POTW	MS0020567	✓	✓	✓	✓
WEST POINT POTW, WEST	MS0020788	✓	✓		
HATTIESBURG NORTH LAGOON	MS0020826	✓	✓		
WINONA POTW	MS0021024	✓	✓		
PHILADELPHIA POTW	MS0021156	✓	✓		
ESCATAWPA WWTP	MS0021521	✓	✓		
WATER VALLEY POTW	MS0022331	✓	✓		
VICKSBURG POTW	MS0022381	✓	✓		
HCUA, EAST BILOXI POTW	MS0023159	✓	✓		
GREENWOOD POTW	MS0023833	✓	✓	✓	✓
HAZLEHURST POTW, ACTIVATED SLUDGE	MS0023922	✓	✓	✓	✓
BROOKHAVEN POTW	MS0024147	✓	✓		
LAUREL POTW NUMBER 1	MS0024163	✓	✓		
WAYNESBORO POTW	MS0024228	✓	✓		
NATCHEZ POTW	MS0024252	✓	✓		
JACKSON POTW, SAVANNA STREET	MS0024295	✓	✓	✓	✓
INDIANOLA POTW	MS0024619	✓	✓	✓	✓
BATESVILLE POTW	MS0024627	✓	✓		
KOSCIUSKO POTW - SOUTH	MS0027774	✓	✓		
WAVELAND POTW	MS0027847	✓	✓		
OXFORD POTW	MS0029017	✓	✓		
DCRUA, OLIVE BRANCH POTW	MS0029513	✓	✓	✓	✓
HCUA, WEST BILOXI POTW	MS0030333	✓	✓		
TUPELO POTW	MS0036111	✓	✓	✓	✓
STARKVILLE POTW	MS0036145	✓	✓	✓	✓

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
MORTON POTW	MS0036234	✓	✓	✓	✓
BOONEVILLE POTW	MS0042030	✓	✓		
VERONA POTW	MS0042048	✓	✓		
PRCUA AIRPORT ROAD POTW	MS0042161	✓	✓	✓	✓
CANTON MUNICIPAL UTILITIES, HCR POTW	MS0042455	✓	✓	✓	✓
JACKSON CO UTILITY AUTH, GAUTIER POTW	MS0043010	✓	✓		
HCUA, LONG BEACH AND PASS CHRISTIAN	MS0043141	✓	✓		
JACKSON POTW - TRAHON/BIG CRK	MS0044059	✓	✓	✓	✓
COLUMBIA POTW, SOUTH	MS0044164	✓	✓	✓	✓
JCUA, WEST JACKSON COUNTY POTW	MS0045446	✓	✓		
AMORY POTW	MS0045489	✓	✓		
DIAMONDHEAD WATER AND SEWER DISTRICT	MS0046078	✓	✓		
TUNICA COUNTY UTILITY DISTRICT	MS0048691	✓	✓		
GULFPORT POTW, NORTH	MS0051756	✓	✓		
SENATOBIA POTW	MS0052221	✓	✓		
CLINTON POTW, SOUTHSIDE	MS0054992	✓	✓	✓	✓
ABERDEEN POTW, EAST	MS0055581	✓	✓		
REYNOLDS R. RIDGLEY WWTP	MS0056472	✓	✓		
BEATTIES BLUFF WWTF	MS0057517	✓	✓		
PONTOTOC, CITY OF, ACTIVATED SLUDGE FACILITY	MS0058581	✓	✓		
MCCOMB POTW	MS0061077	✓	✓		
PRCUA, NEAL ROAD POTW	MS0061174	✓	✓	✓	✓
SOUTH WOOLMARKET WATER RECLAMATION FACILITY	MS0061204	✓	✓	✓	✓
S20 D'IBERVILLE WWTF AND TRANSMISSION SYSTEM	MS0061221	✓	✓		
S5 KILN NORTHERN REGIONAL WWTP	MS0061239	✓	✓		
JOHNSON CREEK WWTF	MS0061271	✓	✓	✓	✓
CORINTH POTW	MS0061328	✓	✓	✓	✓
DCRUA SHORT FORK WWTF	MS0062227	✓	✓		
Total	65	65	65	21	21

Missouri

Table B-9. Missouri major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
MSD, MISSOURI RIVER WWTF	MO0004391	✓	✓		
MONETT WASTEWATER TREATMENT PLANT	MO0021440	✓	✓		
REPUBLIC WWTF	MO0022098				
BOLIVAR WWTF	MO0022373	✓	✓		
MOUNT VERNON WWTF	MO0022381				
JACKSON MUNICIPAL WWTP	MO0022853				
CAMPBELL AERATED LAGOON	MO0022861				
SEDALIA CENTRAL WWTP	MO0023019				
SEDALIA NORTH WWTF	MO0023027				
ST. JOSEPH WATER PROTECTION FACILITY	MO0023043		✓		
DEXTER EAST LAGOON	MO0023213				
MACON WWTF	MO0023221				
JOPLIN SHOAL CREEK	MO0023256				
CALIFORNIA S WWTF	MO0023272	✓	✓		
KC, BLUE RIVER WWTF	MO0024911	✓	✓		
KC, WESTSIDE WWTP	MO0024929				
CITY OF KANSAS CITY	MO0024961				
MSD, LEMAY WWTP	MO0025151	✓	✓		
MSD, COLDWATER CREEK WWTF	MO0025160	✓	✓		
MSD, BISSELL POINT WWTP	MO0025178				
BRANSON, COMPTON DRIVE	MO0025241	✓		✓	
UNION WEST WWTF	MO0025283				
WASHINGTON SEWAGE TREAT	MO0025810				
PLATTE CITY WWTF	MO0026298				
CABOOL WWTF	MO0026301	✓	✓		
CITY OF MOUNTAIN VIEW	MO0026310				
SAVANNAH WWTF	MO0026336	✓	✓		
ODESSA SOUTHEAST WWTP	MO0026387				
DE SOTO WWTP	MO0026662				
NIXA WWTF	MO0028037	✓		✓	
HARRISONVILLE WWTF	MO0028070				
KENNETT WWTF	MO0028568	✓	✓		
O' FALLON WASTEWATER TREATMENT PLANT	MO0028720		✓		
CENTRALIA WASTEWATER DISPOSAL FACILITY	MO0028789		✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
EXCELSIOR SPRINGS WWTP	MO0028843				
FARMINGTON E WWTP	MO0028860				
BLUE SPRINGS, SNI A BAR WWTF	MO0028886				
ST. PETERS SPENCER CREEK WWTP	MO0030970				
MARSHALL SE WWTP	MO0032883				
MARYVILLE WWTF	MO0033286				
SIKESTON WASTEWATER TREATMENT PLANT	MO0035009				
MEXICO WWTP	MO0036242				
AURORA WWTF	MO0036757				
CARTHAGE WASTEWATER TREATMENT FACILIY	MO0039136				
EUREKA WWTF	MO0039659				
TRENTON MUNICIPAL UTILITIES WWTP	MO0039748				
NEOSHO-CROWDER	MO0039926		✓		✓
EL DORADO SPRINGS	MO0040002				
PEVELY WWTP	MO0040142				
CENTER CREEK WWTF	MO0040185				
FARMINGTON WEST WWTF	MO0040312	✓	✓		
BOONVILLE WASTEWATER PLANT	MO0040738				
CITY OF MARSHFIELD	MO0040843				
PACIFIC WASTEWATER TREATMENT FACILITY	MO0041131				
CASSVILLE WWTF	MO0042579	✓	✓	✓	
POPLAR BLUFF MUNICIPAL WWTP	MO0043648				
ROLLA SOUTHWEST WWTP	MO0047023				
ROLLA, VICHY ROAD WWTP	MO0047031				
MILAN WWTF	MO0048151				
KC, ROCKY BRANCH SEWAGE	MO0048305				
KC, FISHING RIVER WWTF	MO0048313				
KIRKSVILLE WWTP	MO0049506				
SPRINGFIELD SW WWTP	MO0049522	✓	✓	✓	
KC, BIRMINGHAM WWTF	MO0049531				
CAPE GIRARDEAU MUNICIPAL WWTF	MO0050580				
ROLLA SE TREATMENT PLANT	MO0050652				
PERRYVILLE SOUTHEAST WWTF	MO0051144				
TROY HWY 47 WASTEWATER TREATMENT PLANT	MO0054623				
WARRENSBURG WEST WWTP	MO0055905				
GLAIZE CREEK SEWER DISTRICT	MO0056162				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
ST CHARLES-MISSISSIPPI RIVER WWTF	MO0058343				
MISSOURI RIVER WWTF	MO0058351	✓	✓		
FESTUS-CRYSTAL CITY STP	MO0080632	✓	✓		
MONTGOMERY CITY WWTP EAST	MO0084158				
DCSD, TREATMENT PLANT #1	MO0085472				
MSD, FENTON WWTP	MO0086126				
WARRENTON WWTP	MO0087912	✓	✓		
LEBANON WASTEWATER TREATMENT FACILITY	MO0089010				
NEVADA	MO0089109	✓	✓		
INDEPENDENCE, CITY OF	MO0089681				
HANNIBAL WASTEWATER TREATMENT PLANT	MO0093513				
ST. JAMES STP	MO0093564				
WENTZVILLE WATER RECLAMATION CENTER	MO0093599				
WAYNESVILLE WWTF	MO0094161				
WARRENSBURG EAST WWTP	MO0094579				
JEFFERSON CITY WATER RECLAMATION	MO0094846				
BUFFALO WWTF	MO0094854				
CARUTHERSVILLE WWTF	MO0095028				
BUTLER WWTP	MO0096229				
CARROLLTON WWTP	MO0096318				
WEST PLAINS WWTF	MO0096610				
CLINTON WWTP	MO0097390				
COLUMBIA REGIONAL WWTP	MO0097837		✓		✓
OZARK WWTF, CITY OF	MO0099163	✓	✓	✓	
ST CLAIR, CITY OF	MO0099465				
ELDON WWTF	MO0100676				
LITTLE BLUE VALLEY SEWER	MO0101087				
MSD, GRAND GLAIZE WWTF	MO0101362				
SEDALIA SOUTHEAST WWTP	MO0101567				
SPRINGFIELD NW WWTF	MO0103039				
CITIES/LK OZARK &	MO0103241				
FULTON WWTP	MO0103331				
JOPLIN TURKEY CREEK WWTF	MO0103349				
PARK HILL WWTF	MO0103560				
CAMERON WWTF	MO0104299				
SULLIVAN WWTP	MO0104736				
NEOSHO-SHOAL CREEK	MO0104906				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
KEARNEY WWTF	MO0107883				
CHILLICOTHE, CITY OF	MO0108227				
ST. ROBERT WWTP	MO0112925				
HOLLISTER WWTF	MO0116041	✓		✓	
DUCKETT CREEK SANI DIST	MO0116572				
BRANSON, COOPER CREEK	MO0116599	✓		✓	
BELTON WWTF	MO0117412				
MOBERLY WWTP	MO0117960				
PCRS, BRUSH CREEK FAC	MO0119474	✓	✓		
CHARLESTON WWT LAGOON	MO0120081				
AMAZONIA LAGOONS	MO0126802				
MSD, NEW LOWER MERAMEC WWTF	MO0127949				
NPSD, INTERIM SALINE CREEK REGIONAL WWTF	MO0128490				
CITY OF OAK GROVE WWTF	MO0130371				
TROY, SOUTHEAST WWTF	MO0131296				
ELK VALLEY WWTF	MO0133671	✓		✓	
Total	123	24	24	8	2

Ohio

Table B-10. Ohio major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
UPPER SANDUSKY WWTP	OH0020001	✓	✓	✓	
TWIN CITY WWTP	OH0020079	✓	✓		
GENEVA WWTP	OH0020109	✓	✓	✓	
HURON BASIN WWTP	OH0020125	✓	✓	✓	
WEST CARROLLTON WWTP	OH0020133	✓	✓		
LEXINGTON WWTP	OH0020257	✓	✓		
CELINA WWTP	OH0020320	✓	✓	✓	
ORRVILLE WWTP	OH0020371	✓	✓	✓	
HILLSBORO WWTP	OH0020389	✓	✓	✓	
HAMILTON CO POLK RUN WWTP	OH0020419	✓	✓		
CITY OF OBERLIN	OH0020427	✓	✓	✓	
MILFORD STP	OH0020451	✓	✓		
GALLIPOLIS WPCF	OH0020478	✓	✓		
MASON WWTP NO 2	OH0020494	✓	✓	✓	
MASSILLON WWTP	OH0020516	✓	✓		
BRYAN WWTP	OH0020532	✓	✓	✓	
BROOKVILLE WWTP	OH0020605	✓	✓		
BELPRE WWTP	OH0020621	✓	✓		
CRESTLINE WWTP	OH0020664	✓	✓	✓	
CITY OF BELLEVUE WWTP	OH0020672	✓	✓	✓	
ARCHBOLD WWTP	OH0020796	✓	✓	✓	
JACKSON WWTP	OH0020834	✓	✓	✓	
BLUFFTON WWTP	OH0020851	✓	✓	✓	
NAPOLEON WWTP	OH0020893	✓	✓	✓	
EATON WWTP & SEWER SYSTEM	OH0020907	✓	✓		
PERRYSBURG WWTP	OH0021008	✓	✓	✓	
LEBANON REGIONAL WWTP	OH0021059	✓	✓		
GREENFIELD WWTP	OH0021083	✓	✓	✓	
GEORGETOWN STP	OH0021300	✓	✓	✓	
SAINT MARYS STP	OH0021415	✓	✓	✓	
HARRISON WWTP	OH0021440	✓	✓		
AMHERST WPCF	OH0021628	✓	✓	✓	
UNION WWTP	OH0021644	✓	✓		
COLUMBIANA WWTP	OH0021776	✓	✓		
EAST PALESTINE WWTP	OH0021784	✓	✓	✓	
SOUTH POINT WWTP	OH0021814	✓	✓		
WEST MILTON WWTP	OH0021857	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
NEWTON FALLS WPC	OH0022110	✓	✓		
CHARDON CITY OF	OH0022659	✓	✓	✓	
RAVENNA WWTP	OH0023221	✓	✓	✓	
LOGAN WWTP	OH0023388	✓	✓		
WAUSEON WWTP	OH0023400	✓	✓	✓	
WELLSTON WWTP NORTH	OH0023507	✓	✓		
SHELBY WWTP	OH0023540	✓	✓		
VERMILION WPCF	OH0023612	✓	✓	✓	
LONDON WWTP	OH0023779	✓	✓		
AKRON WPCF	OH0023833	✓	✓	✓	
AMERICAN-BATH WWTP	OH0023841	✓	✓	✓	
SHAWNEE NO 2 WWTP	OH0023850	✓	✓	✓	
ALLIANCE WWTP	OH0023868	✓	✓	✓	
ASHLAND WWTP	OH0023906	✓	✓		
ASHTABULA WPCF	OH0023914	✓	✓	✓	
ATHENS WWTP	OH0023931	✓	✓		
AVON LAKE WPCF	OH0023981	✓	✓	✓	
BARBERTON WPCF	OH0024007	✓	✓	✓	
BARNESVILLE WWTP	OH0024015	✓	✓		
BEDFORD WWTP	OH0024040	✓	✓	✓	
BEDFORD HTS WWTP	OH0024058	✓	✓	✓	
BELLEFONTAINE WWTP	OH0024066	✓	✓		
BOWLING GREEN WWTP	OH0024139	✓	✓	✓	
CAMBRIDGE WPCF	OH0024309	✓	✓		
CAMPBELL WWTP	OH0024325	✓	✓		
CANAL WINCHESTER WWTP	OH0024333	✓	✓		
CITY OF CANTON	OH0024350	✓	✓		
CHILLICOTHE WWTP - EASTERLY	OH0024406	✓	✓		
CITY OF CIRCLEVILLE	OH0024465	✓	✓		
NE OHIO REGIONAL S D EASTERLY STP	OH0024643	✓	✓	✓	
SOUTHERLY WASTEWATER TRTMNT CTR, NEORS	OH0024651	✓	✓	✓	
NEORS WESTERLY WWTP	OH0024660	✓	✓	✓	
CLYDE WWTP	OH0024686	✓	✓	✓	
CITY OF COLUMBUS	OH0024732	✓	✓		
CITY OF COLUMBUS	OH0024741	✓	✓		
CONNEAUT WWTP	OH0024767	✓	✓	✓	
COSHOCTON WWTP	OH0024775	✓	✓		
DAYTON STP	OH0024881	✓	✓		
DEFIANCE STP	OH0024899	✓	✓	✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
UPPER OLENTANGY WATER RECLAMATION CENTER	OH0024911	✓	✓	✓	✓
DELPHOS WWTP	OH0024929	✓	✓	✓	
DOVER WWTP	OH0024945	✓	✓		
EAST LIVERPOOL WWTP	OH0024970	✓	✓		
ELYRIA WWTP	OH0025003	✓	✓	✓	
ENGLEWOOD WWTP	OH0025011	✓	✓		
FAIRBORN WATER RECLAMATION CENTER	OH0025062	✓	✓		
FAIRFIELD WWTP	OH0025071	✓	✓		
FINDLAY WPCF	OH0025135	✓	✓	✓	
FRANKLIN REGIONAL WWTP	OH0025275	✓	✓		
FREMONT WPCF	OH0025291	✓	✓	✓	
GALION WWTP	OH0025313	✓	✓	✓	
GIRARD WWTP	OH0025364	✓	✓		
GRAFTON WWTP	OH0025372	✓	✓	✓	
BEAVERCREEK WRRF	OH0025381	✓	✓	✓	
GREENVILLE WWTP	OH0025429	✓	✓	✓	
HAMILTON WWTP	OH0025445	✓	✓		
LITTLE MIAMI WWTP	OH0025453	✓	✓		
MILL CREEK WWTP	OH0025461	✓	✓		
MUDDY CREEK WWTP	OH0025470	✓	✓		
SYCAMORE CREEK WWTP	OH0025488	✓	✓	✓	
HEATH WWTP	OH0025763	✓	✓		
HICKSVILLE WWTP	OH0025771	✓	✓		
HUBBARD WPCF	OH0025810	✓	✓		
IRONTON WWTP	OH0025852	✓	✓		
CITY OF KENT	OH0025917	✓	✓	✓	
KENTON WWTP	OH0025925	✓	✓		
LAKEWOOD WWTP	OH0026018	✓	✓	✓	
LANCASTER WPCF	OH0026026	✓	✓		
LIMA WWTP	OH0026069	✓	✓	✓	
LORAIN BLACK RIVER WWTP	OH0026093	✓	✓	✓	
CITY OF LOUISVILLE	OH0026182	✓	✓	✓	
MANSFIELD WWTP	OH0026328	✓	✓		
MARIETTA WWTP	OH0026344	✓	✓		
MARION WPC	OH0026352	✓	✓		
MIAMISBURG WATER RECLAMATION FACILITY	OH0026492	✓	✓		
CITY OF MIDDLETOWN	OH0026522	✓	✓		
MINSTER WWTP	OH0026573	✓	✓	✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
EASTERN REGIONAL WATER RECLAMATION FACILITY	OH0026590	✓	✓	✓	
MONTGOMERY CO WESTERN REGIONAL	OH0026638	✓	✓		
MOUNT VERNON WWTP	OH0026662	✓	✓		
NEWARK WWTP	OH0026671	✓	✓		
NEWCOMERSTOWN WWTP & SEWERS	OH0026689	✓	✓		
NEW PHILADELPHIA WWTP	OH0026727	✓	✓		
NILES WWTP	OH0026743	✓	✓		
NORTH OLMSTED WWTP	OH0026778	✓	✓	✓	✓
NORTH ROYALTON WWTP A	OH0026794	✓	✓	✓	
OTTAWA WWTP	OH0026921	✓	✓	✓	
OXFORD WWTP	OH0026930	✓	✓		
PAINESVILLE WPC PLT	OH0026948	✓	✓	✓	
PIQUA WWTP	OH0027049	✓	✓		
PORTSMOUTH LAWSON RUN WWTP	OH0027197	✓	✓		
SALEM STP	OH0027324	✓	✓	✓	
SANDUSKY WPC	OH0027332	✓	✓	✓	
SIDNEY WWTP	OH0027421	✓	✓		
CITY OF SOLON WATER RECLAMATION FACILITY	OH0027430	✓	✓	✓	
SPRINGBORO WWTP	OH0027472	✓	✓		
STEUBENVILLE WWTP	OH0027511	✓	✓		
STRUTHERS WWTP	OH0027600	✓	✓		
TROY WWTP	OH0027758	✓	✓		
CITY OF TWINSBURG WWTP	OH0027863	✓	✓	✓	
URBANA WPCF	OH0027880	✓	✓		
VAN WERT WWTP	OH0027910	✓	✓	✓	
WAPAKONETA WWTP	OH0027952	✓	✓	✓	
WARREN WPCF	OH0027987	✓	✓		
WASHINGTON COURT HOUSE WWTP	OH0028002	✓	✓		
WILLARD WPCP	OH0028118	✓	✓	✓	
WILLOUGHBY EASTLAKE STP	OH0028126	✓	✓	✓	
WILMINGTON STP	OH0028134	✓	✓		
WOOSTER WPCP	OH0028185	✓	✓		
XENIA FORD ROAD WWTP	OH0028193	✓	✓	✓	
GLADY RUN WWTP	OH0028207	✓	✓	✓	
YOUNGSTOWN WWTP	OH0028223	✓	✓		
ROCKY RIVER WWTP	OH0030503	✓	✓	✓	
EUCLID WWTP	OH0031062	✓	✓	✓	
PICKERINGTON WWTP	OH0031119	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
AQUA OHIO WATER CO INC - BLACKLICK WWTP	OH0036021	✓	✓	✓	
BROOKFIELD WWTP	OH0036285	✓	✓		
INDIAN LAKE WPCF	OH0036641	✓	✓		
MADISON WWTP NO 1	OH0036790	✓	✓	✓	
BOARDMAN WWTP	OH0037249	✓	✓	✓	
AMERICAN NO 2 WWTP	OH0037338	✓	✓	✓	
FRANKLIN HILLS WWTP	OH0038717	✓	✓	✓	
BUCKEYE LAKE WWTP	OH0039098	✓	✓		
SUGARCREEK WRF	OH0040592	✓	✓	✓	
HAMILTON CO TAYLOR CRK TREATME	OH0040983	✓	✓		
TRUMBULL MOSQUITO CREEK WWTP	OH0043401	✓	✓		
MCFARLAND CREEK WWTP	OH0043494	✓	✓	✓	
GARY L KRON WATER RECLAMATION FACILITY	OH0043559	✓	✓	✓	
MEDINA CO SD NO 500 LIVERPOOL WWTP	OH0043567	✓	✓	✓	
NORTH RIDGEVILLE FRENCH CRK	OH0044512	✓	✓	✓	
MEANDER WWTP	OH0045721	✓	✓	✓	
MEDINA CO SD #300 HINCKLEY WWTP	OH0045748	✓	✓	✓	
O'BANNON CREEK REGIONAL WWTP	OH0048089	✓	✓		
NINE MILE CREEK WWTP	OH0049361	✓	✓		
CLERMONT CO LOWER EAST FORK WW	OH0049379	✓	✓		
CLERMONT CO MIDDLE EAST FORK W	OH0049387	✓	✓		
LESOURDSVILLE WATER RECLAMATIO	OH0049417	✓	✓		
TRI CITIES NORTH REGIONAL WWTP	OH0049646	✓	✓		
SOUTHWEST WWTP	OH0049794	✓	✓		
EASTERN OHIO REGIONAL WW AUTHORITY	OH0049999	✓	✓		
WHEELERSBURG WWTP SD NO 2	OH0050016	✓	✓		
NORWALK WWTP	OH0052604	✓	✓	✓	
FOSTORIA STP	OH0052744	✓	✓	✓	
PORT CLINTON WWTP	OH0052876	✓	✓	✓	
OREGON WWTP	OH0052914	✓	✓	✓	
BUCYRUS WWTP	OH0052922	✓	✓	✓	
TIFFIN WWTP	OH0052949	✓	✓	✓	
SAWMILL CREEK WWTP	OH0053082	✓	✓	✓	
DANBURY TWP WWTP	OH0053660	✓	✓	✓	
PICKAWAY CORRECTIONAL INSTITUTE	OH0054224	✓	✓	✓	
FAIRFIELD CO TUSSING ROAD WWTP	OH0054305	✓	✓	✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
DELAWARE CO COMMISSIONERS	OH0054399	✓	✓	✓	✓
SD NO 7 WATER RECLAMATION PLANT	OH0058157	✓	✓	✓	
FISHCREEK WWTP NO 25	OH0064009	✓	✓	✓	
UPPER TUSCARAWAS WWTP NO 36	OH0064017	✓	✓	✓	
LOWER LITTLE MIAMI WWTP	OH0071692	✓	✓	✓	
UPPER MILL CREEK WATER RECLAMATION FACILITY	OH0072087	✓	✓	✓	✓
MILLER BREWERING CO.	OH0072605	✓	✓		
CHILLICOTHE CORRECTIONAL INSTITUTION	OH0076490	✓	✓		
PHILIP Q MAIORANA WWTP	OH0089672	✓	✓	✓	
STREETSBORO HUDSON REGIONAL WWTP	OH0090131	✓	✓	✓	
UNION ROME TWPS SUB-SD WWTP	OH0094684	✓	✓		
RITTMAN WWTP	OH0102857	✓	✓	✓	
SOUTHWEST LICKING W & SD GALE RD ENVIR CONTROL FACILITY	OH0113964	✓	✓		
ALUM CREEK WWTP	OH0121380	✓	✓		
LOWER SCIOTO WRF	OH0136247	✓	✓	✓	✓
MARYSVILLE WRF	OH0136271	✓	✓	✓	
UPPER HOCKING WPCF	OH0136603	✓	✓		
Total	205	205	205	107	5

Tennessee

Table B-11. Tennessee major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
SWEETWATER STP	TN0020052	✓	✓	✓	✓
MARYVILLE STP	TN0020079	✓	✓		
KINGSPORT STP	TN0020095				
GATLINBURG STP	TN0020117	✓	✓	✓	
GALLATIN STP	TN0020141	✓	✓		
DAYTON STP	TN0020478	✓	✓		
LENOIR CITY STP	TN0020494	✓	✓		
DECHERD CITY STP	TN0020508	✓	✓	✓	✓
LAFOLLETTE STP	TN0020532	✓	✓		
SMYRNA STP	TN0020541	✓	✓	✓	✓
MCKENZIE STP	TN0020613	✓	✓		
NASHVILLE-DRY CREEK STP	TN0020648				
CLARKSVILLE STP	TN0020656	✓	✓		
ROGERSVILLE STP	TN0020672	✓	✓		
NEWPORT STP	TN0020702	✓	✓		
MEMPHIS-MAYNARD C. STILES	TN0020711	✓	✓		
MEMPHIS-TE MAXSON STP SO PLT	TN0020729	✓	✓		
LAFAYETTE STP	TN0020877	✓	✓	✓	✓
COVINGTON STP	TN0020982	✓	✓		
MILLINGTON STP #2	TN0021067	✓	✓	✓	✓
JEFFERSON CITY STP	TN0021199	✓	✓		
DENZIL BOWMAN WASTEWATER TREAT	TN0021229	✓	✓		
PIGEON FORGE STP	TN0021237	✓	✓	✓	
CHURCH HILL_WWTP	TN0021253	✓	✓		
SPRING CITY STP	TN0021261				
USA FT CAMPBELL STP	TN0021296	✓	✓	✓	✓
A. L. STRUB WWTP	TN0021580	✓	✓		
PULASKI STP	TN0021687				
FAYETTEVILLE STP	TN0021814				
KNOXVILLE-LOVES CREEK STP	TN0021822	✓	✓		
WINCHESTER STP	TN0021857	✓	✓		
PORTLAND STP	TN0021865	✓	✓	✓	✓
LIVINGSTON STP	TN0021873	✓	✓	✓	✓
LAWRENCEBURG UTILITY SYSTEMS	TN0022551	✓	✓	✓	✓
MURFREESBORO STP	TN0022586	✓	✓	✓	✓
LEWISBURG STP	TN0022888	✓	✓	✓	✓
ERWIN STP	TN0023001	✓	✓		

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
FIRST U.D. KNOX CO.-TURKEY CR	TN0023353	✓	✓		
TULLAHOMA STP	TN0023469	✓	✓	✓	✓
DYERSBURG STP	TN0023477	✓	✓	✓	
MORRISTOWN STP	TN0023507	✓	✓		
ELIZABETHTON STP	TN0023515	✓	✓		
BRISTOL STP #2	TN0023531				
KNOXVILLE-FOURTH CREEK STP	TN0023574				
KNOXVILLE-KUWAHEE STP	TN0023582				
MCMINNVILLE STP	TN0023591	✓	✓		
CLEVELAND UTILITIES STP	TN0024121				
OAK RIDGE STP	TN0024155	✓	✓		
SHELBYVILLE STP	TN0024180	✓	✓		
COOKEVILLE STP	TN0024198	✓	✓	✓	✓
ATHENS UB-OOSTANAULA CREEK STP	TN0024201	✓	✓	✓	✓
CHATT.-MOCCASIN BEND STP	TN0024210	✓	✓		
JOHNSON CITY KNOB CREEK STP	TN0024236	✓	✓		
JOHNSON CITY STP	TN0024244	✓	✓		
SOUTH PITTSBURG STP	TN0024295	✓	✓		
ROANE COUNTY STP	TN0024473	✓	✓		
JACKSON ENERGY AUTHORITY	TN0024813	✓	✓		
WAVERLY LAGOON	TN0024830				
MOUNTAIN CITY STP	TN0024945				
SPRINGFIELD STP	TN0024961	✓	✓	✓	✓
NASHVILLE-WHITES CR STP	TN0024970				
CROSSVILLE STP	TN0024996	✓	✓		
MANCHESTER STP	TN0025038	✓	✓	✓	✓
ROCKWOOD STP	TN0026158	✓	✓	✓	✓
BELLS LAGOON	TN0026247	✓	✓		
CLINTON STP #1	TN0026506				
WHITEVILLE STP	TN0026590	✓	✓		
LEBANON STP	TN0028754	✓	✓		
JOHNSON CITY REGIONAL STP	TN0028789	✓	✓		
FRANKLIN STP	TN0028827	✓	✓	✓	✓
COLUMBIA STP	TN0056103				
HALLS LAGOON	TN0057291	✓	✓		
COLLIERVILLE STP	TN0057461	✓	✓		
LOUDON STP	TN0058181	✓	✓		
WHITE HOUSE STP	TN0059404	✓	✓		
WEST KNOX UD-KARNS BEAV CR STP	TN0060020	✓	✓	✓	✓
SPARTA STP	TN0061166				

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
PARIS STP	TN0061271	✓	✓		
SAVANNAH LAGOON	TN0061565	✓	✓		
KINGSTON STP	TN0061701	✓	✓		
NEWBERN STP	TN0062111	✓	✓		
SELMER STP	TN0062308	✓	✓		
BROWNSVILLE STP	TN0062367	✓	✓		
MILAN STP	TN0062375				
MUNFORD LAGOON	TN0062499	✓	✓		
MARTIN STP	TN0062545	✓	✓		
HUMBOLDT STP	TN0062588	✓	✓		
JAMESTOWN STP	TN0062634	✓	✓		
ETOWAH STP	TN0063771	✓	✓		
SEVIERVILLE STP	TN0063959	✓	✓		
ROSSVILLE STP	TN0064092		✓		
MONTEREY STP	TN0064688	✓	✓		✓
SMITHVILLE STP	TN0065358	✓	✓		
BARTLETT LAGOON	TN0066800	✓	✓	✓	
DICKSON STP	TN0066958	✓	✓	✓	✓
ATHENS UB-NORTH MOUSE CREEK STP	TN0067539	✓	✓	✓	
HARPETH VALLEY UD	TN0074748	✓	✓		
BROWNSVILLE LAGOON	TN0075078	✓	✓		
SPRING HILL STP	TN0075868	✓	✓	✓	✓
JACKSON ENERGY AUTH- MIDDLE FK	TN0075876	✓	✓		
BOLIVAR STP	TN0077917	✓	✓	✓	✓
RIPLEY WASTEWATER LAGOON	TN0078191	✓	✓		
TRENTON STP	TN0078271				
ARLINGTON STP	TN0078603	✓	✓		
WAVERLY STP	TN0078808				
COLLIERVILLE NORTHWEST STP	TN0078841	✓	✓		
Total	106	87	88	27	23

Wisconsin

Table B-12. Wisconsin major sewage treatment plants with monitoring or limits for nutrient pollution.

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
WHITEWATER CITY WWTF	WI0020001	✓		✓	
RHINELANDER WWTF	WI0020044	✓		✓	
RICHLAND CENTER CITY WWTF	WI0020109	✓		✓	
MERRILL CITY WWTF	WI0020150	✓		✓	
GRAFTON WATER & WASTEWATER UT	WI0020184	✓		✓	
HARTFORD WATER POLLUTION CTRL	WI0020192	✓		✓	
CEDARBURG CITY WWTF	WI0020222	✓		✓	
PRAIRIE DU CHIEN WWTF	WI0020257	✓		✓	
STOUGHTON CITY WWTF	WI0020338	✓	✓	✓	
MONROE CITY WWTF	WI0020362	✓		✓	
REEDSBURG CITY WWTF	WI0020371	✓		✓	
PORTAGE CITY WWTF	WI0020427	✓		✓	
PLATTEVILLE CITY WWTF	WI0020435	✓		✓	
PORT WASHINGTON CITY WWTF	WI0020460	✓		✓	
SUN PRAIRIE CITY WWTF	WI0020478	✓		✓	
SUSSEX VILLAGE WWTF	WI0020559	✓	✓	✓	
BARABOO CITY WWTF	WI0020605	✓		✓	
OREGON WWTF	WI0020681	✓	✓	✓	
SPARTA CITY WWTF	WI0020737	✓		✓	
COLUMBUS CITY WWTF	WI0021008	✓		✓	
MARSHFIELD CITY WWTF	WI0021024	✓		✓	
RIPON CITY WWTF	WI0021032	✓		✓	
STURGEON BAY UTILITIES WWTF	WI0021113	✓		✓	
OCONOMOWOC CITY WWTF	WI0021181	✓		✓	
TOMAH CITY WWTF	WI0021318	✓		✓	
SAUKVILLE SEWER UTILITY	WI0021555	✓		✓	
TWIN LAKES WASTEWATER TREATMEN	WI0021695	✓		✓	
JACKSON SEWAGE TREATMENT PLANT	WI0021806	✓		✓	
RICE LAKE CITY WWTF	WI0021865	✓		✓	
ANTIGO CITY SPRINGBROOK FACILI	WI0022144	✓		✓	
FORT ATKINSON CITY WWTF	WI0022489	✓		✓	
WAUPUN CITY WWTF	WI0022772	✓		✓	
BURLINGTON WATER POLLUTION CTL	WI0022926	✓		✓	
APPLETON CITY WWTF	WI0023221	✓		✓	
ARCADIA CITY WWTF	WI0023230	✓	✓	✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
BEAVER DAM CITY WWTF	WI0023345	✓	✓	✓	
BELOIT CITY WWTF	WI0023370	✓		✓	
BROOKFIELD FOX WATER POLLUTION	WI0023469	✓		✓	
CHIPPEWA FALLS CITY WWTF	WI0023604	✓		✓	
EAU CLAIRE CITY WWTF	WI0023850	✓		✓	
FOND DU LAC CITY WWTF	WI0023990	✓		✓	
HUDSON CITY WWTF	WI0024279	✓		✓	
JEFFERSON CITY WWTF	WI0024333	✓		✓	
MADISON METRO SEW DIST WWTF	WI0024597	✓		✓	
MANITOWOC CITY WWTF	WI0024601	✓		✓	
MAYVILLE CITY WWTF	WI0024643	✓		✓	
GRAND CHUTE MENASHA WEST WWTF	WI0024686	✓		✓	
MENOMONIE CITY WWTF	WI0024708	✓		✓	
NEW LONDON CITY WWTF	WI0024929	✓		✓	
OSHKOSH CITY WWTF	WI0025038	✓		✓	
RACINE WASTEWATER UTILITY	WI0025194	✓		✓	
SHEBOYGAN CITY WWTF	WI0025411	✓		✓	
SUPERIOR SEWAGE DISPOSAL SYSTE	WI0025593	✓		✓	
WAUSAU WATER WORKS WWTF	WI0025739	✓		✓	
WEST BEND CITY WWTF	WI0025763	✓		✓	
WISCONSIN RAPIDS CITY WWTF	WI0025844	✓		✓	
NEENAH MENASHA SEWER COMMISSIO	WI0026085	✓		✓	
MARINETTE CITY WWTF	WI0026182	✓		✓	
TWO RIVERS CITY WWTF	WI0026590	✓		✓	
PLOVER VILLAGE OF	WI0027995	✓		✓	
UNION GROVE VILLAGE WWTF	WI0028291	✓		✓	
WOLF TREATMENT PLANT	WI0028452	✓		✓	
WATERTOWN CITY WWTF	WI0028541	✓		✓	
KENOSHA CITY WWTF	WI0028703	✓		✓	
WESTERN RACINE CO SEW DISTRICT	WI0028754	✓		✓	
SOUTH MILWAUKEE CITY WWTF	WI0028819	✓		✓	
RIVER FALLS CITY WWTF	WI0029394	✓		✓	
STEVENS POINT CITY WWTF	WI0029572	✓		✓	
LA CROSSE CITY WWTF	WI0029581	✓		✓	
WAUKESHA CITY WWTF	WI0029971	✓		✓	
PLYMOUTH UTILITY COMM WWTF	WI0030031	✓		✓	
JANESVILLE CITY WWTF	WI0030350	✓		✓	
WAUPACA CITY WWTF	WI0030490	✓		✓	

Facility Name	NPDES ID	Monitoring P	Monitoring N	Limits P	Limits N
PESHTIGO CITY WWTF	WI0030651	✓		✓	
ASHLAND SEWAGE UTILITY WWTF	WI0030767	✓		✓	
LAKE MILLS CITY WWTF	WI0031194	✓		✓	
HEART OF THE VALLEY MSD WWTF	WI0031232	✓		✓	
WI DELLS LAKE DELTON SEW COMM	WI0031402	✓		✓	
WALWORTH COUNTY METRO WWTF	WI0031461	✓		✓	
NORWAY TN SANITARY DISTRICT 1	WI0031470	✓		✓	
SALEM UTILITY DISTRICT NO 2	WI0031496	✓		✓	
DELAFIELD HARTLAND PCC WWTF	WI0032026	✓		✓	
RIB MOUNTAIN METRO SEWER DIST	WI0035581	✓		✓	
FONTANA WALWORTH WPCC WWTF	WI0036021	✓		✓	
MILWAUKEE METRO SEW DIST COMBI	WI0036820	✓		✓	
GREEN BAY METROPOLITAN SEWERAGE DISTRICT	WI0065251	✓		✓	
Total	86	86	5	86	0

Appendix C STATE-SPECIFIC SUPPLEMENTAL INFORMATION

As noted in the body of this report, the HTF recognizes that counts of monitoring requirements and permit limits may not fully reflect all of the work that states have done to reduce nutrient discharges from their point sources, nor fully explain the approaches states used to make progress. Thus, Task Force states were invited to provide state-specific, supplemental information. Six states chose to provide additional information about their work, which follows below.

Illinois

Phosphorus Loading in Illinois Municipal Wastewater Treatment Plants

Phosphorus discharged to Illinois water bodies from NPDES permitted sources has been studied extensively in recent years. We know that some industrial sources, especially those involving processes such as meat packing, grain processing, and those with non-contact cooling water treated with anti-corrosives, discharge effluents containing significant levels of phosphorus. However, the overwhelming majority of point source phosphorus comes from municipal or domestic sewage treatment plants. Further, given the population dynamics of Illinois cities, we believe that approximately 90% of phosphorus from domestic sources is discharged from major (greater than one million gallons per day design average flow) treatment plants. All of these discharges are to the Mississippi River basin.

There are 218 major municipal treatment plants in Illinois with a total design average flow of 3.2 billion gallons per day. We have kept a careful tally of which facilities have permit limits for phosphorus. Virtually all limits consist of a 1.0 mg/L phosphorus limit to be met on a monthly average basis. Figure C-1 depicts the number of major municipal facilities covered by an NPDES permit containing phosphorus limits (106 or 48.6%) and Figure C-2 shows the design average flow of major municipal facilities covered by such a permit (2.532 billion gallons per day or 79.1%).

The manner in which Illinois tallies these facilities requires explanation. The driving regulations that require phosphorus limits in permits involve antidegradation, Clean Water Act 303(d) impaired waters listings, and watershed nutrient reduction initiatives. Antidegradation involves planning for future plant expansion. NPDES permits are issued that approve the expansion and are in part based on antidegradation decisions. Permits contain limits for the expanded plant to take effect upon the completion of construction. Fourteen of the 106 facilities with phosphorus permit limits have not yet completed construction.

The 303(d) list of impaired waters contains some Illinois streams listed as having an impaired use caused at least in part by aquatic algae or aquatic plants. Major municipal wastewater treatment plant discharges located upstream of these impaired segments receive a phosphorus limit at the next permit renewal. A compliance schedule is granted to allow the facility time to bring about phosphorus removal. Several Illinois watersheds, located in largely urbanized areas, have watershed planning groups, which has led to phosphorus reduction efforts reflected in NPDES permits for all dischargers in the watershed. Dischargers have studied the schedule that would make phosphorus reduction construction (i.e., biological nutrient removal) most efficient for their plant. This has resulted in “compliance schedules” that may last beyond the term of the current permit. An additional 40 of the 106 facilities counted as having a phosphorus limit have a compliance schedule for phosphorus.

There are up to 54 major municipal facilities in Illinois that are not removing phosphorus from their effluent as yet (and are not counted in ICIS-based tracking measures) but have had regulatory work done to bring about phosphorus limits. A binding agreement has been reached via NPDES permit conditions. Illinois believes that our tally does not exaggerate phosphorus regulation in NPDES permits, but rather shows the true progress achieved in the task of reducing phosphorus loading to local waters and to the Gulf of Mexico.

In addition to the above, major NPDES permits are including requirements to submit a feasibility study that identifies the method, timeframe, and costs of reducing phosphorus levels in its discharge to a level meeting a potential future effluent standard of 1.0 mg/L, 0.5 mg/L and 0.1 mg/L. A range of treatment technologies should be considered, including, but not limited to, biological phosphorus removal, chemical precipitation, or a combination of the two. The study must evaluate construction costs and operation and maintenance (O & M) costs of the different treatment technologies. The amount the typical household annual sewer rate will increase should also be determined. Approximately 45 NPDES permits have been issued in the Fox River, Des Plaines River and DuPage River/Salt Creek watersheds within the past year that include this special condition.

Figure C-1. Major municipal permits.

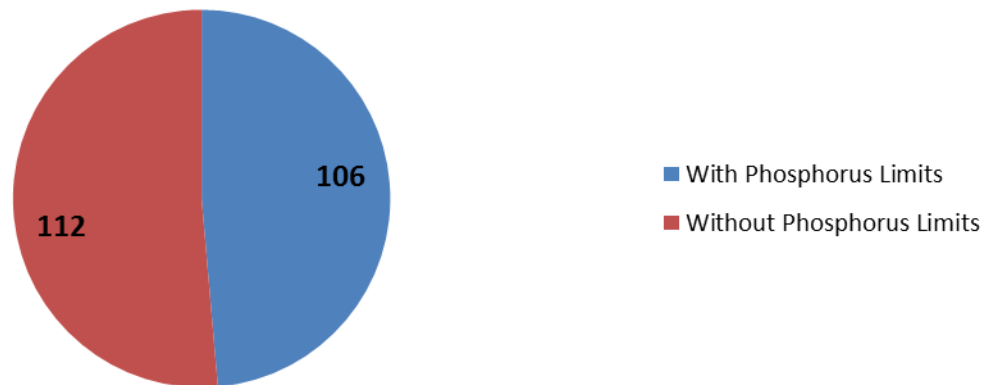
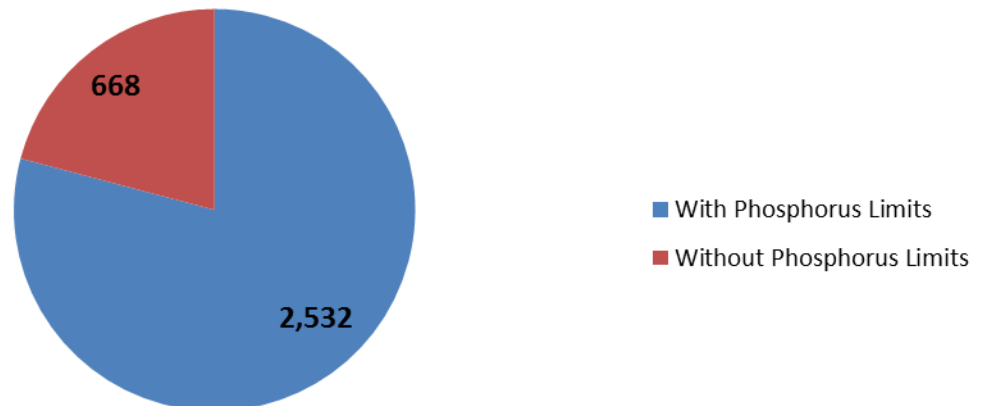


Figure C-2. Design average flow of major municipal permits (million gallons per day).



Indiana

The Indiana Department of Environmental Management has a non-rule policy document (NPD) which establishes the Commissioner's determination that an effluent containing no more than 1.0 milligram per liter (mg/L) of total phosphorus as a monthly average is needed for sanitary wastewater treatment plants with average design flows greater than or equal to 1 million gallons per day (MGD). The NPD can be found here: <http://www.in.gov/idem/files/npd-water-019.pdf>.]

Iowa

The Iowa Nutrient Reduction Strategy (NRS), finalized in May 2013, is a science and technology-based approach to assess and reduce nutrients delivered to Iowa waterways and the Gulf of Mexico. The strategy outlines voluntary efforts to reduce nutrients in surface water from both point sources such as wastewater treatment plants and industrial facilities, and nonpoint sources including farm fields and urban areas in a scientific, reasonable, and cost effective manner.

NRS Strategy Goals

Consistent with the 2008 Gulf Hypoxia Action Plan, the Iowa NRS establishes as goals a 45% reduction in total nitrogen and a 45% reduction in total phosphorus discharged from point sources and nonpoint sources to surface waters in Iowa. To achieve these goals the NRS sets reduction targets for point sources of 66% and 75% for nitrogen and phosphorus, respectively. These targets are the degrees of reduction the state has deemed feasible and reasonable utilizing biological nutrient reduction technology.

On an annual basis, point sources were estimated to contribute approximately 8% of the total nitrogen and 20% of the total phosphorus that enter Iowa's rivers and streams, all of which drain to the Gulf of Mexico. If successful, the strategy will reduce by more than 11,000 tons per year the amount of nitrogen and by 2,170 tons per year the amount of phosphorus discharged by approximately 150 major (greater than 1 million gallons per day) publicly owned treatment works (POTWs) and large industries, with the remaining reductions needing to come from nonpoint sources. These figures represent a 4% reduction in the amount of nitrogen and a 16% reduction in the amount of phosphorus estimated to enter Iowa's rivers and streams annually from all sources.

Pre-2013 Efforts

Prior to the release of the NRS, little information was available on the amounts of nitrogen and phosphorus discharged to wastewater treatment plants or from treatment plants to surface water. Although permits have been issued to point sources that require monitoring and establish effluent limits for one or both nutrients, these permits were issued with water-quality based limits resulting from Total Maximum Daily Loads (TMDLs). These permits were issued primarily to minor facilities (less than 1 million gallons per day) and do not require those facilities to reduce the amounts of nutrients they currently discharge, nor do they allow increases in nutrient discharges.

In 2009, state rules were changed which now require effluent monitoring for total nitrogen and total phosphorus for most facilities designed to treat wastewater from the equivalent of 3,000 or more people. Permits issued since then require such monitoring. However, because raw waste monitoring is not required the amount of reduction achieved, if any, cannot be readily determined.

Strategy Implementation

NPDES permits issued to the 149 point sources subject to the NRS require monitoring of both raw waste and final effluent for total nitrogen and total phosphorus during a two-year period following issuance of their NPDES permit to establish a baseline of the amounts discharged and the degree of reduction, if any, achieved by the existing treatment system. A facility is required to use that data together with other information to evaluate the feasibility and reasonableness of reducing the amounts of nutrients discharged into surface water, with a target of reducing nitrogen and phosphorus by 66% and 75%, respectively. The required feasibility study report will include an evaluation of operational changes to the existing treatment facility that could be implemented to reduce the nitrogen and phosphorus discharged.

If the implementation of operational changes alone cannot achieve the targets, the facility must evaluate new or additional treatment technologies that could achieve significant reductions in amounts discharged.

The feasibility study report must also include a proposed schedule for implementing the operational changes and/or constructing new or additional treatment technologies found to be feasible and reasonable. Upon approval of the schedule it will be added to the NPDES permit and is enforceable. The facility then installs and optimizes the technology and the NPDES permit is reissued or amended to include annual average technology-based effluent limits derived from the performance data for the installed technology.

Because of this non-traditional approach, progress at reducing nutrient discharges in Iowa, especially in the early years of implementation of the NRS, must be evaluated by means other than simply the number of permits that specify nutrient limits and/or monitoring requirements. Such metrics include the number of permits issued that require feasibility studies, the number of studies submitted, the number of construction schedules included in permits, and the number of facilities that have completed construction and are operating nutrient reduction technologies.

Progress

One of the goals of the NRS was to annually issue or reissue NPDES permits to at least 20 (15%) of the 149 facilities listed in the strategy that would specify influent and effluent nitrogen and phosphorus monitoring and include a requirement to complete a technology evaluation on the feasibility of reducing the amounts of nitrogen and phosphorus discharged. These 149 facilities included all major POTWs (greater than 1 million gallons per day), all major industries, and minor industries that utilize a biological treatment process.

Twenty-one permits were issued during the first year following release of the NRS. An additional 33 permits were issued during the second year, which ended May 31, 2015. As of September 2015, 65 permits have been issued that represent 44% of the 149 point sources subject to the strategy. This exceeds the goals of 40 permits that were to be issued within the first two years and 60 permits to be issued by the end of year three (May 2016).

The first of the feasibility reports were required to be completed in September 2015 and 5 studies were submitted. No construction schedules have been added to permits as of September 30, 2015.

While the NRS itself has not yet directly resulted in significant point source nutrient reduction, some facilities in Iowa have voluntarily implemented nutrient reduction practices. For example, the City of Clinton, faced with having to construct a new treatment facility to meet limits for conventional pollutants, designed, constructed, and began operating a new wastewater treatment plant in 2013 that removes nitrogen and phosphorus. Monitoring data show the facility is meeting the nutrient reduction targets specified in the strategy. Iowa City and Sioux City both operate new wastewater treatment plants designed to remove total nitrogen and will be evaluating opportunities to reduce phosphorus as part of their feasibility studies. Several smaller POTWs, like the City of Northwood, are including nitrogen and phosphorus removal into new treatment plant designs although they have not been required to do so.

Analysis of Preliminary Data

Results of weekly monitoring are being submitted by facilities whose permits have been issued since the strategy was released. Data in Table C-1 reflect the actual results from 13 POTWs for which at least 10 months of weekly sample results were available for both raw waste and final effluent and the six industries with at least 10 months of data for raw waste, final effluent, or both for the period May 1, 2014 through April 30, 2015. Not all major industries operate wastewater treatment plants and therefore not all have raw waste data.

Table C-1. Results of nitrogen and phosphorus monitoring for the period May 1, 2014 through April 30, 2015 at 19 facilities with NPDES permits issued to comply with the Iowa Nutrient Reduction Strategy.

	Target	POTW	Industry
Number of Facilities	147	13	6
Total Nitrogen (average)			
Raw Waste (mg/L)		30.9 (range 15.9 – 80.1)	133 (range 62.5 – 298.6)
Final Effluent (mg/L)	10	15.1 (range 4.2 – 53)	28 (range 4.6 – 48.9)
% Removal	66	50.3 (range 11.8 – 80.1)	76 (range 45.1 -90.9)
Total Phosphorus (average)			
Raw Waste (mg/L)		4.4 (range 2.2 – 11.2)	27.6 (range 3.6 - 72.8)
Final Effluent (mg/L)	1	2.2 (range 0.8 – 4.4)	16.6 (range 0.6 – 83.4)
% Removal	75	45.4 (range 16.6 – 84.5)	54.4 (range -14.6 – 94.7)
Annual Load Reduction (2014-2015)			
Total Nitrogen (pounds)		2,050,795	247,666
Total Phosphorus (pounds)		361,124	145,587

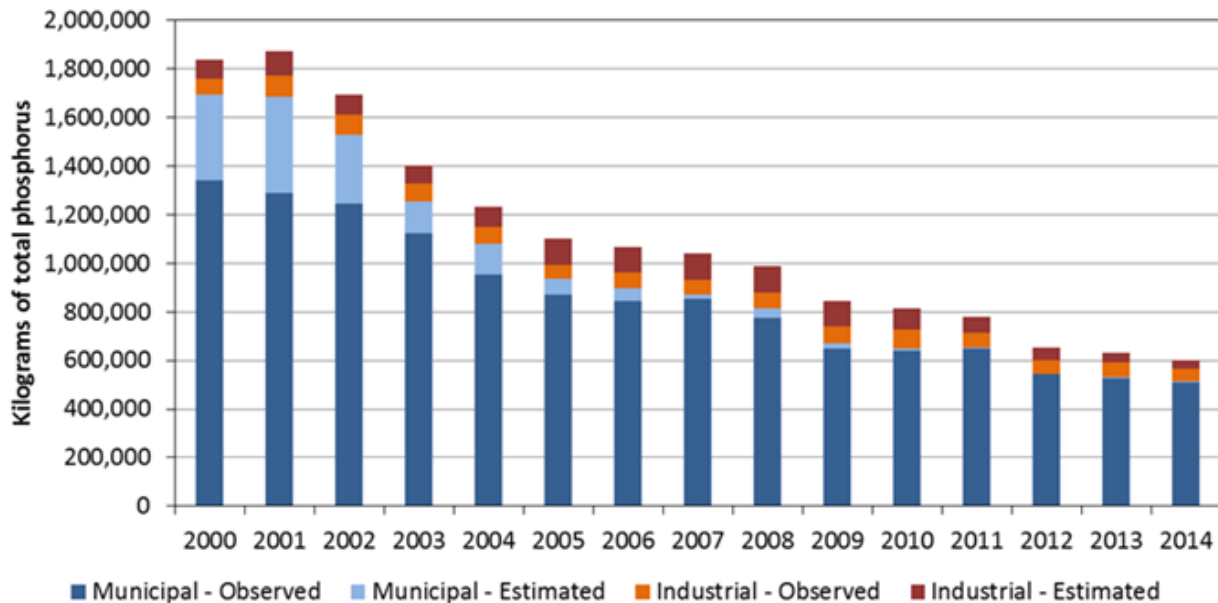
The amounts of total nitrogen and total phosphorus removed between May 1, 2014 and April 30, 2015 by the 19 facilities represented in Table C-1 were 2,298,461 pounds (1,149 tons) and 399,119 pounds (199 tons), respectively. It is noteworthy that none of these facilities have constructed treatment specifically designed to reduce total nitrogen and total phosphorus but nonetheless some achieve significant reductions in one or both nutrients. Greater reductions are anticipated for most facilities following installation or implementation of specific nutrient reduction practices and technologies.

Minnesota

Minnesota's Wastewater Phosphorus Reduction Strategy

The significant statewide effluent phosphorus load reductions by Minnesota wastewater treatment facilities over the last 15 years (Figure C-3) have been achieved as the result of a long term strategy. Over the last 15 years, phosphorus monitoring has become a commonplace permit requirement and 30% of all NPDES permits contain phosphorus limits. Further reductions are expected as a result of the recently adopted river eutrophication standards.

Figure C-3. Minnesota NPDES discharger effluent total phosphorus loading trend by facility type.

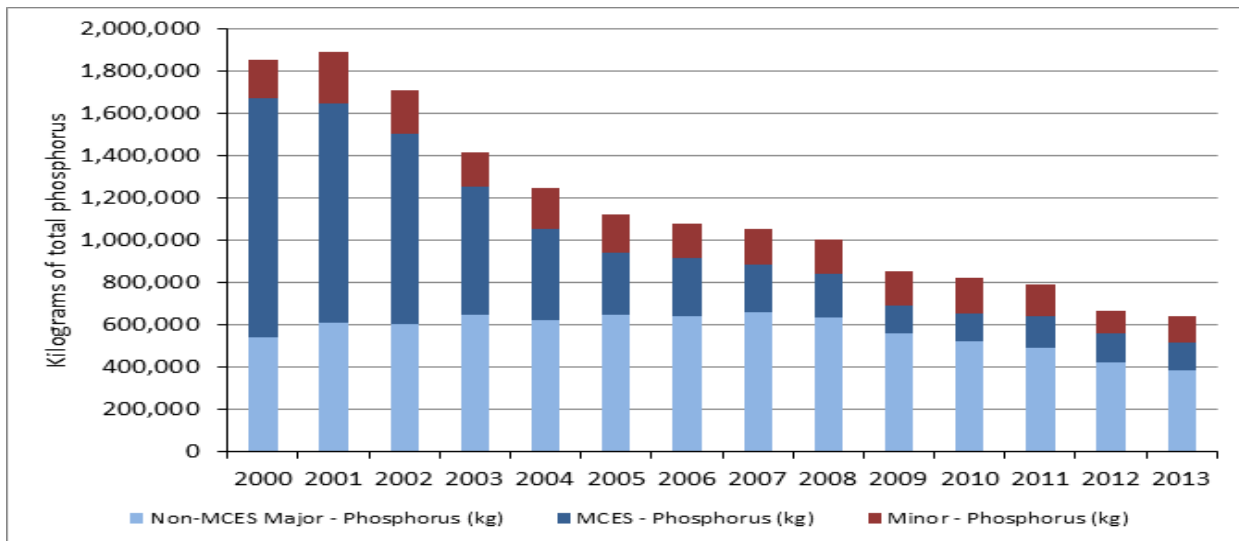


The majority of the phosphorus reductions can be traced back to the implementation of the Minnesota Pollution Control Agency (MPCA) 2000 Phosphorus Strategy which was developed by MPCA staff to provide a consistent framework for implementing 1 mg/L total phosphorus limits and to promote reductions in phosphorus loading from point sources. The MPCA Citizens' Board approved the Strategy in March 2000, establishing a 1 mg/L effluent concentration performance standard for new or expanded wastewater treatment plants (WWTPs) whose discharge had the potential to exceed 1,800 pounds per year and required smaller WWTPs to develop Phosphorus Management Plans.

The majority of the 66% statewide reduction in phosphorus discharge that occurred from 2001 to 2013 (as compared to peak loads pre-2001) was accomplished by the largest dischargers (Figure C-4), but significant reductions have also been made by smaller facilities:

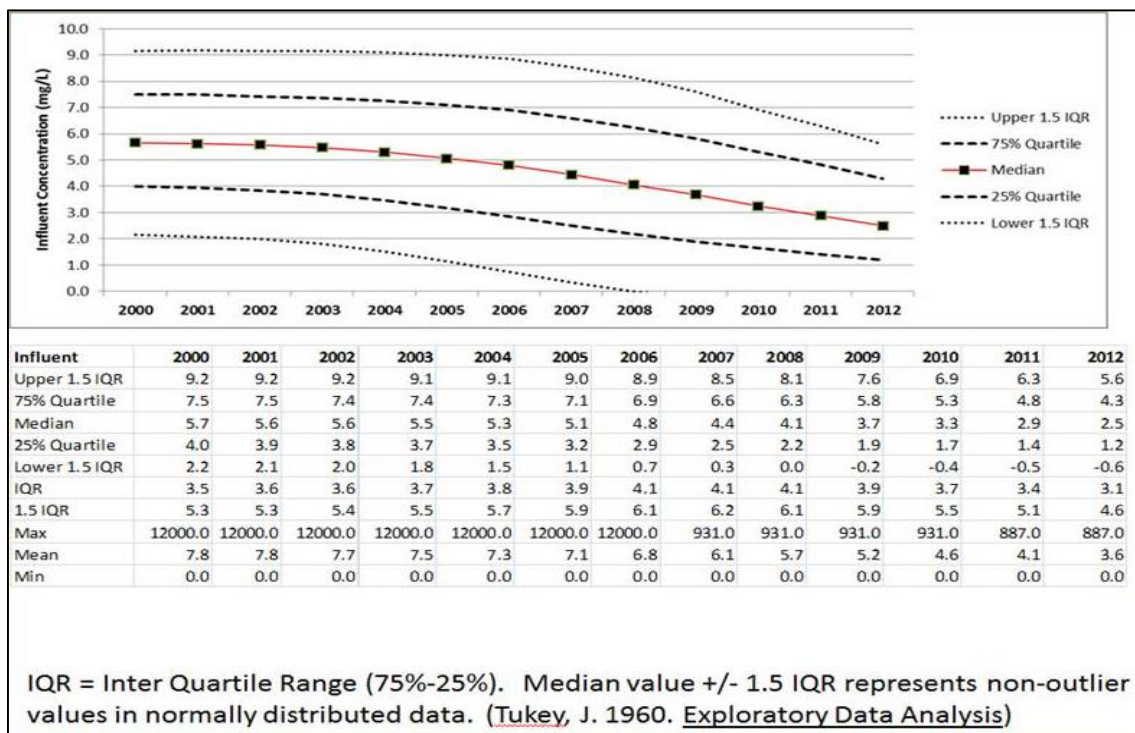
- Metropolitan Council wastewater treatment facilities – 902 MT per year = 87% reduction
- Other major facilities – 225 MT per year = 37% reduction
- Minor facilities – 117 MT per year = 48% reduction

Figure C-4. Minnesota NPDES discharger effluent total phosphorus loading trend by facility size.



There is evidence that the implementation of phosphorus management plans has resulted in statistically significant reductions in influent phosphorus as evidenced by the reduction in median influent monthly average phosphorus concentrations reported by municipal wastewater treatment operators whose permits did not contain effluent phosphorus limits (Figure C-5).

Figure C-5. Municipal wastewater treatment facility influent total phosphorus concentration trends.



The MPCA’s 2000 Phosphorus Strategy was formalized as [MN Rule 7053.0255](#) in connection with the adoption of Lake Eutrophication Standards (LES) in 2008. Subsequent acceleration in the development of water quality based LES effluent phosphorus limits has resulted in further effluent phosphorus load reductions. The adoption of River Eutrophication Standards (RES) in 2014 is expected to further reduce Minnesota effluent phosphorus loads over the next decade. The overall magnitude of RES based reductions is expected to be small in comparison to the major progress made since 2000, but the results will be important for the health of local waterbodies, and the removal costs of those reductions may be relatively high where advanced tertiary treatment is necessary to comply with low level effluent phosphorus limits.

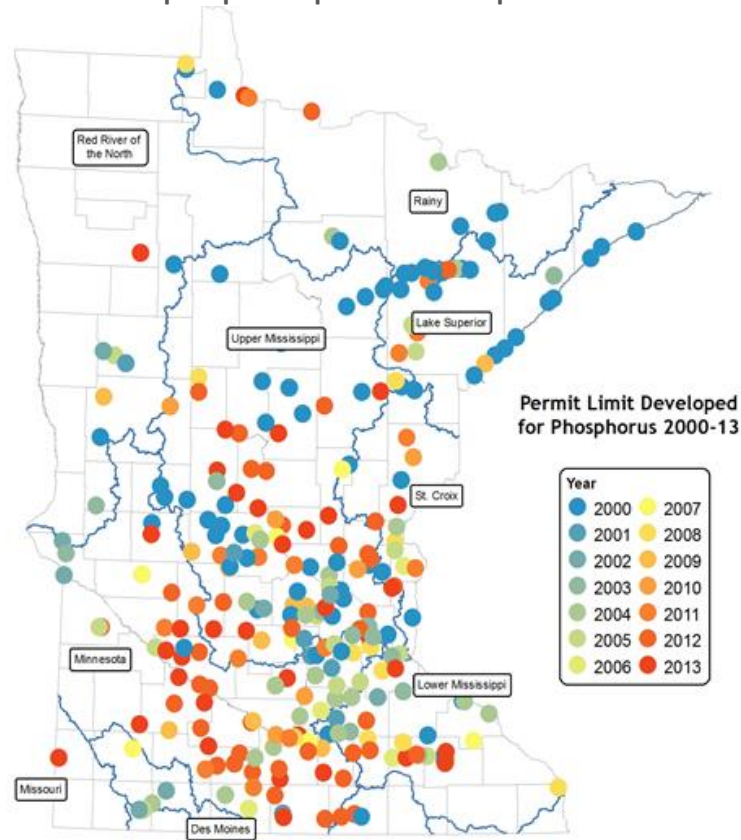
As of September 2015, 71% of Minnesota’s NPDES permits for dischargers in the Mississippi River Basin contain total phosphorus monitoring requirements and 30% of the permits contain effluent limits (Table C-2).

Table C-2. Minnesota NPDES permit total phosphorus limits and monitoring requirements in the Mississippi River Basin.

	Domestic	Industrial	Total
NPDES Permits in Minnesota	574	555	1,129
NPDES Permits in Mississippi River Basin	454	431	892
NPDES Permits with TP monitoring in Mississippi River Basin	448	181	629
NPDES Permits with TP limits in Mississippi River Basin	220	47	267

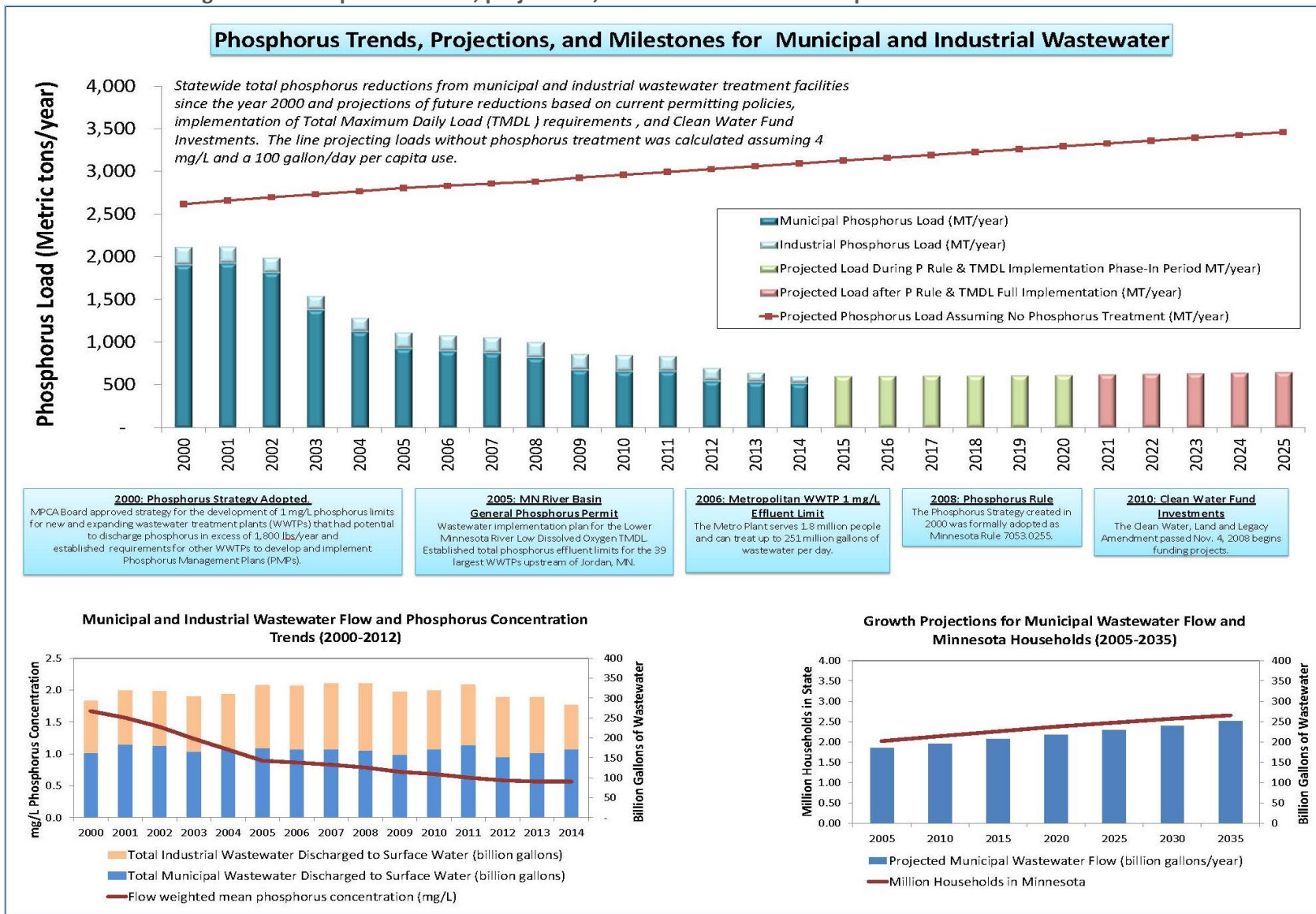
Minnesota’s phosphorus limit implementation has evolved over time (Figure C-6), starting in the Lake Superior Basin and dischargers in close proximity to lakes, and expanding to Total Maximum Daily Load (TMDL) implementation (including the Lower Minnesota River Low Dissolved Oxygen TMDL), as well as the development of pre-TMDL water quality based effluent limits for Lake Pepin, a flowage in the Mississippi River below the Twin Cities and other impaired waters.

Figure C-6. Total phosphorus permit limit implementation over time.



Overall we estimate that the implementation of the 2000 Phosphorus Strategy and subsequent adoption of Minnesota’s Phosphorus Rule and Lake Eutrophication standards have resulted in dramatic reductions in the quantities of phosphorus discharged by Minnesota industrial and domestic wastewater treatment facilities. The phosphorus loading trends, projections, and milestones for municipal and Industrial wastewater illustrated in Figure C-7 below were developed prior to the adoption of Minnesota’s River Eutrophication Standards (RES). The reductions predicted in Figure C-7 have already been achieved and further reductions are likely as a result of RES implementation.

Figure C-7. Phosphorus trends, projections, and milestones for municipal and industrial wastewater.



Mississippi

Alternative Approach for Reducing the Impact of Point Source Contributions to Nutrient Loadings in Mississippi

Many aging municipal wastewater treatment facilities across Mississippi are facing increasingly more stringent discharge permit limitations. The more stringent limitations are due to new or more stringent Federal requirements that must be applied to discharge permits and advances in science related to stream modeling used to develop environmentally protective permits. The changes in how permits are developed have a particularly adverse effect on municipalities that rely on lagoon systems for wastewater treatment. Lagoon systems are limited in their ability to provide more advanced treatment that is required of today's wastewater treatment systems in order to meet new discharge limitations, especially when facing more stringent nutrient limits. The highest concentration of lagoon wastewater treatment in the in Mississippi is in the Delta region of the state bordering the Mississippi River. The Mississippi Delta has over 80 municipal wastewater treatment facilities, of which 89% use lagoons as the form of wastewater treatment. Often these systems serve very small towns and municipalities with very limited funds to devote to upgrades for their treatment systems. Over 50 facilities in the Delta are required to upgrade their wastewater treatment in order to comply with new discharge permits.

Many of the wastewater treatment facilities in the Delta are surrounded by irrigated cropland. MDEQ is exploring opportunities to cost effectively solve wastewater treatment needs that many communities in the Delta are facing and provide a source of water for irrigation purposes. Review of municipal wastewater discharge records indicates that over 40,000 acre feet of water is generated annually from Delta communities that could be made available for irrigation purposes. The use of treated effluent from wastewater treatment facilities has many benefits that are outlined below:

- Benefits to Municipalities
 - A pathway to reduce or eliminate effluent discharge thus providing relief to more stringent permit limits.
 - Prevent or delay capital expenditures for wastewater treatment upgrades.
 - Potentially reduce O&M and personnel costs.
- Benefits to Producers
 - Provides a dependable source of water for irrigation.
 - Water source that may be less expensive to access due to savings in pumping costs.
 - Water that has nutrient value.
 - Water that is warmer than groundwater thus preventing thermal shock to crops.
 - Potentially increased crop yields.
- Benefits to the Environment
 - Reduces demand on groundwater.
 - Lessened impact of nutrients to surface water.

Mississippi Department of Environmental Quality (MDEQ) is currently working in conjunction with other partners such as the Mississippi Soil and Water Commission and U.S. Department of Agriculture NRCS to identify opportunities and resources to initiate this application of water reuse for irrigation purposes on agricultural lands.

Ohio

Tracking Nutrient Loads

In 2015, the Ohio General Assembly passed Amended Substitute House Bill 64 that contained a requirement for Ohio Environmental Protection Agency (OEPA) to prepare a biennial report on mass loading of nutrients delivered to Lake Erie and the Ohio River from Ohio's point sources and nonpoint sources [Ohio Revised Code 6111.03(U)]. To that end, Ohio EPA Division of Surface Water is developing a method to calculate total Ohio nutrient loads to Lake Erie and the Ohio River on an annual basis, then track trends/changes to those loads over coming years. Where sufficient data exists, flow weighted mean concentrations may also be calculated and tracked on an annual basis. The parameters proposed to be included are total phosphorus, nitrate-nitrite, and total nitrogen. A list of "pour points" has been developed where loads will be calculated using a phased approach, but eventually covering more than 90% of the state. Direct dischargers to Lake Erie and the Ohio River will be grouped as two loads for each basin (industrial and public/semipublic) for reporting purposes. In addition, results will be grouped and reported by western and central basins in the Lake Erie watershed. The Division of Surface Water is also evaluating our monitoring strategy with the intent of making adjustments so the data available for this effort is more robust in the future.

Technology Upgrade Feasibility Studies

Ohio has recently put into place various requirements to conduct technology upgrade feasibility reports. There are two major watersheds within Ohio: the Lake Erie Basin and the Ohio River Basin, which flows into the Mississippi River and eventually the Gulf of Mexico. Because permits in the Lake Erie Basin must adhere to requirements of the Great Lakes Water Quality Agreement, different regulations apply to facilities in each basin. For the Lake Erie Basin and under Ohio Administrative Code 3745-33-06(C), major municipal facilities with an average daily design flow greater than or equal to 1.0 million gallons per day have had to adhere to a 1.0 mg/L monthly and 1.5 mg/L weekly total phosphorus limit for more than 30 years.

In 2014, Ohio EPA began to require facilities in the Lake Erie Basin to evaluate further reductions for total phosphorus concentrations in plant effluent by requiring an optimization study. The study for reducing the discharge of phosphorus evaluates collected effluent data, possible source reduction measures, operational improvements, and minor facility modifications that will optimize reductions in phosphorus discharges from the WWTP. The plan includes a proposed schedule for implementing discharge optimization measures identified through the evaluation process. The plan must be completed and submitted to Ohio EPA, and upon acceptance of the plan by Ohio EPA, the permittee implements the measures, improvements, and modifications in accordance with the plan and schedule specified in the plan.

Also, Ohio EPA asks permittees to fill out and submit an Evaluation for Reducing Discharge of Phosphorus Form found at the website <http://www.epa.state.oh.us/dsw/permits/npdesform.aspx>, which reports on the overall progress towards reducing the final effluent concentration of nutrients. This form is submitted along with the future permit renewal application. Information on this form provides Ohio EPA a summary of measures that were implemented, as well as the resulting impacts to phosphorus discharges and associated costs.

The passage of Senate Bill 1 in 2015 requires POTWs with a design flow of 1.0 million gallons per day or more, or otherwise designated as a major by the director, and that do not currently have limits for total phosphorus, to submit a study that evaluates the technical and financial capability of their facilities to reduce the final effluent discharge of phosphorus to 1.0 mg/L (Ohio Revised Code 6111.03). This requirement will be completed outside of NPDES permits. Ohio EPA will contact affected permittees by mail to explain and schedule the submission of the study, which must be completed by December 1, 2017.

Nutrient Removal Technologies

Approximately 47 POTWs have installed biological nutrient removal technologies in anticipation of future limits, or to meet current permit limits, according to previously submitted NPDES permit applications. There have been very few NPDES permits with nitrogen-based limits, apart from ammonia. Phosphorus limits are more common in NPDES permits but are typically near 1.0 mg/L, a limit that can be met via chemical feed and plant optimization.

One such facility that has recently installed biological nutrient removal is Sugarcreek WWTP (Permit No. OH0027618). This facility is a major wastewater treatment plant located in the Upper Little Miami Watershed in southwestern Ohio. The Little Miami River drains to the Ohio River, and dischargers in this watershed were not subject to the 1.0 mg/L total phosphorus limits required in the Ohio Administrative Code 3745-33-06(C). However, a Total Maximum Daily Load (TMDL) was performed for this segment of the Little Miami River that showed the stream was impaired due to nutrients and new total phosphorus limits were necessary.

To meet the requirements of the TMDL, the Sugarcreek WWTP employed both biological nutrient removal and chemical feed. However, chemical feed has only been needed as a backup to biological nutrient removal, as the former process has removed phosphorus to concentrations below permit limits. Other dischargers in the area, including Xenia-Ford Road WWTP (Permit OH0028193) and Xenia-Glady Run WWTP (Permit OH0028207), had incorporated biological nutrient removal before the TMDL-based limits went into effect and continued operations. The upper segment of the Little Miami River has since come back into full attainment of its water quality standards.

Many facilities have also made use of chemical addition and optimization. One such facility that has recently completed an optimization study required by Ohio EPA and implemented evaluations of effluent data, operational improvements, and minor facility modifications is the Northeast Ohio Regional Sewer District Southerly wastewater treatment plant (Permit No. OH0024651) located in Cleveland. This plant has a phosphorus monthly limit of 0.7 mg/L. The facility has developed specific ferric chloride injection methods through process improvement where an in-line analyzer can determine phosphorus concentrations in real time. Dosage rates of the chemical feed are based on such effluent data, where ferric chloride feed rates are incrementally increased based upon elevated phosphorus concentrations and flows. The facility has also conducted pilot tests that explore benefits of various ferric chloride injection locations including the influent, first stage aeration, and second stage lift station at the plant. Southerly's most recent annual report contains 2014 plant effluent data listed in Table C-3.

Table C-3. Year 2014 effluent data for the Northeast Ohio Regional Sewer District Southerly wastewater treatment plant (Permit No. OH0024651).

Parameter	Average Percent Reduction (Raw Influent vs. Final Effluent)	Average Effluent Discharge Concentration
Total Suspended Solids	98.6%	2.43 mg/L
CBOD	98.0%	1.26 mg/L
Ammonia	98.0%	0.15 mg/L
Phosphorus	87.7%	0.34 mg/L

State Water Quality Trading Programs

Ohio EPA adopted rules for water quality trading in 2007. The emergence of two trading programs in Ohio, the Miami Conservancy District’s trading program in the Great Miami River basin and the Alpine Cheese program, provided the impetus to develop rules. Both programs have put best management practices on the ground to reduce nutrient enrichment from non-point sources. The rules provide a framework for developing a water quality trading plan that must be approved by the Director before anyone can engage in trading activities in Ohio.

The phosphorus limits in most Ohio NPDES permits are not low enough to drive water quality trading programs, as most NPDES permit holders are able to meet permit limits via on site treatment. However, The Alpine Cheese Trading Program is an exception. This program was developed to provide an option for the company to comply with phosphorus reductions required by a TMDL. In exchange for a higher phosphorus limit in its NPDES permit, the company funded best management practices (BMPs) at local dairy farms to reduce phosphorus runoff. Ambient testing conducted after the end of the funding period showed previously impaired stream segments had returned to full attainment of water quality standards.

Another trading program is the Electric Power Research Institute’s (EPRI) pilot project, focused on developing a framework for interstate trading of nutrient credits. In October 2009, EPRI announced \$1.3 million in federal grants from US EPA and the USDA NRCS, as well as \$700,000 dollars in matching funding from project collaborators. Assisting EPRI in this venture is the American Farmland Trust. Stakeholders in the pilot project include ORSANCO, Ohio DNR-DSWR, Ohio DA, Ohio EPA, our sister agencies in Indiana and Kentucky and county Soil and Water Conservation Districts. In 2012, Ohio entered into an agreement with EPRI along with Indiana and Kentucky to conduct the pilot project.

Nonpoint source BMPs have been put in place in Ohio. Three power companies subsequently agreed to buy the nutrient credits generated through these best management practices and immediately retire them as “stewardship credits.” These credits were purchased by AEP, Duke Energy, and Hoosier Energy on March 11, 2014. Since then, several more projects have been implemented across the tristate and have generated approximately 90,000 credits.

EPRI has developed an online credit registry system through a third party, instructed individuals from each state agency on how to use the online registry, and trained individuals in using a previously determined workflow and credit verification process. In Ohio, Soil and Water Conservation District and Ohio Department of Natural Resources employees will verify best management practices and calculate credits generated, and then pass this information to Ohio EPA. Ohio EPA then reviews and certifies nutrient credits before allowing EPRI to sell credits to dischargers via the online credit registry.

Wisconsin

Phosphorus

Wisconsin has a long history of protecting Wisconsin's surface waters from excess phosphorus pollution. Formal regulations began in 1992 for wastewater point source discharges, requiring many Wisconsin Pollutant Discharge Elimination System (WPDES) permit holders to comply with technology-based effluent limits (TBELs), typically set equal to 1.0 mg/L (NR 217 Subchapter II, Wis. Code). Additionally, Wisconsin has implemented priority watershed projects throughout the state to help reduce nonpoint source pollution to meet water quality goals. A full description about these and other historic phosphorus efforts is available at http://dnr.wi.gov/news/mediakits/mk_phosphorus.asp.

To further protect human health and welfare from excess phosphorus pollution, revisions to Wisconsin's Phosphorus Water Quality Standards for surface waters were adopted on December 1, 2010. These revisions:

1. Established the maximum allowable phosphorus concentration in Wisconsin's waters, also known as phosphorus criteria (see s. [NR 102.06](#), Wis. Adm. Code and Table C-4);
2. Created phosphorus standard implementation procedures for Wisconsin Pollutant Discharge Elimination System (WPDES) permits (see [ch. NR 217](#), Subchapter III, Wis. Adm. Code); and,
3. Strengthened agricultural performance standards to help curb nonpoint source phosphorus pollution (see [ch. NR 151](#), Wis. Adm. Code)⁴.

Since December 2010, Wisconsin Department of Natural Resources (DNR) has been evaluating the need for phosphorus Water Quality Based Effluent Limits (WQBELs) in WPDES permits to comply with these standards. Wisconsin's Phosphorus Implementation Guidance provides a detailed discussion of the phosphorus standards and implementation procedures in WPDES permits, and is available for download at <http://dnr.wi.gov/topic/surfacewater/phosphorus.html>.

Many point sources face restrictive phosphorus limitations as a result of these standards. Almost 80% of wastewater permittees face more restrictive phosphorus limits than Wisconsin's TBEL of 1.0 mg/L. Under NR 217, 60% of these facilities will receive phosphorus WQBELs set equal to the phosphorus criteria⁵, shown in Table C-4. The remaining point sources are given less restrictive limits based on the assimilative capacity of the receiving and/or downstream surface water, however, WQBELs consistent with Total Maximum Daily Loads (TMDLs) can be used in lieu of the NR 217 derived limits.

⁴ Changes to ch. NR 151, Wis. Adm. Code, were formally promulgated January 2011.

⁵ Data gathered from Final EIA Determination.

Table C-4. Applicable statewide phosphorus criteria pursuant to s. NR 102.06, Wis. Adm. Code.

Waterbody Type	Applicable Criteria (µg/L)
Rivers	100
Streams	75
Reservoirs:	
• Stratified	30
• Not stratified	40
Lakes:	
• Stratified, two-story fishery	15
• Stratified, seepage	20
• Stratified, drainage	30
• Non-stratified, drainage	40
• Non-stratified, seepage	40
Great Lakes:	
• Lake Michigan	7
• Lake Superior	5
Impoundments	Varies by inflowing waterbody type
Ephemeral streams, lakes and reservoirs of less than 5 acres in surface area, wetlands (including bogs), and limited aquatic life waters ⁶	None

WQBELs derived through NR 217 only target the point source fraction of phosphorus loading entering Wisconsin surface waters. In most watersheds compliance with water quality criteria requires addressing both point and nonpoint sources of phosphorus. Figure C-8 highlights the ratio of point to nonpoint phosphorus mass loads for HUC8 watersheds within the Mississippi River Basin. Figure C-8 summarizes total phosphorus loads on an annual basis. To express needed mass reductions from both point and nonpoint sources of phosphorus, Wisconsin relies on the development of TMDLs and water quality protection and restoration plans.

Wisconsin develops TMDLs by evaluating phosphorus loads on a monthly basis to account for the seasonal variation in the loadings, to ensure adequate protection during critical periods, and to ensure allocations correspond with the compliance periods for the phosphorus criteria and 303(d) list delisting protocols (<http://dnr.wi.gov/topic/surfacewater/documents/2014/2014wiscalm.pdf>). TMDLs produce both wasteload and load allocations needed to attain water quality standards. The wasteload allocations are implemented through NR 217 and the load allocations are implemented through NR 151. Figure C-9 highlights the completed TMDLs that are currently in the implementation phase, the reaches currently listed as impaired for phosphorus, and the prioritization for future studies.

⁶ Limits may still be given to discharges to these receiving waters based on downstream protection, if necessary. See Section 2.04 of the Phosphorus Implementation Guidance for detail.

Figure C-8. Estimated 1995 baseline and projected future phosphorus loadings for Mississippi River Basin by HUC8 watershed. Source: Wisconsin's Nutrient Reduction Strategy- <http://dnr.wi.gov/topic/surfacewater/nutrientstrategy.html>.

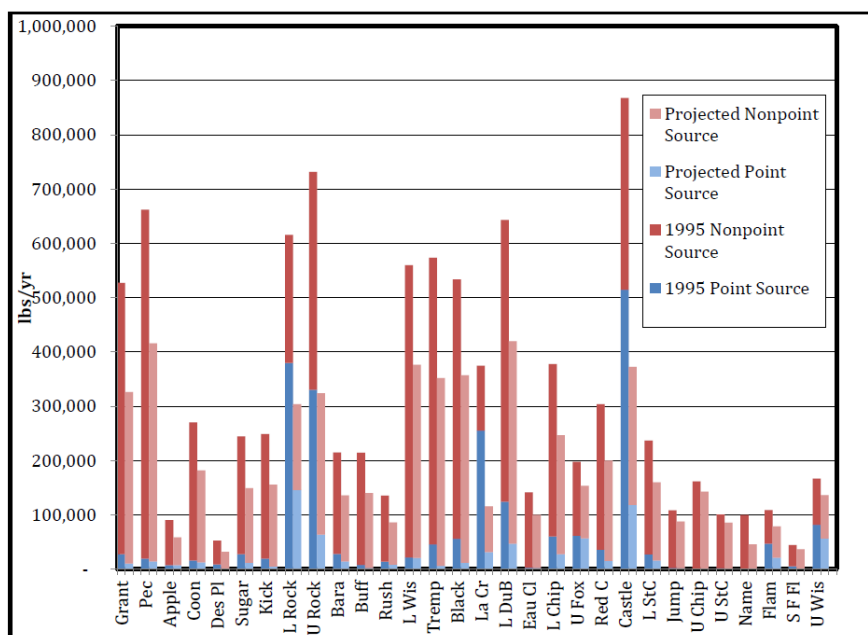
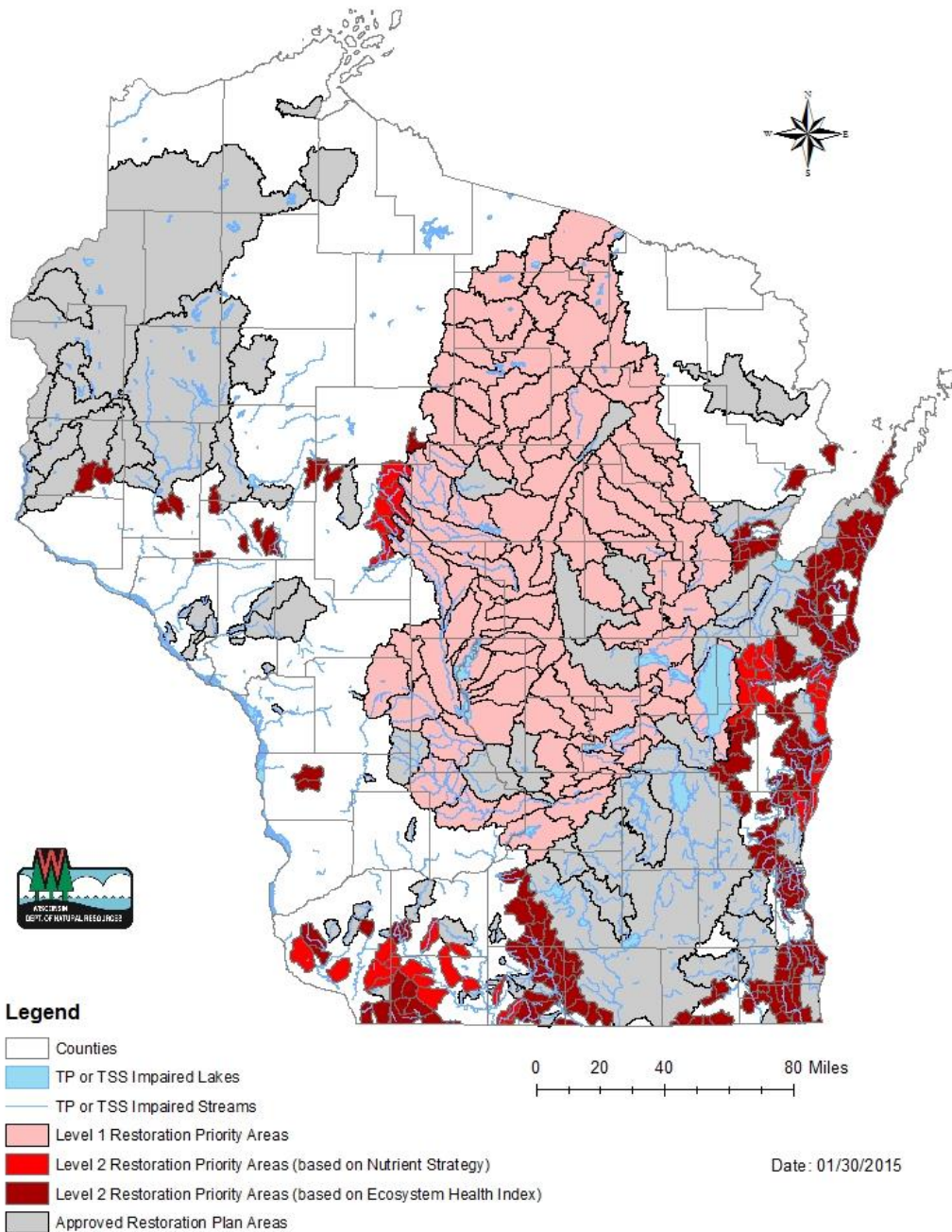


Figure C-9. Level 1 and Level 2 water quality restoration priority areas and existing water quality restoration or protection plans by HUC12 watershed. Source: Wisconsin's Water Quality Restoration and Protection Prioritization Framework; Final Draft July 27, 2015.



Implementation of point source reductions is handled through the WPDES permit program, with permit limits issued consistent with allocations contained in the TMDL. Nonpoint sources are addressed through implementation of the performance standards and prohibitions contained in NR 151. Typically, an offer of state or federal cost sharing is required to implement the nonpoint practices. To help address shortfalls in funding for nonpoint source reductions, and help offset the often costly point source reductions, WDNR, in collaboration with its stakeholders, developed innovative compliance options as part of the 2010 phosphorus rulemaking to reach water quality goals in a more economically efficient manner. This spurred the development of Wisconsin's adaptive management (AM) and water quality trading (WQT) programs. The premise behind these compliance options is that point source discharges could invest a smaller amount of money towards nonpoint source pollution control projects, and potentially have a greater water quality benefit⁷. These programs have seen some successes and continue to be explored as point sources work towards phosphorus compliance: <http://dnr.wi.gov/topic/SurfaceWater/AmWqtMap.html>.

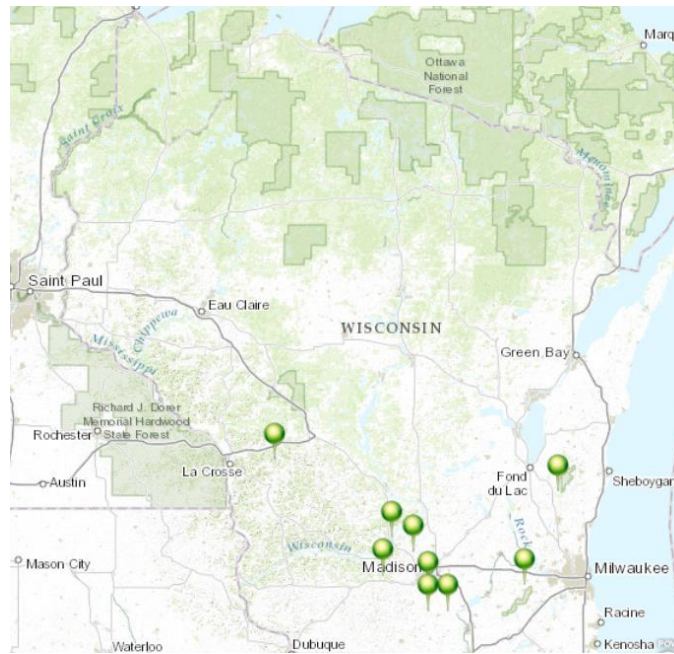
Although similar, adaptive management is different from water quality trading. In both cases, point sources can take credit for phosphorus reductions within the watershed towards phosphorus compliance. Because the practices used to generate phosphorus reductions may be the same, these compliance options are often confused with one another. Adaptive management and water quality trading have different permit requirements, however, making them different from a permitting and timing standpoint:

- **Adaptive management and trading have different end goals.** Adaptive management focuses on achieving water quality criterion for phosphorus in the surface water; trading focuses on offsetting phosphorus from a discharge to comply with a permit limit.
- **Monitoring.** Because adaptive management focuses on water quality improvements, in-stream monitoring is required under adaptive management; this is not required under trading.
- **Timing.** Practices used to generate reductions in a trading strategy must be established before the phosphorus limit takes affect; adaptive management is a watershed project that can be implemented throughout the permit term.
- **Quantifying reductions needed.** Trading requires trade ratios be used to quantify reductions used to offset a permit limit; the reductions needed for adaptive management are based on the receiving water, not the effluent, and trade ratios are not necessary in this calculation.
- **Eligibility.** Adaptive management and trading have different eligibility.

Several point sources are developing and/or implementing trading or adaptive management projects to seek phosphorus compliance in lieu of installing treatment technologies (Figure C-10). Information about these and other projects is available at <http://dnr.wi.gov/topic/SurfaceWater/AmWqtMap.html>. It is anticipated that additional adaptive management and trading projects be developed over the next few years as point sources continue to make compliance decisions for phosphorus.

⁷ For details about Wisconsin's adaptive management and water quality trading programs, visit <http://dnr.wi.gov/>, keywords "adaptive management" or "water quality trading".

Figure C-10. Adaptive management/water quality trading participants as of January 15, 2016.



Despite these additional regulatory tools, some facilities have found that compliance with restrictive phosphorus limitations is simply economically infeasible. In these cases, point sources may seek an individual phosphorus variance based on substantial and widespread social and economic impacts. Wisconsin is also seeking EPA-approval of a multi-discharger phosphorus variance to help streamline the variance process. The concept of a multi-discharger phosphorus variance was enacted in section 283.16, Wis. Stat. in 2013. If approved by EPA, the multi-discharger phosphorus variance would provide point sources with a 10 to 15 year time extension to come into compliance with their final phosphorus limits. During this time, point sources would be required to optimize their treatment processes for phosphorus, make stepwise reductions in effluent phosphorus concentrations, and implement a watershed project. Similar to “pollution minimization plans” for other variances, the multi-discharger phosphorus variance watershed plan is designed to make economically feasible reductions to phosphorus entering surface waters of the state. There are three types of watershed projects for the multi-discharger variance. The point source discharger has discretion to select the option that works best for them:

- Make payments to county land and water conservation departments located in the same HUC8 basin in the amount of \$50 per pound times the difference between what they discharge and a target value. Payments are capped for any one point source at \$640,000 per year.
- Enter into an agreement with DNR to implement a plan or project designed to result in an annual reduction of phosphorus from other sources in the HUC8 basin in an amount equal to the difference between what they discharge and a target value.
- Enter into an agreement with a third party and approved by DNR to implement a plan or project designed to result in an annual reduction of phosphorus from other sources in the HUC8 basin in an amount equal to the difference between what they discharge and a target value.

The multi-discharger phosphorus variance approach is different from water quality trading and adaptive management in that water quality trading and adaptive management are compliance options that focus on achieving compliance with phosphorus water quality standards or limits. The proposed multi-discharger phosphorus variance provides a time extension for point sources to comply with their final phosphorus limits while they contribute funds towards nonpoint pollution control projects or implement specific projects in the watershed to reduce phosphorus. More information about the proposed multi-discharger phosphorus variance is available at <http://dnr.wi.gov/topic/surfaceWater/phosphorus/statewideVariance.html>.

Nitrogen

It is common practice to include total nitrogen limitations in WPDES permits for groundwater discharges to ensure that drinking water standards are maintained in water supplies. This is not the case for WPDES permits for surface water discharges at this time. Wisconsin does not have numeric TBELs or water quality standards for total nitrogen currently. Therefore, total nitrogen permitting decisions for surface water discharges are based on narrative standards. In-stream monitoring throughout Wisconsin continues to be performed to help identify if surface water quality is being adversely affected by excess total nitrogen, and, if so, where these deleterious effects are occurring. In addition, WDNR has expanded the effluent monitoring requirements for total nitrogen in WPDES permits to gather additional information about total nitrogen effluent concentrations across the state. These efforts have improved WDNR's ability to evaluate the need for restrictive total nitrogen limitations in WPDES permits, but have not resulted in restrictive total nitrogen effluent limitations being included in WPDES permits so far.

It is noted that several phosphorus-based regulatory programs will also help curb total nitrogen pollution. Nonpoint source practices installed through water quality trading, adaptive management, and the proposed multi-discharger phosphorus variance will reduce phosphorus and nitrogen pollution entering surface water. Additionally, WDNR is currently developing a robust tracking system to retain information about best management practices installed and phosphorus, nitrogen, and total suspended solid pollution reduced as a result of these and other programs throughout the state.

Impaired Waters

The goal of the Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" {33 U.S.C §1251(a)}. Every two years, Section 303(d) of the Clean Water Act requires states to publish a list of all waters that are not meeting water quality standards. The law requires that states establish priority rankings for waters on the lists and develop TMDLs for these waters. A TMDL includes a calculation of the maximum amount of a pollutant that can be present in a waterbody and still meet water quality standards. An essential component of a TMDL is the calculation of the maximum amount of a pollutant that can occur in a waterbody and still meet water quality standards.

Tackling excess nutrients in our waterways is especially challenging in the 303(d) program for most states, in part because most states rely on narrative water quality standards from which to base impairment decisions. However, Wisconsin adopted numeric phosphorus criteria for streams, rivers, and lakes in 2010, and can readily apply these criteria to list a waterbody, identify nutrients as the cause of the impairment, and establish water quality targets for TMDLs.

The listing process has led to the identification and tracking of approximately 1,300 impaired waters throughout Wisconsin (Figure C-11). Of these, 633 waters are impaired by excess levels of

phosphorus. TMDLs are currently in development to address 160 of the phosphorus listings, and TMDLs have been approved by EPA that addresses 101 phosphorus listings. WDNR is currently working with multiple stakeholders in the development of TMDLs for the restoration of HUC12 watersheds identified as high priority on the current impaired waters list. A TMDL is currently in development for the Wisconsin River Watershed that will address nutrient and sediment-related impairments in this watershed.

Addressing nutrient pollution in Wisconsin's waters is a top priority for WDNR's impaired waters program. WDNR recently revamped its TMDL development prioritization framework to incorporate a systematic and objective modeling analysis that identifies watershed areas experiencing the most ecological degradation and vulnerability to future degradation, and focuses planning efforts on two pollutants: total phosphorus (TP) and total suspended solids (TSS).

Following TMDL implementation, expectations are often high for an impaired water's condition to begin to change. The TMDL program analysis focused on approaches for detecting improving conditions and identifying driving factors that are associated with improvements. A waterbody remains on the 303(d) list until it is fully recovered and meets water quality standards. Since 2002, Wisconsin has delisted 147 individual streams, lakes, and beaches, representing approximately 500 stream miles and 52,800 lake acres. However, most of the delisted impairments to date were not related to eutrophication.

Figure C-11. Wisconsin's 2014 EPA-approved 303(d) impaired waters listings and major basins.

Wisconsin's Phosphorus or Sediment Impaired Waters EPA-approved listings (2014 list) and Major Basins

