March 2004

Troubled Waters

An analysis of Clean Water Act compliance, January 2002-June 2003

WISPIRG Foundation

Troubled Waters

An analysis of Clean Water Act compliance,
January 2002-June 2003

WISPIRG Foundation

March 2004

Acknowledgments

Written by Alison Cassady, Research Director at WISPIRG Foundation.

Cover photo obtained from the South Florida Water Management District.

The author would like to thank Richard Caplan, Clean Water Advocate with WISPIRG Foundation, for his editorial assistance and contributions to this report. Additional thanks to the numerous staff at state environmental protection agencies across the country for reviewing the data for accuracy.

Special thanks to the Bauman Foundation, Beldon Fund, Educational Foundation of America, Scherman Foundation, Town Creek Foundation, Rockefeller Family Fund and individual contributors for supporting the National Association of State PIRGs' environmental defense campaign.

The recommendations are those of WISPIRG Foundation and the National Association of State PIRGs and do not necessarily reflect the views of our funders, those who provided editorial review, or their employers.

To obtain additional copies of this report, visit our website or send a check for $25 made payable to WISPIRG Foundation at the following address:

WISPIRG Foundation
1050 Regent Street, Suite L2
Madison, WI 53715
608) 251-1918
info@wispirg.org
www.wispirg.org

Table of Contents

Executive Summary

When drafting the Clean Water Act in 1972, legislators set the goals of making all waterways fishable and swimmable by 1983 and eliminating the discharge of pollutants into the nation's waterways by 1985. More than 30 years later, we are far from realizing the Clean Water Act's original vision.

Using information provided by the Environmental Protection Agency (EPA) in response to a Freedom of Information Act (FOIA) request, this report analyzes all major facilities[a] violating their Clean Water Act permits between January 1, 2002 and June 30, 2003, reveals the type of pollutants they are discharging into our waterways, and details the extent to which these facilities are exceeding their permit levels.

Two decades after the drafters of the Clean Water Act hoped that all waterways would be fishable and swimmable, we find that facilities across the country continue to violate the letter of the law, at times egregiously.

Key findings include:

Thousands of facilities continue to exceed their Clean Water Act permits.

◈ Nationally, more than 3,700 major facilities (60%) exceeded their Clean Water Act permit limits at least once between January 1, 2002 and June 30, 2003.

◈ The ten U.S. states that allowed the highest percentage of major facilities to exceed their Clean Water Act permit limits at least once are Rhode Island, New Hampshire, North Carolina, West Virginia, Massachusetts, Connecticut, the District of Columbia, Ohio, Iowa, and Nevada.

These facilities often exceed their permits more than once and for more than one pollutant.

◈ Nationally, 436 major facilities exceeded their Clean Water Act permit limits for at least 10 of the 18 reporting periods between January 1, 2002 and June 30, 2003.

◈ Thirty-five (35) facilities exceeded their Clean Water Act permits during every reporting period between January 1, 2002 and June 30, 2003.

◈ Nationally, major facilities reported more than 32,000 exceedances of their Clean Water Act permit limits between January 1, 2002 and June 30, 2003.

◈ The ten U.S. states that allowed the most exceedances of Clean Water Act permit limits between January 1, 2002 and June 30, 2003 are Ohio, New York, North Carolina, Pennsylvania, Texas, Massachusetts, Louisiana, Alabama, Tennessee, and Indiana.

These facilities often exceed their permits egregiously.

◈ Major facilities exceeding their Clean Water Act permits, on average, exceeded their permit limits by more than 600%, or more than six times the allowed amount.

◈ The ten U.S. states that allowed the highest average permit exceedance between January 1, 2002 and June 30, 2003 are Hawaii, Rhode Island, Arizona, West Virginia, Michigan, Connecticut, Nevada, Iowa, Texas and North Carolina.

[a] Facilities are designated as "major" based on an EPA scoring system that considers a combination of factors, including toxic pollutant potential, streamflow volume, public health impacts, and proximity to coastal waters.

◈ Nationally, major facilities reported more than 2,900 instances between January 1, 2002 and June 30, 2003 in which they exceeded their Clean Water Act permit limits by at least fivefold (500%).

◈ The U.S. states that allowed at least 100 exceedances of at least 500% are North Carolina, Alabama, Massachusetts, West Virginia, Tennessee, New York, Pennsylvania, Ohio, Indiana, Illinois, and Mississippi.

At a time when our leaders should be working with the states to address this illegal pollution and make all of our waterways fishable and swimmable, the Bush administration has suggested, proposed, or enacted numerous policies that would weaken the Clean Water Act and threaten the future of America's rivers, lakes, streams, and oceans. Rather than weakening the Clean Water Act, the Bush administration and our elected officials should tighten enforcement of Clean Water Act programs; strengthen standards to protect our rivers, lakes, streams and wetlands; and ensure the public's right to know about water pollution by increasing and improving access to compliance data and discharge reporting.

Introduction: The State of America's Waters

While the 1972 Clean Water Act has made strides in cleaning up our waterways, the "fishable and swimmable" goal of the Act remains the unmet benchmark of water quality in the United States. Consider the following:

- A majority of Americans live within 10 miles of a polluted river, lake, stream, or coastal area.[1]

- Approximately 39% of our rivers, 51% of our estuaries, and 46% of our lakes are impaired for one or more uses and thus still too polluted for safe fishing or swimming.[2]

- Although the precise number is not known, EPA believes that more than 20,000 bodies of water throughout the country are too polluted to meet basic water quality standards.[3]

- Beach closings and advisories in 2002 reached the second highest level in 13 years. Across the country, pollution caused more than 12,000 closings and advisories in 2002 at ocean, bay, Great Lakes, and surveyed freshwater beaches.[4]

- In 2002, 28 states had fish consumption advisories in place for all of their waterbodies because of toxic pollution. Federal or state agencies have issued fish consumption advisories for one third of the nation's total lake acres, 15% of total river miles, and almost three-fourths of the country's contiguous coastal waters, including 92% of the Atlantic coast and 100% of the Gulf coast. Most advisories involve five primary contaminants: mercury, PCBs, chlordane, dioxins, and DDT.[5]

- According to EPA's Toxic Release Inventory, polluters discharged more than 221 million pounds of toxic chemicals into our waterways in 2001 alone.[6]

As troubling as these findings are, the complete picture could be even worse. According to a report written by current and former environmental officials, EPA is not rigorous in its monitoring of water quality. In fact, the report concludes that the states are "free to manipulate numbers in order to falsely portray continuing progress in water quality when, in fact, what fragmentary reliable information exists often suggests the exact opposite."[7]

Background: A Permit to Pollute

The National Pollutant Discharge Elimination System (NPDES) was established by the Clean Water Act of 1972 to regulate water pollution from point-source dischargers in the U.S.

National Pollution Discharge Elimination System

The failure of state water quality standards programs, along with growing public concern, led President Nixon to establish the United States Environmental Protection Agency (EPA) in 1970 to manage federal pollution control activities.

Shortly thereafter, Congress passed a comprehensive revision of federal water pollution control laws, commonly known as the Clean Water Act, marking a distinct change in the direction of water pollution control. The Clean Water Act maintained the requirements for water quality-based controls but added an equal emphasis on technology-based, or end-of-pipe, control strategies. The act set several goals including: "it is the national goal that the discharge of pollutants into navigable waters be eliminated by 1985"; "it is the national goal that wherever attainable an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983"; and "it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited."[8]

The Clean Water Act contained four other important principles:

- The discharge of pollutants to navigable waters is not a right.

- A discharge permit is required to use public resources for waste disposal and limits the amount of pollutants that may be discharged.

- Wastewater must be treated with the best treatment technology economically achievable, regardless of the condition of the receiving water.

- Effluent limits must be based on treatment technology performance, but more stringent limits may be imposed if the technology-based limits do not prevent violations of water quality standards in the receiving water.

Evolution of the NPDES Program

Under NPDES, all facilities that discharge pollutants from any point source into U.S. waterways are required to obtain a permit. The permit provides two levels of control: technology-based limits, based on the ability of dischargers to treat wastewater, and water quality-based limits, if technology-based limits are not enough to protect the water body.[9]

Point Sources

Pollutants enter waterways from agricultural, domestic, industrial, and other sources. For regulatory purposes these sources are categorized as either *point sources* or *non-point sources*. *Point sources* refer to those discharges that enter waterways from individual pipes or other identifiable locations. *Point source* discharges include discharges from sewage treatment plants and industrial facilities. While provisions of the NPDES program do address certain types of agricultural activities, most agricultural activities are defined as *non-point sources* and are exempt from NPDES regulation.

Water pollution may come from both *direct* and *indirect* sources. *Direct* sources discharge wastewater directly into waterways, whereas *indirect* sources discharge wastewater to a sewage treatment plant, which in turn discharges into the receiving water body. NPDES permits are issued only to direct point source discharges. Indirect dischargers -- industrial and commercial

facilities that discharge into sewage treatment works -- are regulated by the National Pretreatment Program.

The NPDES permitting program is mainly geared toward the regulation of municipal and industrial direct dischargers. However, within these major categories of dischargers, there are a number of more specific types of discharges that are regulated under the NPDES program.

Municipal Sources
Municipal sources are sewage treatment plants that receive primarily domestic sewage from residential and commercial customers. Larger sewage treatment plants also usually treat wastewater from industrial facilities (indirect dischargers) connected to the sewage system. Sewage treatment plants treat many different types of pollutants including conventional pollutants and toxic pollutants.

Non-Municipal Sources
Many industrial and commercial facilities discharge into the waterways of the United States. "Unlike municipal sources, at industrial facilities the types of raw materials, production processes, treatment technologies utilized, and pollutants discharged vary widely and are dependent on the type of industry and specific facility characteristics."[10]

Roles and Responsibilities of Federal and State Authorities

EPA is authorized under the Clean Water Act to implement and enforce the NPDES program. However, EPA can authorize those states that request permission to implement all or part of the NPDES program.

In order for states to receive authorization to implement the NPDES program, they must first establish the necessary legal framework and institutions. This authority is subject to conditions and can be revoked by EPA. States that want to administer the NPDES program submit a letter to EPA from the governor requesting review and approval, a Memorandum of Agreement (MOA), a Program Description, a Statement of Legal Authority (also known as an "Attorney General's Statement" or "AG Statement"), and the underlying state laws and regulations.

In general, once a state is authorized to administer a part of the NPDES program, EPA no longer conducts these activities. However, EPA still maintains an oversight role and retains the right to take enforcement action against violators if the state fails to do so. Additionally, EPA retains the right to review each permit issued by the state and may formally object to elements that conflict with federal requirements. If the permitting agency does not address the objection points, EPA will issue the permit directly.

In states without an authorized NPDES program, EPA administers the NPDES program through EPA regional offices, with help from the respective state environmental agencies. When EPA issues the permit, the Clean Water Act requires that EPA obtain certification from the state of where the discharge will occur to ensure that the discharge will be in compliance with effluent limits, the state's water quality standards, and "any other appropriate requirement of state law."[11]

Once a permit is issued through a government agency, it is enforceable by the approved state and federal agencies (including EPA) with legal authority to implement and enforce the permit. In all cases, citizens retain the right to enforce the law in federal court.

Currently, the only states without an approved NPDES program are Alaska, the District of Columbia, Idaho, Massachusetts, New Hampshire, and New Mexico.[12]

Findings: America's Troubled Waterways

Two decades after the drafters of the Clean Water Act hoped that all waterways would be fishable and swimmable, we find that facilities across the country continue to violate the letter of the law, at times egregiously.

In response to a Freedom of Information Act (FOIA) request, EPA provided us with summary data about active major facilities[b] in the Clean Water Act's National Pollutant Discharge Elimination System. All information was generated from the Permit Compliance System (PCS) and Integrated Data for Enforcement Analysis (IDEA) system and covers the time period spanning January 1, 2002 through June 30, 2003. Refer to the methodology section for more detail about this data. Key findings include:

Thousands of facilities continue to exceed their Clean Water Act permits.

◈ Nationally, more than 3,700 major facilities (60%) exceeded their Clean Water Act permit limits at least once between January 1, 2002 and June 30, 2003.

◈ The ten U.S. states that allowed the highest percentage of major facilities to exceed their Clean Water Act permit limits at least once are Rhode Island, New Hampshire, North Carolina, West Virginia, Massachusetts, Connecticut, the District of Columbia, Ohio, Iowa, and Nevada.

These facilities often exceed their permits more than once and for more than one pollutant.

◈ Nationally, 436 major facilities exceeded their Clean Water Act permit limits for at least 10 of the 18 reporting periods between January 1, 2002 and June 30, 2003. Thirty-five (35) facilities exceeded their permits during every reporting period.

◈ Nationally, major facilities reported more than 32,000 exceedances of their Clean Water Act permit limits between January 1, 2002 and June 30, 2003.

◈ The ten U.S. states that allowed the most exceedances of Clean Water Act permit limits between January 1, 2002 and June 30, 2003 are Ohio, New York, North Carolina, Pennsylvania, Texas, Massachusetts, Louisiana, Alabama, Tennessee, and Indiana.

These facilities often exceed their permits egregiously.

◈ Major facilities exceeding their Clean Water Act permits, on average, exceeded their permit limits by more than 600%, or more than six times the allowed amount.

◈ The ten U.S. states that allowed the highest average permit exceedance between January 1, 2002 and June 30, 2003 are Hawaii, Rhode Island, Arizona, West Virginia, Michigan, Connecticut, Nevada, Iowa, Texas and North Carolina.

◈ Nationally, major facilities reported more than 2,900 instances between January 1, 2002 and June 30, 2003 in which they exceeded their Clean Water Act permit limits by at least fivefold (500%).

◈ The U.S. states that allowed at least 100 exceedances of at least 500% are North Carolina, Alabama, Massachusetts, West Virginia, Tennessee, New York, Pennsylvania, Ohio, Indiana, Illinois, and Mississippi.

[b] Facilities are designated as "major" based on an EPA scoring system that considers a combination of factors, including toxic pollutant potential, streamflow volume, public health impacts, and proximity to coastal waters.

Water Quality Permitting: Quantity vs. Concentration

A facility's NPDES permit can contain several different discharge limits for each parameter (pollutant), depending on the permit writer and parameter regulated. The permit limits generally fall within two categories: quantity and concentration.

Quantity refers to the mass of a pollutant discharged into a waterway and most commonly is measured in kilograms per day or pounds per day. A NPDES permit may set a *quantity average* that the facility may not exceed for a specified parameter. Quantity average refers to the quantity of a pollutant discharged averaged over the reporting period, which may be a week, month, quarter, etc., depending on the permit writer and the parameter.

Similarly, a permit may set a *quantity maximum* that the facility may not exceed for a specified parameter. Quantity maximum refers to the highest quantity of a pollutant recorded on any given day during the reporting period. The logic is that, for some pollutants, if an entire month's allowable amount was discharged all in one day, a waterbody might be severely damaged.

Concentration refers to the mass of a pollutant in a given volume of water, generally measured as milligrams per liter or parts per million. A NPDES permit may set a *concentration average* that the facility may not exceed for a specified parameter. Concentration average refers to the concentration of a pollutant discharged averaged over the reporting period.

Similarly, a permit may set a *concentration maximum* that the facility may not exceed for a specified parameter. Concentration maximum refers to the highest concentration of a pollutant recorded on any given day during the reporting period. In addition, a NPDES permit may set a *concentration minimum* that the facility may not fall below for a specified parameter. This permit requirement is rare and applies to parameters such as dissolved oxygen.

FINDING: Thousands of facilities continue to exceed their Clean Water Act permits.

Nationally, more than 3,700 major facilities (60%) exceeded their Clean Water Act permit limits at least once between January 1, 2002 and June 30, 2003. The ten U.S. states that allowed the highest percentage of major facilities to exceed their Clean Water Act permit limits at least once are Rhode Island, New Hampshire, North Carolina, West Virginia, Massachusetts, Connecticut, the District of Columbia, Ohio, Iowa, and Nevada.

Table 1. Number and Percentage of Major Facilities Exceeding their Clean Water Act Permit Limits at Least Once between January 1, 2002 and June 30, 2003: By State

Rank	State	Total Major Facilities	# Exceeding Permit at Least Once	Percentage
1	Rhode Island	25	22	88.00%
2	New Hampshire	59	50	84.75%
3	North Carolina	224	180	80.36%
4	West Virginia	99	79	79.80%
5	Massachusetts	135	106	78.52%
6	Connecticut	109	83	76.15%
7	District of Columbia	4	3	75.00%
8	Ohio	293	219	74.74%
9	Iowa	129	92	71.32%
10	Nevada	10	7	70.00%
11	New York	354	247	69.77%
12	Delaware	23	16	69.57%
13	Kentucky	132	89	67.42%
14	Tennessee	156	105	67.31%
15	Oklahoma	94	63	67.02%
16	Maine	87	58	66.67%
17	Missouri	146	95	65.07%
18	Indiana	190	122	64.21%
19	Alabama	192	123	64.06%
20	Louisiana	236	149	63.14%
21	Mississippi	91	57	62.64%
22	Kansas	58	36	62.07%
23	Idaho	55	34	61.82%
24	Vermont	33	20	60.61%
25	Georgia	170	100	58.82%
26	Pennsylvania	381	223	58.53%
27	Utah	33	19	57.58%
28	Illinois	278	160	57.55%
29	Arkansas	109	62	56.88%
30	Nebraska	55	31	56.36%
31	Arizona	43	24	55.81%
32	Texas	540	290	53.70%
33	Florida	221	118	53.39%
34	Virginia	138	73	52.90%
35	Colorado	107	56	52.34%
36	South Dakota	29	15	51.72%
37	South Carolina	179	85	47.49%
38	Maryland	95	44	46.32%
39	Wyoming	26	12	46.15%
40	Hawaii	22	10	45.45%
41	Michigan	185	84	45.41%
42	Washington	85	38	44.71%
43	Wisconsin	132	59	44.70%
44	New Mexico	34	15	44.12%
45	Minnesota	87	37	42.53%
46	North Dakota	26	11	42.31%
47	Alaska	74	31	41.89%
48	New Jersey	158	59	37.34%
49	Montana	43	10	23.26%
	TOTAL	6184	3721	60.17%

Note: We excluded California and Oregon from this analysis because the states failed to provide reliable data.

FINDING: These facilities often exceed their permits more than once and for more than one pollutant.

Nationally, 436 major facilities exceeded their Clean Water Act permit limits for at least 10 of the 18 reporting periods between January 1, 2002 and June 30, 2003. Thirty-five (35) facilities exceeded their permits during every reporting period (see Appendix A). In addition, major facilities in the U.S. reported more than 32,000 exceedances[c] of their Clean Water Act permit limits between January 1, 2002 and June 30, 2003. The ten U.S. states that allowed the most exceedances of Clean Water Act permit limits between January 1, 2002 and June 30, 2003 are Ohio, New York, North Carolina, Pennsylvania, Texas, Massachusetts, Louisiana, Alabama, Tennessee, and Indiana (Table 2).

Table 2. Number of Exceedances of Permit Limits between January 1, 2002 and June 30, 2003: By State

Rank	State	Total Exceedances
1	Ohio	2130
2	New York	2090
3	North Carolina	2075
4	Pennsylvania	1862
5	Texas	1798
6	Massachusetts	1684
7	Louisiana	1655
8	Alabama	1339
9	Tennessee	1241
10	Indiana	1175
11	Illinois	1123
12	West Virginia	1013
13	Kentucky	882
14	Florida	872
15	South Carolina	782
16	Mississippi	759
17	Georgia	740
18	Connecticut	698
19	Missouri	662
20	New Hampshire	629
21	Michigan	565
22	Iowa	540
23	Oklahoma	529
23	Virginia	529
25	Arkansas	477
26	Rhode Island	450
27	Maine	394
28	New Jersey	298
29	Idaho	294
30	Nebraska	271
31	Maryland	270
32	Arizona	268
33	Colorado	261
34	Alaska	244
35	Kansas	203
36	Wisconsin	180
37	Washington	169
38	Utah	160
39	Delaware	154
40	Minnesota	138
41	New Mexico	133
42	Vermont	131
43	South Dakota	123
44	Hawaii	98
45	Wyoming	93
46	North Dakota	37
47	Nevada	35
48	Montana	33
49	District of Columbia	6
Total		32,292

Note: We excluded California and Oregon from this analysis because the states failed to provide reliable data.

[c] We define exceedance as any instance in which a facility exceeded its permit for any given parameter during any given reporting period. As such, if a facility exceeds its permit level for a parameter for quantity average, quantity maximum, concentration average and concentration maximum during the same reporting period, we count this as four exceedances but as one facility in violation.

FINDING: These facilities often exceed their permits egregiously.

Major facilities exceeding their Clean Water Act permits, on average, exceeded their permit limits by more than 600%, or more than six times the allowed amount. The ten U.S. states that allowed the highest average permit exceedance between January 1, 2002 and June 30, 2003 are Hawaii, Rhode Island, Arizona, West Virginia, Michigan, Connecticut, Nevada, Iowa, Texas and North Carolina (Table 3).

Nationally, major facilities reported more than 2,900 instances between January 1, 2002 and June 30, 2003 in which they exceeded their Clean Water Act permit limits by at least fivefold (500%). The U.S. states that allowed at least 100 exceedances of at least 500% are North Carolina, Alabama, Massachusetts, West Virginia, Tennessee, New York, Pennsylvania, Ohio, Indiana, Illinois, and Mississippi (Table 4).

Table 3. Average Exceedance of Clean Water Act Permit Limits between January 1, 2002 and June 30, 2003: By State

Rank	State	Average % Exceedance
1	Hawaii	4435
2	Rhode Island	3673
3	Arizona	3050
4	West Virginia	3003
5	Michigan	2312
6	Connecticut	1754
7	Nevada	1108
8	Iowa	1067
9	Texas	1058
10	North Carolina	955
11	Oklahoma	914
12	New York	794
13	Missouri	766
14	Mississippi	713
15	New Mexico	639
16	Maine	563
17	Florida	546
18	New Hampshire	517
19	Illinois	478
20	Ohio	426
21	Tennessee	418
22	South Carolina	374
23	Georgia	361
24	Alaska	356
25	Nebraska	351
26	Massachusetts	335
27	Wyoming	322
28	North Dakota	317
29	South Dakota	316
30	Virginia	293
31	Alabama	278
32	Indiana	270
33	Vermont	269
34	Louisiana	209
35	Idaho	172
36	Maryland	144
37	Kentucky	139
38	Colorado	131
39	Pennsylvania	119
40	Arkansas	114
41	Wisconsin	99
42	New Jersey	96
43	Delaware	93
44	Washington	86
45	Utah	53
46	Kansas	46
47	Minnesota	45
48	Montana	30
49	District of Columbia	17
National		650

Note: We excluded California and Oregon from this analysis because the states failed to provide reliable data.

Table 4. Number of Exceedances of Permit Limits of at Least 500% (Fivefold) between January 1, 2002 and June 30, 2003: By State

Rank	State	# exceedances >500%
1	North Carolina	429
2	Alabama	171
3	Massachusetts	148
4	West Virginia	138
5	Tennessee	136
6	New York	135
7	Pennsylvania	125
8	Ohio	118
9	Indiana	112
10	Illinois	106
10	Mississippi	106
12	Louisiana	92
13	Florida	91
14	Texas	89
15	Michigan	77
16	South Carolina	72
17	Missouri	71
18	Virginia	54
19	Connecticut	53
20	Kentucky	50
20	Oklahoma	50
22	New Hampshire	47
23	Rhode Island	40
24	Iowa	38
25	Nebraska	36
26	Arkansas	32
26	Alaska	32
28	Wyoming	31
29	Hawaii	28
30	Arizona	27
31	Maine	26
32	Idaho	24
33	Georgia	22
34	South Dakota	17
35	New Mexico	15
36	Nevada	13
37	Colorado	12
38	Wisconsin	11
39	Maryland	10
40	New Jersey	8
40	Washington	8
42	Utah	6
43	Vermont	5
44	Delaware	3
44	Kansas	3
46	North Dakota	2
47	Minnesota	1
47	Montana	1
49	District of Columbia	0
TOTAL		2,921

Note: We excluded California and Oregon from this analysis because the states failed to provide reliable data.

Failure of States and EPA to Fully Enforce the Clean Water Act

Responsibility for not meeting the goals of the Clean Water Act lies in large part on the shoulders of EPA and state environmental officials charged with implementing and enforcing the law.

Inconsistent Permitting and Monitoring

EPA has allowed states to follow inconsistent methods for identifying polluted waters, furthering the difficulties in identifying pollution sources and the ways to prevent them.[13] According to the General Accounting Office (GAO), states "have little of the information they need to assess the quality of their waters and, in particular, to identify those that are impaired." The problem results from several factors, including state approaches to identifying polluted waters that "have no appropriate scientific basis," as well as data in EPA's database of impaired waters that is "of questionable reliability." According to GAO, more comprehensive monitoring would have identified more impaired waters.[14]

In addition, states do not permit polluters consistently, across states or even within the same state. GAO analyzed permits for five toxic metals at wastewater treatment facilities and found that numeric discharge limits differ substantially for pollutants both from state to state and even within the same state. In some states, no controls were imposed at all. According to the report, "EPA has not assessed the impact of the differences among the states."[15]

In June 2003, an internal EPA Office of Enforcement and Compliance Assurance (OECA) report leaked to the *Washington Post* revealed further confirmation of the inadequacies in oversight of the Clean Water Act.[16] Many states are failing to enter information into the Permit Compliance System database, making it impossible to know the full scope of compliance with the Act.[17] The OECA report also showed that violations are rampant and severe, noting that "exceedances are higher for toxic pollutants than for conventional pollutants."[18]

The report also includes several seemingly self-contradictory statements, of which three in particular are of note. For example, "majors are not thought to be significant contributors to [water] impairment," followed one sentence later by the statement that, "There are no data available on the extent to which majors contribute to impairment."[19] The agency acknowledges that data "might suggest that penalties do create a deterrent effect and have a positive impact on compliance rates"[20] while also acknowledging that "enforcement activity…has been declining" and that "a low percentage of enforcement actions are taken timely and appropriately."[21]

Perhaps most troubling is what follows the admission that "regulations which define compliance and establish the limits are intended to be protective of human health and the environment, therefore we believe that enforcing them ensures the appropriate level of protection is achieved."[22] But instead of working to protect human health and the environment, the agency proposes to weaken permits, calling them unworkable "due to technological limitations or cost."[23]

Lax Enforcement

Analysis of Clean Water Act compliance data, many other reviews and studies,[24] and the recent analysis by EPA's Office of Inspector General[25] demonstrate that serious and chronic discharge violations are routinely ignored. These studies also have argued that enforcement actions taken by EPA and states are frequently ineffective in

returning violators to compliance. The EPA's Inspector General notes that penalties assessed for polluters are often too small to offset the economic gain received by breaking the law, establishing a perverse incentive to pollute while creating a competitive disadvantage for law-abiding companies. This, in addition to the large disparity between state penalties, exacerbates the "race to the bottom" for states trying to attract polluting industries that the Clean Water Act was designed in part to prevent.[26]

Poor Data Collection

Another fundamental problem with Clean Water Act enforcement by EPA is the agency's failure to modernize its data collection system. As noted by EPA's Office of the Inspector General in a 2003 report, EPA's Office of Enforcement and Compliance Assurance (OECA) "has directed insufficient attention to conducting accurate and timely planning and analysis for this project. OECA has not completed certain required planning documents whose preparation might have improved the management of the program."[27] The Permit Compliance System (PCS) database had its last major revision in 1982 and has been identified as an agency weakness publicly since 1999. Several hundred thousand facilities are still not included in the system. Despite this, the agency, which had promised to modernize the system by the fourth quarter of 2003, is now saying it will not be ready until September 30, 2006. The Inspector General's report criticized EPA for allowing the date to slip, noting that without a modernized PCS system, "EPA's Office of Water cannot effectively manage its Clean Water NPDES program."[28]

Underestimating Pollution

For all of these reasons, available data on water quality in the U.S. at best paint an incomplete picture of the pollution entering our waterways; at worst, it is a gross underestimate.

EPA only requires states to enter data for "major" facilities into its database, covering just a small subset of the universe of facilities. Facilities are designated as "major" based on an EPA scoring system that considers a combination of factors, including toxic pollutant potential, streamflow volume, public health impacts, and proximity to coastal waters. For example, a major municipal facility is a publicly owned treatment works (POTW) that serves a population of 10,000 or more, discharges one million gallons or more of wastewater daily, or has a significant impact on water quality. Little compliance information regarding hundreds of thousands of additional dischargers with NPDES permits is available to the public, or in some cases even available at all.[29] According to the EPA Inspector General, states' concerns over costs are the reason that EPA policy does not require data from "minor" facilities to be entered into the system. In addition, although standards are set for taking action on major facilities, standards are unclear for other dischargers. Due to the lack of public oversight and accountability with respect to these smaller facilities, it is reasonable to expect that minor facility non-compliance rates are even more substantial than those of the major facilities examined in this report.

For these reasons and more, the available data still represent only a fraction of the problem regarding illegal water pollution. States have been faulted by EPA for "not reporting serious, significant violations."[30] Meanwhile, the problem of illegal pollution continues: a 1993 GAO report concluded that self-reporting NPDES facilities have incentives to hide rather than report environmental violations.[31] EPA has done nothing since this 1993 report to deter facilities from not reporting environmental violations.

The Bush Administration's Assault on the Clean Water Act

The Clean Water Act has made measurable progress in water quality in the last three decades, although much remains to be done. As detailed in this report, facilities across the country continue to dirty our waterways by discharging more pollutants than permitted by law—at times egregiously. At a time when the Bush administration should be working with the states to make all of our waterways fishable and swimmable, the Bush administration has suggested, proposed, or enacted numerous policies that would weaken the Clean Water Act and threaten the future of America's rivers, lakes, streams, and oceans.

Allowing More Pollution in Waterways

In January 2003, the Bush administration issued an Advanced Notice of Proposed Rulemaking signaling its intentions to eliminate protection for a significant number of waterways under the Clean Water Act, including non-navigable tributaries of navigable waters, intermittent and ephemeral streams, man-made watercourses connecting these waters, and wetlands adjacent to these waters. At a press conference announcing the proposed rule, the administration acknowledged that the proposed rule could remove protection from 20 million acres of wetlands alone, or about 20% of U.S. wetlands in the lower 48 states.

Simultaneously, EPA and the Corps directed staff to immediately stop implementing the Clean Water Act with regards to so-called "isolated" waters. This guidance suggests that all "isolated" waters are no longer protected and advises field staff to seek "formal project-specific approval" from Army Corps or EPA headquarters if they plan to use the Clean Water Act to protect these waters. This guidance could allow developers, mining companies, and other polluters seeking exemption from the Clean Water Act to argue that specific wetlands, small streams, non-navigable ponds or other waters are "isolated" and therefore fall outside of the Clean Water Act's jurisdiction.

On December 16, 2003, EPA announced that it would not go forward with the proposed rulemaking to redefine many wetlands, streams, and other waters "out" of the Clean Water Act. However, the guidance directing EPA and Army Corps of Engineers staff remains in place, threatening thousands of miles of headwaters and other waterways across the country.

Leaving Dirty Waters Dirty

Section 303(d) of the Clean Water Act requires states to identify waterways that remain impaired by pollution despite technology controls installed on sewage plants and factories. This program of the Clean Water Act—called the total maximum daily load, or TMDL, program—requires that states identify rivers, lakes, and coastal waters that remain polluted, rank them for priority attention, and then develop pollution limits for each body of water. If the state fails to do this, EPA is required to develop a priority waterway list for the state and issue its own pollution limit determination. States and EPA enforce the TMDL program by revising existing permits, including the pollutant limits and schedule for compliance.[32]

In July 2001, EPA and the Bush administration announced an extensive "redesign" of the Clean Water Act's TMDL program. The administration's draft proposed rule to guide the TMDL program, if promulgated, would:

- Allow states to avoid doing cleanup plans for many polluted waters;

• Make cleanup plans less effective by not assigning responsibility to specific sources;
• Fail to protect waters that are in danger of becoming polluted;
• Attempt to allow EPA to escape its responsibility for ensuring watershed plans are designed to clean up polluted waters; and
• Allow states to drop polluted waters from cleanup lists.

Polluting Beaches and Threatening Public Health

Sanitary sewers carry wastes from buildings to sewage treatment plants. When these sewers are overloaded, inadequately maintained or obstructed, they often overflow, dumping raw and inadequately treated sewage into basements, streets, and waterways. EPA estimates that there are at least 40,000 sanitary sewer overflows nationally each year. Because sewer overflows contain raw sewage, they can carry bacteria, viruses, protozoa (parasitic organisms), helminthes (intestinal worms), borroughs (inhaled molds and fungi), and a host of other organisms that cause beach closings and kill fish. Sewage-contaminated waters can cause illness ranging in severity from mild gastroenteritis (causing stomach cramps and diarrhea) to life-threatening ailments such as cholera, dysentery, infectious hepatitis, and severe gastroenteritis. [33]

In January 2001, EPA proposed to clarify and expand permit requirements for 19,000 municipal sanitary sewer collection systems in order to reduce sewer overflows. The proposed Sanitary Sewer Overflow Rule, the product of a federal advisory committee that met for five years, would help communities improve some sanitary sewer systems by requiring facilities to develop and implement new capacity, management, operations, maintenance, and public notification programs. [34] This rule would, among other things, require sewer operators to monitor sewers and notify health authorities and the public when overflows could potentially harm public health.

The Bush administration has blocked these regulations ever it assumed office.

In addition, on November 7, 2003 the Bush administration issued a draft guidance that would allow publicly owned sewage treatment facilities to divert sewage around secondary treatment units and then combine the filtered but untreated sewage with fully treated wastewater before discharge, in a process called "blending." The effect of this guidance would be to authorize the removal of the crucial second step in the process of secondary treatment during wet weather, specifically the biological treatment of the sewage. Currently, this sort of bypass is prohibited.[35] Because the biological treatment component of the process removes most of the pathogens from the wastewater, this guidance could lead to beach closings, algal blooms and increased incidences of pfisteria, giardia and hepatitis A outbreaks.

Undercutting Enforcement

The Bush administration's fiscal year 2005 budget proposal cuts funding for EPA by $606 million, or 7% below this year's enacted level. This would take environmental cops off the beat, reducing the number of inspections to detect violations of the Clean Air Act, Clean Water Act and other key environmental laws. The proposed budget also cuts funding for the states' clean water revolving loan funds, which help improve wastewater treatment facilities, by $492 million – a 37% decrease.

Moreover, the Bush administration's poor track record on environmental enforcement is well-documented. A recent Knight Ridder analysis of 15 years of environmental enforcement records found that the Bush administration is catching and punishing far fewer polluters than the two previous administrations.[36] Knight Ridder examined EPA data in 17 categories and subcategories of civil enforcement since January 1989 and compared the records of the past three administrations. In 13 of those 17 categories, the Bush administration had lower average numbers

than the Clinton administration. And in 11 of those categories, the 2003 average was lower than the 2001 average, showing the trend increasing over time.

The monthly average of violation notices against polluters, a critical enforcement tool, has dropped 58% since January 2001 compared with the Clinton administration's monthly average; notices of water pollution violations are down 74%. The study also found that administrative fines since January 2001 are down 28%, when adjusted for inflation, from Clinton administration levels. Civil penalties average 6% less, when adjusted for inflation. And the number of cases referred to the Justice Department for prosecution is down 5%.[37]

Other Rollbacks to the Clean Water Act

The Bush administration has proposed or enacted numerous other policies to chip away at the Clean Water Act's protections, including:

• On January 7, 2004, the Bush administration proposed its latest attack on clean water protections to the benefit of the coal-mining industry. The administration is looking to remove a Reagan-era rule known as the "buffer zone rule" that prohibits coal-mining activities from disrupting areas within 100 feet of streams.

• In May 2002, the Bush administration finalized a new rule that allows mountaintop removal coal operations and other mining industries to dump coal and hardrock mining waste, construction and demolition debris, and other solid industrial wastes into streams, rivers, coastal waters, wetlands, and other waterways—legally.

• In January 2002, the Army Corps of Engineers and EPA relaxed standards for Clean Water Act "nationwide permits" – five year general permits that allow the filling of wetlands and streams but do not receive the same level of environmental scrutiny as individual permits and provide no public notice or comment opportunity.

Recommendations

Thirty years after passage of the Clean Water Act, with its most basic promises still unfulfilled, it is clear that we need to tighten enforcement of the law and strengthen the Act's fundamental principles. Unless illegal pollution is stopped, polluters punished, and legal pollution phased out by technological improvements, we will never realize the Clean Water Act's vision of waters free of toxic pollutants and safe enough for fishing and swimming.

The Bush Administration Should Strengthen, Not Weaken, the Clean Water Act

As detailed above, the Bush administration has suggested, formally proposed or enacted policies designed to limit the Clean Water Act in scope and in strength. Thirty years after the birth of this landmark legislation, more than 300,000 miles of river and shoreline and five million acres of lakes remain too contaminated for recreational use. Rather than weakening the Clean Water Act, the Bush administration should:

◈ Fully fund EPA at the levels necessary to hire adequate environmental enforcement staff.

◈ Recall the January 2003 guidance to EPA and Army Corps staff limiting the scope of the Clean Water Act.

◈ Direct EPA to abandon efforts to weaken the TMDL program, the Clean Water Act's primary program for cleaning up polluted waters.

◈ Direct EPA to implement the proposed rule to regulate sanitary sewer overflows and improve public notification of overflows that threaten human health.

Policy-Makers Should Tighten Enforcement of the Clean Water Act

The Bush administration and Congress should act to strengthen the Clean Water Act to help reach the goal of fishable and swimmable waters.

◈ Prevent Facilities from Profiting from Pollution

The existing Clean Water Act allows "economic benefits" to be taken into consideration when assessing penalties. Unfortunately, this authority is greatly underutilized; EPA has acknowledged that penalties rarely recover the profits companies gain from their non-compliance. In other words, under current Clean Water Act enforcement practices, it often pays to pollute illegally, which creates incentives to break the law, allows states and violators to cut sweetheart deals, and places those who comply with the law at a competitive disadvantage. Courts and administrative hearing officers must assess a penalty that exceeds the amount of economic benefit gained by the polluter as the result of its non-compliance. In addition, any state with an authorized Clean Water Act program should collect and make public all fines levied and collected against polluters.

◈ Tighten Pollution Limits

Although the Act was premised upon a goal of zero discharge, its implementation has not come close to that goal. EPA has sanctioned a permit-to-pollute system rather than a pollution elimination system. With the Clean Water Act, Congress intended to eliminate water pollution through a gradual tightening of permits based on emerging control technologies. The Act's authors envisioned progressive permit tightening,

coupled with enforcement actions against permit violators, to eventually reduce industrial and municipal pollution levels and achieve the interim Clean Water Act goal of fishable and swimmable waterways and ultimately zero discharge.

Progressive permit tightening, however, has not occurred consistently. By failing to regularly reevaluate permit limits and lower allowable pollution levels based on advances in technology, the government is missing a fundamental opportunity to reduce and eliminate pollution.

◈ Revoke Permits from Repeat Violators

Under the principles of the Clean Water Act, EPA and state agencies are not issuing facilities permits to pollute indefinitely, but are granting them a temporary right to discharge pollution into waterways while they reduce and eventually eliminate their waste stream. This temporary right must not be taken for granted. EPA and state agencies should deny permit issuance or renewal to applicants whose compliance history shows a repeated pattern of significant noncompliance with the Clean Water Act.

◈ Implement Pollution Prevention Initiatives

Pollution prevention means reducing the use of chemical inputs in order to generate less toxic waste, rather than relying on end-of-pipe pollution control technologies to stop waste chemicals from entering water discharges. Pollution prevention tends to be more effective in cutting use and often saves facilities money otherwise spent handling hazardous materials.

Each applicant for a permit to discharge one or more pollutants should be required to submit, with the application for the permit, a pollution prevention plan that details the applicant's plans for reducing and eliminating the use and discharge of such pollutants at a measurable rate. Specifically, the pollution prevention plans should:

- Set a specific pollution prevention goal and timeline that fits within the overall context of moving toward zero discharge.

- Identify specific steps, such as material substitutions, technology changes, or process changes, the facility can take to reduce its use of toxic chemicals, so that there is less pollution to control at the end of the pipe.

◈ Remove Current Obstacles to Citizen Suits

Citizens should be allowed to sue for past violations of the Clean Water Act, similar to the 1990 amendments to the Clean Air Act. Furthermore, citizen suits should not be precluded by inadequate government enforcement actions. Only judicial or enforcement actions that recoup the full economic benefit gained by violating the law should be allowed to preclude subsequent citizen enforcement.

◈ Citizens Should Be Able to Bring Penalty Actions Against Polluting Federal Facilities

Currently, the federal government enjoys sovereign immunity from penalty actions in the event of a Clean Water Act violation. Federal facilities that pollute illegally should be subject to the same enforcement mechanism as other facilities.

Expand the Public's Right to Know

Policy-makers should increase and facilitate public access to compliance data and discharge reporting. Access to accurate and consistent reporting is fundamental to the success of the Clean Water Act's permitting and enforcement

programs. Without it, protection of our waterways is impossible.

◈ All "major" facilities discharging to ground waters, surface waters, or treatments works facilities should be required to submit discharge monitoring reports (DMRs) on a monthly basis; other permit holders should submit DMRs on at least a quarterly basis, and states should be required to input this data into the EPA Permit Compliance System.

◈ All significant industrial users of Publicly Owned Treatment Works (POTWs) should be required to file DMRs monthly with the treatment works, states, and EPA regional offices, and states should be required to input this data into the EPA Permit Compliance System.

◈ EPA and the states should compile and make public an analysis of enforcement actions taken during the preceding year, including the number of enforcement actions; the type of enforcement action; the average penalty assessed and collected for each action; the number of facilities in noncompliance and the reason for such noncompliance; the number and percentage of facilities with expired permits; the number and percentage of waters that are impaired, and the acres of wetlands authorized to be filled, restored, or created.

◈ California's facilities should comply with the same reporting requirements as all other states and input all DMR data into the Permit Compliance System. It is unacceptable that EPA cannot provide accurate Clean Water Act compliance information about the state with the sixth largest economy in the world.

◈ EPA should expand the public's right to know to include information on chemical *use*. While the Toxics Release Inventory discloses facilities' direct discharges of chemical pollution every year, there is little public information about chemicals used in workplaces and placed in products. In order to move towards the Clean Water Act's goal of zero-discharge, industrial facilities need to practice pollution prevention – reducing the use of chemicals at the source – rather than relying on pollution control technologies to limit releases once waste has been generated. Requiring companies to disclose their chemical use gives them an incentive to reduce use. In Massachusetts, where chemical-use reporting is required, in combination with pollution prevention planning, companies have cut the use of toxic chemicals by 40%, reduced waste generated by 58% and decreased environmental releases by 90%.

◈ EPA should maintain and expand the Enforcement and Compliance History Online (ECHO) database. The ECHO database provides the public with access to important information about facilities' compliance with the Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act. EPA should continue to expand the information provided to the public on this site and deny requests by the regulated industries to remove any information from the public domain.

Methodology

1. Obtaining the data. To obtain the data, we submitted a Freedom of Information Act (FOIA) request in August 2003, to which EPA responded in October 2003.

2. Scope and source of the data. The data provided through the FOIA request contains summary data about active major facilities in the Clean Water Act's National Pollutant Discharge Elimination System. All information was generated from the Permit Compliance System (PCS) and Integrated Data for Enforcement Analysis (IDEA) system. The data covers the time period spanning January 1, 2002 through June 30, 2003. EPA provided us with a database of approximately 32,000 records; each record represents a facility reporting at least one permit exceedance for a specific parameter. *The data do not include paperwork violations, such as late filing of Discharge Monitoring Reports.*

3. Ensuring accuracy of the data. In anticipation of fulfilling our FOIA request, EPA offered state agencies approximately a month to review the data for accuracy and submit changes to the Permit Compliance System. After receiving the data, we contacted each state agency—except in states where EPA administers the NPDES program—and offered them an additional opportunity to review the data for accuracy. The following states (in addition to the states where EPA administers the Clean Water Act) did not provide further review of the water quality data, due to resource limitations or failure to respond to repeated requests: Delaware, Florida, Georgia, Indiana, Kentucky, Missouri, Nebraska, Nevada, North Carolina, Pennsylvania, West Virginia and Wyoming.

In addition to making the corrections noted by the state agencies, we deleted or updated the following records from the database provided by EPA:

- In certain instances, PCS parameter-level effluent violations will show the value 99999% over limit. This value is a code indicating that PCS was not able to properly interpret the measurement that was submitted by the permittee. Therefore, 99999% values are not necessarily violations; as such, we excluded 99999% values from our analysis.

- Some facilities reported discharges of "<" or ">" a given value. EPA's PCS database drops the "<" and ">" symbols and calculates the violation as the base number; in most cases, we were unable to verify whether the PCS database correctly calculated the percentage over the effluent permit limit. We eliminated all records for which states reported discharges using a character such as "<" or ">", except when the facility reported a discharge of ">" a given value that was higher than the permitted limit. We coded these records as "apparent violations of undetermined magnitude."

- We eliminated all records where the quantity or concentration average was noted as being higher than the quantity or concentration maximum, since this had to be a data entry error.

- We independently calculated the percent violation for each facility and identified instances in which our calculations differed from EPA's. We went through each of these records and fixed or dropped the data.

- In some cases, EPA's PCS database improperly calculated percentage violations for concentration minimum permits; we corrected or deleted these records as well.

4. Data limitations. The data covers major facilities only. Facilities are designated as "major" based on an EPA scoring system that considers a combination of factors, including

toxic pollutant potential, streamflow volume, public health impacts, and proximity to coastal waters. For example, a major municipal facility is a publicly owned treatment works that serves a population of 10,000 or more, discharges one million gallons or more of wastewater daily, or has a significant impact on water quality. Because we only looked at major facilities, this report examines a small subset of the total number of facilities discharging pollutants into U.S. waters.

5. California and Oregon data. EPA expressed concern that the California data were not accurate or trustworthy. The Permit Compliance System maintains current permit limits for only a small percentage of California's facilities, so some of the information may not be accurate. In addition, the Oregon Department of Environmental Quality noted that the Permit Compliance System does not have up-to-date permit limits for a significant number of the state's facilities, meaning that the system is generating erroneous data on violations for these facilities. As such, we chose to exclude California and Oregon from the report's analysis.

6. Definition of "exceedance." We count any exceedance (greater than 0% above the permit level) for any given parameter during any given reporting period as an exceedance. If a facility exceeded its permit level for a parameter for quantity average, quantity maximum, concentration average and concentration maximum during the same reporting period, we count this as four exceedances but as one facility in violation. Again, we did not include paperwork violations in this analysis.

7. Calculating the average permit violation by state. To calculate the average violation, we first averaged the violations by category (quantity average percent over, quantity maximum percent over, concentration average percent over, concentration maximum percent over, concentration minimum percent under), excluding non-violations and fields displaying EPA's 99999% code. We then averaged each of these five averages together to obtain each state's total average.

8. Number of major facilities by state. Data for the number of major facilities in each state, which forms the basis of the calculations in Table 1, are current as of June 30, 2002. EPA provided this data in response to a separate FOIA request.

Appendix A. Facilities Exceeding Their Clean Water Act Permits for Every Reporting Period, January 1, 2002-June 30, 2003

State	NPDES Permit Number	Facility Name	City	Primary Parameters Exceeded During 18-Month Period
AL	AL0060445	UNION SPRINGS WWTP AND LAND AP	UNION SPRINGS	Chlorine, Biological Oxygen Demand, Total Suspended Solids
DE	DE0050580	DELMARVA P & L INDIAN RIVER PO	MILLSBORO	Flow
DE	DE0000655	GENERAL CHEMICAL CORPORATION	NEW CASTLE COUNTY	Biological Oxygen Demand, Nitrogen, pH
FL	FL0026344	BOCA RATON WPC FAC	BOCA RATON	Dissolved Oxygen, pH, Total Suspended Solids
GA	GA0034584	ATHENS CEDAR CREEK WPCP	ATHENS	Biological Oxygen Demand, Flow, Suspended Solids
GA	GA0047147	RICHMOND CO (SPIRIT CRK WPCP)		Biological Oxygen Demand, Chlorine, Flow, Suspended Solids
HI	HI0020117	HONOLULU, CITY & CNTY	HONOLULU	Chlordane, Dieldrin, Enterococci
IL	IL0023027	DEKALB S.D. STP	DE KALB	Chlorine, Fecal Coliform, Copper
IL	IL0048526	ROMEOVILLE STP #1 AND #2	ROMEOVILLE	Biological Oxygen Demand, Chlorine, Fecal Coliform, Nitrogen, Total Suspended Solids
IN	IN0022829	EAST CHICAGO_MUNICIPAL STP	EAST CHICAGO	Cadmium, Chloride, Chromium, Copper, Oil & Grease, Phenolics, Phosphorus, Sulfate
IN	IN0025135	AUSTIN MUNICIPAL STP	AUSTIN	Biological Oxygen Demand, Nitrogen, Dissolved Oxygen, Total Suspended Solids
IN	IN0023060	HAMMOND MUNICIPAL STP	HAMMOND	Fluoride, Phosphorus
KY	KY0021270	LONDON STP	LAUREL COUNTY	Biological Oxygen Demand, Chlorine, Nitrogen, Dissolved Oxygen, Total Suspended Solids, Toxicity
LA	LA0032131	ST CHARLES PARISH PH-LULING ST	LULING	Biological Oxygen Demand, Fecal Coliform, Total Suspended Solids
LA	LA0044008	NEW IBERIA, CITY OF	NEW IBERIA	Biological Oxygen Demand, Fecal Coliform, Nitrogen, Total Suspended Solids
LA	LA0038814	VILLE PLATTE, CITY OF	VILLE PLATTE	Biological Oxygen Demand, Copper, Fecal Coliform, Nitrogen, Dissolved Oxygen, Total Suspended Solids, Zinc
MA	MA0100030	MARION W W T F	MARION /T/	Fecal Coliform, Ammonia/Ammonium, Biological Oxygen Demand, Copper, Flow, pH, Total Suspended Solids
MA	MA0100587	PLYMOUTH W W T P	PLYMOUTH	Fecal Coliform, Chlorine, Copper, Total Suspended Solids, Settleable Solids

State	NPDES Permit Number	Facility Name	City	Primary Parameters Exceeded During 18-Month Period
MA	MA0100862	WINCHENDON W P C F	WINCHENDON	Biological Oxygen Demand, Fecal Coliform, Chlorine, Copper, Flow, pH, Total Suspended Solids
MI	MI0024058	SAULT STE MARIE WWTP	SAULT SAINTE MARIE	Biological Oxygen Demand, Fecal Coliform, Chlorine
MS	MS0020311	CLARKSDALE POTW	CLARKSDALE	Cadmium, Copper, Lead
NC	NC0023981	LENOIR, CITY-LOWER CREEK WWTP	LENOIR COUNTY	Biological Oxygen Demand, Fecal Coliform, Lead, Dissolved Oxygen, Selenium, Total Suspended Solids
NC	NC0021873	MAYODAN, TOWN OF - WWTP	MAYODAN TOWN	Fecal Coliform, Total Suspended Solids
NH	NH0100234	PORTSMOUTH-PIERCE ISLAND WWTP	PORTSMOUTH	Coliform, Flow, pH, Settleable Solids
PA	PA0012751	ZINC CORP OF AMERICA - PALMERT	PALMERTON	Oil & Grease, pH, Zinc
PA	PA0025615	FIRST ENERGY NUCLEAR OPERATING	SHIPPINGPORT	Chlorine, Oil & Grease, pH, Total Suspended Solids, Zinc
PA	PA0005037	EME HOMER CITY GENERATION LP	CENTER TWP	Oil & Grease, Dissolved Oxygen, Selenium, Total Suspended Solids
SC	SC0025135	ANDREWS WWTF	ANDREWS	Biological Oxygen Demand, Fecal Coliform, pH, Nitrogen
SC	SC0041696	GSW&SA/GEORGE R VEREEN WWTP	CONWAY	Biological Oxygen Demand, Fecal Coliform, Nitrogen, Oxygen Demand
TN	TN0059404	WHITE HOUSE STP	WHITE HOUSE	Biological Oxygen Demand, Fecal Coliform, Nitrogen, Oxygen Demand, Total Suspended Solids, Dissolved Oxygen
TX	TX0063410	PASADENA, CITY OF	PASADENA	Biological Oxygen Demand, Chlorine, Flow, Nitrogen, Total Suspended Solids
TX	TX0009148	CONOCOPHILLIPS COMPANY	BORGER	pH, Selenium, Whole Effluent Toxicity
TX	TX0025950	NORTH TEXAS MWD	WYLIE	Biological Oxygen Demand, Flow, Nitrogen, Total Suspended Solids
WV	WV0027740	NORTH BECKLEY PSD	BECKLEY	Biological Oxygen Demand, Fecal Coliform, Copper, Lead, Silver, Total Suspended Solids, Zinc
WV	WV0022349	CHARLES TOWN CITY OF	CHARLES TOWN	Biological Oxygen Demand, Fecal Coliform, Nitrogen, Total Suspended Solids

Appendix B. Major Facilities in Wisconsin Exceeding their Clean Water Act Permits at Least Once, January 1, 2002-June 30, 2003

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0022144	ANTIGO CITY SPRING BROOK POLLU	ANTIGO /C/	SPRING BROOK CR	OXYGEN, DISSOLVED (DO)	12/31/2002	0	0	8	0	0
WI0000990	APPLETON PAPERS INC APPLETON	COMBINED LOCKS	FOX R	BOD, 5-DAY (20 DEG. C)	7/31/2002	0	2	0	0	0
WI0000990	APPLETON PAPERS INC APPLETON	COMBINED LOCKS	FOX R	CHLORINE, TOTAL RESIDUAL	5/31/2002	0	50	0	0	32
WI0000990	APPLETON PAPERS INC APPLETON	COMBINED LOCKS	FOX R	CHLORINE, TOTAL RESIDUAL	5/31/2002	0	0	0	0	58
WI0023230	ARCADIA CITY WWTF	ARCADIA	TRADE R VIA UN C	PHOSPHORUS, TOTAL (AS P)	4/30/2003	0	0	0	6	0
WI0030767	ASHLAND SEWAGE UTILITY WWTF	ASHLAND	L SUPERIOR	PHOSPHORUS, TOTAL (AS P)	11/30/2002	0	0	0	14	0
WI0030767	ASHLAND SEWAGE UTILITY WWTF	ASHLAND	L SUPERIOR	PHOSPHORUS, TOTAL (AS P)	12/31/2002	0	0	0	5	0
WI0023370	BELOIT CITY WWTF	BELOIT	ROCK R	PHOSPHORUS, TOTAL (AS P)	2/28/2003	0	0	0	2	0
WI0023604	CHIPPEWA FALLS CITY WWTF	CHIPPEWA FALLS	CHIPPEWA R	PHOSPHORUS, TOTAL (AS P)	6/30/2003	0	0	0	46	0
WI0003204	CITYFOREST CORPORATION	LADYSMITH	FLAMBEAU R AND G	SOLIDS, TOTAL SUSPENDED	3/31/2002	0	31	0	0	0
WI0003204	CITYFOREST CORPORATION	LADYSMITH	FLAMBEAU R AND G	SOLIDS, TOTAL SUSPENDED	4/30/2003	0	8	0	0	0
WI0021008	COLUMBUS CITY WWTF	COLUMBUS	CRAWFISH R UPPER	NITROGEN, AMMONIA TOTAL	5/31/2002	0	172	0	0	0
WI0003239	DAIRYLAND POWER COOP	GENOA /V/	MISSISSIPPI R	PH	6/30/2003	0	0	30	0	0
WI0003239	DAIRYLAND POWER COOP	GENOA /V/	MISSISSIPPI R	SOLIDS, TOTAL SUSPENDED	11/30/2002	0	0	0	139	132
WI0032026	DELAFIELD HARTLAND POLLUTION C	DELAFIELD	BARK R	OXYGEN, DISSOLVED (DO)	5/31/2002	0	0	5	0	0
WI0003620	DOMTAR	NEKOOSA	WISCONSIN R AND	PH	6/30/2002	0	0	44	0	0
WI0003620	DOMTAR	NEKOOSA	WISCONSIN R AND	PHOSPHORUS, TOTAL (AS P)	6/30/2002	0	0	0	17	0
WI0003620	DOMTAR	NEKOOSA	WISCONSIN R AND	SOLIDS, TOTAL SUSPENDED	5/31/2003	0	25	0	0	0
WI0023850	EAU CLAIRE CITY WWTF	EAU CLAIRE	CHIPPEWA R	CHLORINE, TOTAL RESIDUAL	5/31/2002	0	0	0	0	347
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	BOD, 5-DAY (20 DEG. C)	1/31/2002	0	0	0	67	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	BOD, 5-DAY (20 DEG. C)	2/28/2002	0	0	0	29	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	BOD, 5-DAY (20 DEG. C)	3/31/2002	0	0	0	26	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	BOD, 5-DAY (20 DEG. C)	4/30/2002	0	0	0	8	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	CHLORINE, TOTAL RESIDUAL	7/31/2002	0	0	0	0	853
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	CHLORINE, TOTAL RESIDUAL	9/30/2002	0	0	0	0	1795
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	CHLORINE, TOTAL RESIDUAL	5/31/2003	0	0	0	0	476
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	PH	8/31/2002	0	0	2	0	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	PH	12/31/2002	0	0	37	0	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	PHOSPHORUS, TOTAL (AS P)	1/31/2002	0	0	0	9	0
WI0023990	FOND DU LAC CITY WWTF	FOND DU LAC COUNTY	L WINNEBAGO	SOLIDS, TOTAL SUSPENDED	1/31/2002	0	0	0	8	0
WI0036021	FONTANA WALWORTH WATER POLLUTI	WALWORTH	PISCASAW CR	PHOSPHORUS, TOTAL (AS P)	3/31/2002	0	0	0	24	0
WI0036021	FONTANA WALWORTH WATER POLLUTI	WALWORTH	PISCASAW CR	SOLIDS, TOTAL SUSPENDED	5/31/2002	0	0	0	138	0
WI0022489	FORT ATKINSON CITY WWTF	FORT ATKINSON	ROCK R	CHLORINE, TOTAL RESIDUAL	7/31/2002	0	0	0	0	289
WI0003212	FRASER PAPERS INC PARK FALLS	PARK FALLS /C/	FLAMBEAU R N FK	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	8	0	0	0
WI0020991	GREEN BAY METROPOLITAN SEWERAG	GREEN BAY /T/	GREEN BAY VIA FO	PHOSPHORUS, TOTAL (AS P)	11/30/2002	0	0	0	54	0
WI0020192	HARTFORD WATER POLLUTION CTRL	HARTFORD /C/	RUBICON R	PHOSPHORUS, TOTAL (AS P)	6/30/2002	0	0	0	7	0
WI0020192	HARTFORD WATER POLLUTION CTRL	HARTFORD /C/	RUBICON R	PHOSPHORUS, TOTAL (AS P)	7/31/2002	0	0	0	4	0
WI0031232	HEART OF THE VALLEY MSD WWTF	KAUKAUNA /C/	FOX R	CHLORINE, TOTAL RESIDUAL	5/31/2003	0	0	0	0	32
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	OXYGEN, DISSOLVED (DO)	6/30/2002	0	0	7	0	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	OXYGEN, DISSOLVED (DO)	7/31/2002	0	0	3	0	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	OXYGEN, DISSOLVED (DO)	8/31/2002	0	0	77	0	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	2/28/2002	0	0	0	4	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	3/31/2002	0	0	0	169	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	4/30/2002	0	0	0	3	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	5/31/2002	0	0	0	7	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	6/30/2002	0	0	0	13	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	7/31/2002	0	0	0	23	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	8/31/2002	0	0	0	24	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	9/30/2002	0	0	0	1	0
WI0021806	JACKSON VILLAGE	JACKSON	CEDAR CR	PHOSPHORUS, TOTAL (AS P)	10/31/2002	0	0	0	21	0
WI0030350	JANESVILLE CITY WASTEWATER UTI	JANESVILLE	ROCK R	CHLORINE, TOTAL RESIDUAL	5/31/2003	0	0	0	0	5
WI0030350	JANESVILLE CITY WASTEWATER UTI	JANESVILLE	ROCK R	CHLORINE, TOTAL RESIDUAL	6/30/2003	0	0	0	0	32
WI0024333	JEFFERSON CITY WWTF	JEFFERSON	ROCK R	PHOSPHORUS, TOTAL (AS P)	5/31/2003	0	0	0	130	0
WI0024333	JEFFERSON CITY WWTF	JEFFERSON	ROCK R	PHOSPHORUS, TOTAL (AS P)	6/30/2003	0	0	0	180	0
WI0028703	KENOSHA CITY WWTF	KENOSHA	L MICHIGAN	CHLORINE, TOTAL RESIDUAL	1/31/2002	0	0	0	0	366
WI0031194	LAKE MILLS CITY WWTF	LAKE MILLS	ROCK CR	SOLIDS, TOTAL SUSPENDED	7/31/2002	0	11	0	0	0
WI0001341	LITTLE RAPIDS CORP SHAWANO	SHAWANO	WOLF R	SOLIDS, TOTAL SUSPENDED	12/31/2002	0	18	0	0	0
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	BOD, 5-DAY (20 DEG. C)	1/31/2002	0	0	0	0	33
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	BOD, 5-DAY (20 DEG. C)	2/28/2002	0	0	0	46	87
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	PH	10/31/2002	0	0	33	0	0
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	PH	1/31/2003	0	0	0	0	4
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	SOLIDS, TOTAL SUSPENDED	2/28/2002	0	0	0	0	10
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	SOLIDS, TOTAL SUSPENDED	9/30/2002	0	0	0	0	63
WI0003085	MURPHY OIL USA INC SUPERIOR	SUPERIOR /C/	ALLOUEZ BAY	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	0	0	0	20
WI0026085	NEENAH MENASHA SEWERAGE COMMIS	MENASHA /T/	FOX R MENASHA CH	PHOSPHORUS, TOTAL (AS P)	9/30/2002	0	0	0	46	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0026085	NEENAH MENASHA SEWERAGE COMMIS	MENASHA /T/	FOX R MENASHA CH	SOLIDS, TOTAL SUSPENDED	9/30/2002	0	0	0	25	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	1/31/2003	0	0	83	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	2/28/2003	0	0	56	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	3/31/2003	0	0	84	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	4/30/2003	0	0	80	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	5/31/2003	0	0	81	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	OXYGEN, DISSOLVED (DO)	6/30/2003	0	0	86	0	0
WI0020681	OREGON VILLAGE		BADFISH CR VIA O	PHOSPHORUS, TOTAL (AS P)	10/31/2002	0	0	0	5	0
WI0002810	PACKAGING CORP OF AMERICA	LINCOLN COUNTY	WISCONSIN R AT L	PH	6/30/2003	0	0	34	0	54
WI0027995	PLOVER VILLAGE	PLOVER	WISCONSIN R	CHLORINE, TOTAL RESIDUAL	5/31/2002	0	0	0	0	268
WI0027995	PLOVER VILLAGE	PLOVER	WISCONSIN R	CHLORINE, TOTAL RESIDUAL	5/31/2003	0	0	0	0	1084
WI0027995	PLOVER VILLAGE	PLOVER	WISCONSIN R	CHLORINE, TOTAL RESIDUAL	6/30/2003	0	0	0	0	637
WI0030031	PLYMOUTH CITY UTILITY COMMISSI	PLYMOUTH /C/	MULLET R	NITROGEN, AMMONIA TOTAL	6/30/2002	0	170	0	0	0
WI0020257	PRAIRIE DU CHIEN CITY WWTF	PRAIRIE DU CHIEN	MISSISSIPPI R	PHOSPHORUS, TOTAL (AS P)	4/30/2003	0	0	0	2	0
WI0020371	REEDSBURG CITY WWTF	REEDSBURG	BARABOO R	NITROGEN, AMMONIA TOTAL	5/31/2002	0	54	0	0	0
WI0020371	REEDSBURG CITY WWTF	REEDSBURG	BARABOO R	PH	6/30/2002	0	0	2	0	0
WI0020371	REEDSBURG CITY WWTF	REEDSBURG	BARABOO R	SOLIDS, TOTAL SUSPENDED	5/31/2002	0	101	0	0	0
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	CHLORINE, TOTAL RESIDUAL	5/31/2003	0	0	0	0	200
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	PH	10/31/2002	0	0	1	0	0
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	PH	2/28/2003	0	0	0	0	1
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	SOLIDS, TOTAL SUSPENDED	6/30/2002	0	0	0	4	0
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	SOLIDS, TOTAL SUSPENDED	8/31/2002	0	0	0	7	0
WI0020044	RHINELANDER CITY OF	RHINELANDER	PELICAN R	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	0	0	7	0
WI0021865	RICE LAKE CITY WWTF	RICE LAKE	RED CEDAR R	PH	6/30/2003	0	0	7	0	0
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	BOD, 5-DAY (20 DEG. C)	10/31/2002	0	0	0	97	0
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	PHOSPHORUS, TOTAL (AS P)	5/31/2002	0	0	0	4	0
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	PHOSPHORUS, TOTAL (AS P)	10/31/2002	0	0	0	170	0
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	PHOSPHORUS, TOTAL (AS P)	11/30/2002	0	0	0	15	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	PHOSPHORUS, TOTAL (AS P)	4/30/2003	0	0	0	10	0
WI0020109	RICHLAND CENTER CITY WWTF	RICHLAND CENTER	PINE R	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	0	0	133	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	BOD, CARBONACEOUS 5 DAY,5 C	2/28/2003	0	75	0	0	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	NITROGEN, AMMONIA TOTAL	3/31/2002	0	19	0	0	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	NITROGEN, AMMONIA TOTAL	5/31/2002	0	27	0	0	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	NITROGEN, AMMONIA TOTAL	6/30/2002	0	6	0	0	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	NITROGEN, AMMONIA TOTAL	2/28/2003	0	22	0	0	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	PHOSPHORUS, TOTAL (AS P)	4/30/2003	0	0	0	19	0
WI0021032	RIPON CITY WWTF	RIPON	SILVER CR UPPER	SOLIDS, TOTAL SUSPENDED	2/28/2003	0	15	0	0	0
WI0029394	RIVER FALLS CITY WWTF	RIVER FALLS	KINNICKINNIC R	NITROGEN, AMMONIA TOTAL	5/31/2002	0	18	0	0	0
WI0025411	SHEBOYGAN CITY WWTF	SHEBOYGAN	L MICHIGAN	CHLORINE, TOTAL RESIDUAL	1/31/2002	0	0	0	0	137
WI0025411	SHEBOYGAN CITY WWTF	SHEBOYGAN	L MICHIGAN	CHLORINE, TOTAL RESIDUAL	8/31/2002	0	0	0	0	847
WI0025411	SHEBOYGAN CITY WWTF	SHEBOYGAN	L MICHIGAN	PH	9/30/2002	0	0	5	0	0
WI0029572	STEVENS POINT CITY WWTF	STEVENS POINT	WISCONSIN R	PHOSPHORUS, TOTAL (AS P)	3/31/2003	0	0	0	4	0
WI0000752	STORA ENSO NORTH AMERICA NIAGA	NIAGARA	MENOMINEE R	TEMPERATURE, WATER DEG. FAHRENHEIT	5/31/2002	0	0	0	0	1
WI0000752	STORA ENSO NORTH AMERICA NIAGA	NIAGARA	MENOMINEE R	TEMPERATURE, WATER DEG. FAHRENHEIT	6/30/2002	0	0	0	0	1
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	CHLORINE, TOTAL RESIDUAL	5/31/2002	0	0	0	0	558
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	OXYGEN, DISSOLVED (DO)	8/31/2002	0	0	3	0	0
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	OXYGEN, DISSOLVED (DO)	11/30/2002	0	0	2	0	0
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	OXYGEN, DISSOLVED (DO)	12/31/2002	0	0	4	0	0
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	OXYGEN, DISSOLVED (DO)	2/28/2003	0	0	1	0	0
WI0020478	SUN PRAIRIE CITY WWTF	SUN PRAIRIE	KOSHKONONG CR	OXYGEN, DISSOLVED (DO)	6/30/2003	0	0	6	0	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	1/31/2002	0	0	0	17	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	1/31/2002	0	0	0	56	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	3/31/2002	0	0	0	27	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	11/30/2002	0	0	0	2	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	12/31/2002	0	0	0	7	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	1/31/2003	0	0	0	39	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	1/31/2003	0	0	0	3	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	3/31/2003	0	0	0	12	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	BOD, 5-DAY (20 DEG. C)	5/31/2003	0	0	0	2	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	CHLORINE, TOTAL RESIDUAL	1/31/2002	0	0	0	0	1111
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	CHLORINE, TOTAL RESIDUAL	2/28/2002	0	0	0	0	637
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	PHOSPHORUS, TOTAL (AS P)	2/28/2002	0	0	0	35	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	PHOSPHORUS, TOTAL (AS P)	3/31/2002	0	0	0	46	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	PHOSPHORUS, TOTAL (AS P)	12/31/2002	0	0	0	71	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	PHOSPHORUS, TOTAL (AS P)	1/31/2003	0	0	0	742	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	PHOSPHORUS, TOTAL (AS P)	3/31/2003	0	0	0	96	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	SOLIDS, TOTAL SUSPENDED	4/30/2002	0	0	0	64	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	SOLIDS, TOTAL SUSPENDED	5/31/2002	0	0	0	20	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	0	0	107	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	SOLIDS, TOTAL SUSPENDED	10/31/2002	0	0	0	23	0
WI0025593	SUPERIOR SEWAGE DISPOSAL SYSTE	SUPERIOR /C/	SUPERIOR BAY-ST	SOLIDS, TOTAL SUSPENDED	5/31/2003	0	0	0	23	0
WI0020559	SUSSEX VILLAGE WWTF	SUSSEX	FOX R VIA SUSSEX	OXYGEN, DISSOLVED (DO)	5/31/2003	0	0	86	0	0
WI0021318	TOMAH CITY WWTF	TOMAH	LEMONWEIR R S FK	BOD, 5-DAY (20 DEG. C)	2/28/2003	0	14	0	0	0

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0021318	TOMAH CITY WWTF	TOMAH	LEMONWEIR R S FK	PH	2/28/2003	0	0	0	0	7
WI0021318	TOMAH CITY WWTF	TOMAH	LEMONWEIR R S FK	SOLIDS, TOTAL SUSPENDED	2/28/2003	0	62	0	0	0
WI0038938	TRENT TUBE DIV PLANTS 2 AND 3	EAST TROY	HONEY CR	CHROMIUM TOTAL RECOVERABLE	12/31/2002	40	100	0	0	0
WI0038938	TRENT TUBE DIV PLANTS 2 AND 3	EAST TROY	HONEY CR	NICKEL TOTAL RECOVERABLE	12/31/2002	110	88	0	0	0
WI0026590	TWO RIVERS CITY WWTF	TWO RIVERS /C/	L MICHIGAN TWO R	SOLIDS, TOTAL SUSPENDED	5/31/2003	0	0	0	113	0
WI0001040	TYCO SAFETY PRODUCTS - ANSUL	MARINETTE	MENOMONEE R AND	ARSENIC, TOTAL RECOVERABLE	9/30/2002	0	210	0	0	589
WI0001040	TYCO SAFETY PRODUCTS - ANSUL	MARINETTE	MENOMONEE R AND	ZINC TOTAL RECOVERABLE	3/31/2002	0	0	0	0	36
WI0028291	UNION GROVE VILLAGE WWTF	UNION GROVE	ROOT R W BR	PHOSPHORUS, TOTAL (AS P)	11/30/2002	0	0	0	1	0
WI0028291	UNION GROVE VILLAGE WWTF	UNION GROVE	ROOT R W BR	PHOSPHORUS, TOTAL (AS P)	6/30/2003	0	0	0	5	0
WI0003565	VULCAN CHEMICALS(PORT EDWARDS)	PORT EDWARDS /V/	WISCONSIN R	CHLORINE, TOTAL RESIDUAL	4/30/2002	0	85	0	0	0
WI0003565	VULCAN CHEMICALS(PORT EDWARDS)	PORT EDWARDS /V/	WISCONSIN R	MERCURY TOTAL RECOVERABLE	6/30/2002	43	0	0	0	0
WI0003565	VULCAN CHEMICALS(PORT EDWARDS)	PORT EDWARDS /V/	WISCONSIN R	MERCURY TOTAL RECOVERABLE	10/31/2002	0	0	0	2	0
WI0031461	WALWORTH COUNTY METRO	DELAVAN LAKE DIS	TURTLE CR	PHOSPHORUS, TOTAL (AS P)	1/31/2003	0	0	0	5	0
WI0030490	WAUPACA CITY WWTF	WAUPACA	WAUPACA R	PHOSPHORUS, TOTAL (AS P)	8/31/2002	0	0	0	2	0
WI0043583	WE ENERGIES PLEASANT PRAIRIE	PLEASANT PRAIRIE	L MICHIGAN AND J	CHLORINE, TOTAL RESIDUAL	7/31/2002	0	0	0	0	5
WI0043583	WE ENERGIES PLEASANT PRAIRIE	PLEASANT PRAIRIE	L MICHIGAN AND J	CHLORINE, TOTAL RESIDUAL	10/31/2002	0	0	0	0	5
WI0043583	WE ENERGIES PLEASANT PRAIRIE	PLEASANT PRAIRIE	L MICHIGAN AND J	CHLORINE, TOTAL RESIDUAL	12/31/2002	0	0	0	0	5
WI0043583	WE ENERGIES PLEASANT PRAIRIE	PLEASANT PRAIRIE	L MICHIGAN AND J	SOLIDS, TOTAL SUSPENDED	1/31/2002	89	0	0	65	0
WI0043583	WE ENERGIES PLEASANT PRAIRIE	PLEASANT PRAIRIE	L MICHIGAN AND J	SOLIDS, TOTAL SUSPENDED	4/30/2002	131	0	0	105	19
WI0028754	WESTERN RACINE COUNTY SEWERAGE	ROCHESTER /V/	FOX R	CHLORINE, TOTAL RESIDUAL	8/31/2002	0	0	0	0	347

NPDES Permit Number	Facility Name	City	Receiving Waters	Parameter	Report Period End Date	Qty Avg % Violation	Qty Max % Violation	Conc Min % Violation	Conc Avg % Violation	Conc Max % Violation
WI0028754	WESTERN RACINE COUNTY SEWERAGE	ROCHESTER /V/	FOX R	PH	1/31/2003	0	0	9	0	0
WI0026042	WEYERHAEUSER COMPANY	ROTHSCHILD	WISCONSIN R	SOLIDS, TOTAL SUSPENDED	12/31/2002	0	5	0	0	0
WI0026042	WEYERHAEUSER COMPANY	ROTHSCHILD	WISCONSIN R	SOLIDS, TOTAL SUSPENDED	3/31/2003	0	61	0	0	0
WI0000922	WI ELECTRIC POWER CO PORT WASH	MILWAUKEE COUNTY	L MICHIGAN	SOLIDS, TOTAL SUSPENDED	2/28/2002	0	0	0	3	0
WI0000922	WI ELECTRIC POWER CO PORT WASH	MILWAUKEE COUNTY	L MICHIGAN	SOLIDS, TOTAL SUSPENDED	4/30/2002	0	0	0	0	5
WI0000957	WI ELECTRIC POWER CO PT BEACH	TWO RIVERS /C/	L MICHIGAN	SOLIDS, TOTAL SUSPENDED	11/30/2002	0	0	0	270	569
WI0001571	WI PUBLIC SERVICE CORP KEWAUNE	KEWAUNEE	L MICHIGAN VIA T	PH	3/31/2003	0	0	3	0	0
WI0001571	WI PUBLIC SERVICE CORP KEWAUNE	KEWAUNEE	L MICHIGAN VIA T	SOLIDS, TOTAL SUSPENDED	9/30/2002	0	0	0	57	52
WI0025844	WISCONSIN RAPIDS CITY WWTF	WISCONSIN RAPIDS	WISCONSIN R	PH	12/31/2002	0	0	13	0	0
WI0025844	WISCONSIN RAPIDS CITY WWTF	WISCONSIN RAPIDS	WISCONSIN R	PHOSPHORUS, TOTAL (AS P)	7/31/2002	0	0	0	2	0

End Notes

[1] EPA Inspector General Audit Report. August 2001.
[2] United States Environmental Protection Agency, Office of Water. *National Water Quality Inventory: 2000 Report to Congress*. EPA-841-R-02-001. http://www.epa.gov/305b/2000report/.
[3] General Accounting Office. *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*. GAO-02-186. January 2002.
[4] Natural Resources Defense Council. *Testing the Waters 2003: A Guide to Water Quality at Vacation Beaches*. August 2003. Available at http://www.nrdc.org/water/oceans/ttw/titinx.asp.
[5] U.S. EPA, 2002 National Listing of Fish and Wildlife Advisories. Available at http://www.epa.gov/waterscience/fish/advisories/gpfs.pdf.
[6] U.S. EPA. 2001 Toxics Release Inventory. http://www.epa.gov/tri.
[7] Public Employees for Environmental Responsibility. *Murky Waters*. May 1999.
[8] Kovalic, J. M., The Clean Water Act of 1987, 2nd edition; The Water Pollution Control Federation (W.P.C.F); Alexandria, VA, 1987
[9] U.S. EPA NPDES Permit Writers' Manual; U.S. Environmental Protection Agency, Office of Water, December, 1996; EPA-833-B-96-003, pp 1-28.
[10] U.S. EPA NPDES Permit Writers' Manual; U.S. Environmental Protection Agency, Office of Water, December, 1996; EPA-833-B-96-003, pp 1-28.
[11] Code of Federal Regulations, TITLE 33 > CHAPTER 26 > SUBCHAPTER I > Section 401(d)
[12] Environmental Protection Agency, National Pollution Discharge Elimination System, State Program Status, accessed at http://cfpub.epa.gov/npdes/statestats.cfm on March 16, 2004.
[13] General Accounting Office. *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*. GAO-02-186. January 2002.
[14] General Accounting Office. *Water Quality: Inconsistent State Approaches Complicate Nation's Efforts to Identify Its Most Polluted Waters*. GAO-02-186. January 2002.
[15] General Accounting Office. *Water Pollution: Differences Among the States in Issuing Permits Limiting the Discharge of Pollutants*. GAO/RCED-96-42. January 1996.
[16] Eric Pianin, "EPA: Few Fined for Polluting Water." *Washington Post*. June 6, 2003.
[17] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Pages 3-4. On file with U.S. PIRG Education Fund.
[18] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 6. On file with U.S. PIRG Education Fund.
[19] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 7. On file with U.S. PIRG Education Fund.
[20] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 22. On file with U.S. PIRG Education Fund.
[21] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 21. On file with U.S. PIRG Education Fund.
[22] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 6. On file with U.S. PIRG Education Fund.
[23] Environmental Protection Agency, Office of Enforcement and Compliance Assurance. *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program.* February 2003. Page 6. On file with U.S. PIRG Education Fund.
[24] See for example: General Accounting Office. *Water Pollution: Many Violations Have Not Received Appropriate Enforcement Attention*. GAO/RCED-96-23. March 1996.; Victor B. Flatt. "A Dirty River Runs Through It (The Failure of Enforcement in the

Clean Water Act)." 25 *Boston College Environmental Affairs Law Review.* Fall 1997.; Clifford Rechtschaffen. "Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement." *Southern California Law Review*. Vol. 71, No. 6. September 1998.; Robert Worth. "Asleep On The Beat." *The Washington Monthly*. November 1999.; John H. Cushman.. "E.P.A. and States Found to be Lax on Pollution Law: Enforcement is Faulted: Agencies Are Failing to Inspect, Issue Permits and Report Violations, Audit Says." *New York Times*. 7 June 1998.

[25] EPA Office of Inspector General Audit Report. *Water Enforcement: State Enforcement of Clean Water Act Dischargers Can Be More Effective*. 2001-P-00013. August 2001.

[26] Worth, 1999.

[27] EPA Office of Inspector General. *EPA Should Take Further Steps to Address Funding Shortfalls and Time Slippages in Permit Compliance System Modernization Effort.* Report No. 2003-M-00014. May 20, 2003.

[28] EPA Office of Inspector General. *EPA Should Take Further Steps to Address Funding Shortfalls and Time Slippages in Permit Compliance System Modernization Effort.* Report No. 2003-M-00014. May 20, 2003.

[29] EPA Office of the Inspector General Audit Report. August 2001.

[30] EPA Office of the Inspector General Audit Report. August 2001.

[31] General Accounting Office. *Environmental Enforcement: EPA Cannot Ensure the Accuracy of Self-Reported Compliance Monitoring Data*. GAO/RCED-93-21. March 1993.

[32] *Clean Water Act and Total Maximum Daily Loads (TMDLs) of Pollutants.* CRS Report for Congress, October 30, 2001. http://www.cnie.org/nle/crsreports/water/h2o-24.pdf.

[33] Proposed Rule to Protect Communities from Overflowing Sewers." EPA Fact Sheet, available at http://www.epa.gov/npdes/regulations/facsheet.pdf.

[34] U.S. EPA, Office of Wastewater Management. http://cfpub.epa.gov/npdes/home.cfm?program_id=4.

[35] Letter to EPA Administrator Mike Leavitt from Rep. Frank Pallone (NJ) and Clay Shaw (FL), dated December 4, 2003.

[36] Seth Borenstein, "Fewer polluters punished under Bush administration, records show." *Knight Ridder Newspapers*. December 9, 2003.

[37] Seth Borenstein, "Fewer polluters punished under Bush administration, records show." *Knight Ridder Newspapers*. December 9, 2003.