

**Overburdened Waters:  
How Weak Permitting and Enforcement Have Failed to  
Curb High Levels of Toxic Discharge into Wisconsin's  
Waterways**

Wisconsin Public Interest Research Group Foundation  
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# Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>INTRODUCTION.....</b>	<b>7</b>
<b>CONTEXT: TOO MUCH POINT SOURCE POLLUTION BURDENS WISCONSIN’S WATERWAYS .....</b>	<b>9</b>
<b>FAR FROM ZERO DISCHARGE.....</b>	<b>9</b>
<i>Toxic Discharge.....</i>	<i>9</i>
<i>What is a Point Source?.....</i>	<i>12</i>
<b>WEAK ENFORCEMENT OF END-OF-PIPE DISCHARGE EXACERBATES THE PROBLEM.....</b>	<b>14</b>
<b>WATER POLLUTION PERMIT VIOLATIONS ARE NOT INFREQUENT: .....</b>	<b>14</b>
<b>WISCONSIN’S STEPPED ENFORCEMENT PROCESS MAY LET POLLUTERS OFF THE HOOK     TOO EASILY .....</b>	<b>14</b>
<i>How Stepped Enforcement Works.....</i>	<i>14</i>
<i>Few Violations Result In Formal Enforcement .....</i>	<i>15</i>
<i>Enforcement Action Is Often Delayed.....</i>	<i>16</i>
<i>Repeat Violators May Escape Enforcement Consequences.....</i>	<i>17</i>
<i>Permits to Pollute Are Not Delayed.....</i>	<i>19</i>
<i>Inspection Rates Appear To Be Declining.....</i>	<i>19</i>
<i>Region 5 Penalties Have Declined .....</i>	<i>22</i>
<b>FULFILLING THE PROMISE OF THE CLEAN WATER ACT IN WISCONSIN .....</b>	<b>23</b>
<b>STRENGTHENING PERMITTING .....</b>	<b>23</b>
<b>PUBLICIZING ENFORCEMENT ACTIONS .....</b>	<b>23</b>
<b>ADDRESSING THE RESOURCE GAP .....</b>	<b>23</b>
<b>SOME RECENT CHANGES POINT IN A POSITIVE DIRECTION.....</b>	<b>24</b>
<i>The Electronic Data Submittal Program.....</i>	<i>24</i>
<i>Accelerating “Stepped Enforcement”—Livestock Violators Go Directly To DOJ ..</i>	<i>25</i>
<b>POLICY RECOMMENDATIONS .....</b>	<b>26</b>
<b>ENDNOTES.....</b>	<b>29</b>

## Executive Summary

Thirty years after the passage of the Clean Water Act, Wisconsin's waterways continue to be the dumping grounds for high levels of pollution. Weak enforcement of permit limits established under the Clean Water Act contributes to this pollution. This report explores some of the shortcomings of clean water enforcement in Wisconsin, finding that:

### **Wisconsin's waterways are overburdened by toxic pollution, most of which is *legal*:**

- More than 1,200 industrial manufacturers, factory farms, and municipal sewage treatment plants continue to receive permits to discharge high levels of pollution directly into the state's waterways.
- According to US EPA's Toxics Release Inventory, more toxic pollution is directly discharged into Wisconsin's waterways than into the neighboring states of Minnesota and Michigan combined—more than 3 million pounds in 2002 alone.<sup>1</sup>
- Point source pollution has contributed to impaired water quality in more than 1,500 miles of the state's rivers, including large stretches of the Yellow River, Big Eau Pleine River, Fox River, Rock River, and the Milwaukee River.<sup>2</sup>

### ***Illegal* pollution seldom leads to enforcement action:**

- An analysis of Wisconsin Department of Natural Resources data revealed more than 2,000 effluent violations at 160 distinct facilities between January 1999 and December 2002.<sup>3</sup>
- One in six major facilities violated its effluent limits at least once, and one in eight minor facilities did so, during the time frame studied.
- Enforcement action (in the form of a Notice of Violation (NOV), enforcement conference, or referral to the Department of Justice) was only initiated against one in eight of the violating facilities.

### **Enforcement action, if taken at all, is concluded long after the initial violation:**

- The average delay from a violation to the issuance of a Notice of Violation, the beginning of formal enforcement, was 147 days.
- The average delay to a referral to the Department of Justice, the necessary step for a penalty to be assessed, was 340 days.
- Nearly half (46%) of NOVs were issued more than 90 days after the violation date (144 of 310).
- 45% of enforcement conferences were held more than 4 months after the violation date (87 of 191).
- 75% of referrals to the Department of Justice occurred more than six months after the violation date (49 of 65).

### **On the other hand, permits to pollute are not delayed:**

- As of January 2003, the Wisconsin DNR had one of the fastest permit turnaround times in the nation, and the fastest in the six-state EPA Region V. The average turnaround time is about five and a half days<sup>4</sup>.

### **Enforcement inspections are becoming increasingly infrequent:**

- Although Wisconsin DNR seeks to inspect every major facility annually, the agency is likely to only inspect 2 of every 3 major facilities this year, down from 3 in every 4 in 2000<sup>5</sup>.
- Examining records for 15 facilities with significant noncompliance over the past 3 years, we found that inspection rates per facility had declined dramatically since 1991, when the DNR averaged semiannual inspections, to 2002, when they reported under 10 inspections total.

**Penalties have declined:**

- In the five year period from 1997 to 2002, the number of Clean Water Act penalty cases decreased by more than 50%, from 35 to 17
- The average penalty size decreased by more than \$50,000, from \$65,000 to \$11,400.

Already, polluters in Wisconsin are given license to discharge large volumes of toxic chemicals directly into the state's waterways. When Clean Water Act violations are not pursued with timely, consistent enforcement actions that assess a financial penalty for environmental harm, polluters face little incentive to clean up their act--those who make capital investments to improve their environmental compliance may actually be competitively disadvantaged against those who willingly delay making such outlays, gambling that they will not face significant financial penalties.

To help tackle industrial discharge of harmful pollution in Wisconsin, we recommend the following steps, already authorized by state and federal law:

**1. Ratchet down permit limits to lessen pollution legally entering Wisconsin's waterways.**

Every 5 years, industrial dischargers apply for permit renewals that specify how much they can legally discharge into the states waterways. The DNR should consistently add conditions to industrial permit renewals that would ratchet down discharges and eliminate them on specified timetables, thus meeting the intent of a longstanding Wisconsin law "to eliminate the discharge of pollutants into the waters of the state by 1985."

**2. Within a given watershed, the DNR should issue permits based on the cumulative impacts of those permits on waterways rather than issuing each in isolation.**

For example, ten major industrial facilities discharge toxins to the Wisconsin River, which receives three quarters of the statewide direct discharges of carcinogens into surface waters. Permitting decisions for any given discharge should consider the impacts of the cumulative discharge from the ten facilities, not the single facility in isolation.

**3. Refer more cases to the Department of Justice**

Increasing a violator's likelihood of facing penalties creates a more even playing field for those good actors who are following the law, and helps remove the financial incentive some polluters may have to avoid making capital upgrades that would prevent such violations from occurring.

#### **4. Implement timeline benchmarks for the stepped enforcement process**

Currently, agency staff are updating the enforcement handbook that provides guidance on how violations should be enforced. State enforcement handbook guidance should require that a Notice of Violation be issued within 6 weeks of the violation date, and set strict timelines for compliance that must be met to avoid referral to the Department of Justice for the assessment of a penalty. DOJ referrals should happen within 3 months of the violation date.

**5. Ensure and facilitate the public's right to know.** Make permit exceedance, violation, enforcement, and penalty information more easily accessible to the public by posting it on DNR's website and compiling an annual report that includes summaries of this information.

**Furthermore, we recommend the following three policy changes that would help facilitate strong enforcement of clean water laws:**

#### **1. Give DNR the ability to assess penalties administratively**

Wisconsin is one of the few states in which the environmental agency does not have the authority to directly assess administrative penalties to polluters. For penalties to be assessed to violators, the state must go through a costly and time consuming judicial process. Giving DNR the ability to assess administrative penalties would provide the agency with an additional enforcement weapon that is administratively simpler to use than criminal sanctions and less harsh than license revocation.

#### **2. Raise polluter permit fees to fill the resource gap**

The Wisconsin Department of Natural Resources WPDES enforcement program currently receives 40% of its funding from the state general fund and 20% from a federal matching grant. The program receives only 4% from permit fees. In contrast, New Jersey collected \$13,500,000 in permit fees alone in 2002. Wisconsin should assess permit fees at a level sufficient to cover the full costs of the Wisconsin Pollution Discharge Elimination System (WPDES) program. This should include funding to ensure the electronic monitoring pilot program is maintained and expanded to include mandatory participation by all WPDES facilities.

#### **3. Don't issue permits without adequate review**

Polluters stand to gain—but the public loses—if staff limitations at DNR result in rubberstamping of permits (replacing adequate review which could incorporate stronger pollution controls.) DNR should not issue permit renewals without adequate review—even if heavy workloads result in delayed permits.

## Introduction

"The life of every river sings its own song, but in most the song is long marred by the discords of misuse."

-**Aldo Leopold** (1886-1948), *Sand County Almanac*.

Wisconsin's waterways an important part of the state's heritage and prosperity. The "highways" of fur trappers and loggers of yesteryear today provide a recreational paradise, fueling the state's \$12 billion annual tourism industry--an economic engine nearly twice the size of the state's renowned agricultural industry.<sup>6</sup>

These waters provide a haven for rediscovery of the natural world. Wisconsinites and tourists alike can follow the trail of 17<sup>th</sup> century French explorers from Green Bay along the Wisconsin River and Fox River, brave the whitewater of the Wolf and Flambeau, or relax along the shores of Lake Superior.

Unfortunately, many of the state's rivers, lakes, and streams have borne the brunt of decades of misuse. From toxins dumped by pulp and paper mills that grew along with the timber industry, to the runoff from factory farms whose impact continues to grow, many of Wisconsin's waterways are beset by pollution.

Wisconsin is by no means alone—across the nation, states grapple with water quality problems. In 1972, Congress passed the Clean Water Act with the explicit goal of restoring the health of all the nation's waterways by ending pollution discharges to surface water.

Yet more than thirty years later, Wisconsin continues to struggle to meet this goal. One third of Wisconsin's rivers, lakes, and streams remain unsafe for fishing and swimming. At least 3 million pounds of toxic chemicals continue to be dumped directly into the state's surface waters each year.<sup>7</sup> And even the state's most pristine waterways are increasingly threatened by runoff from residential and agricultural development.

The state of Wisconsin has been delegated the authority, and responsibility, of achieving the Clean Water Act's goals here at home, preventing pristine waterways from being degraded and restoring waterways whose health has already been compromised.

Over the past three decades, Wisconsin has at times taken significant leadership in cleaning up state waters. From becoming the first state to remove visible pollution from its waterways, to more recently, passing mandatory comprehensive regulations to control polluted runoff, Wisconsin has at times wielded its authority boldly on behalf of the greater public interest in clean, safe water for drinking, recreational use, and habitat.

However, Wisconsin continues to permit large amounts of toxic industrial discharge into its rivers.

Before any facility can dump pollution into our waterways—be it a paper mill, brewery, dairy farm, manufacturer, or municipal sewage treatment plant--it must receive a permit from the state that explicitly outlines what kind of pollutants may be discharged, in what quantities. Not only are thousands of facilities still legally dumping directly into our rivers, but indeed, violators of these permits have little to fear—the likelihood of receiving financial penalties for even repeat violations is miniscule.

In this report, we examine how effectively this “permit to pollute” system is working in Wisconsin. Specifically, we seek to understand how well Wisconsin is enforcing the Clean Water Act to gauge whether the state is living up to her responsibility to protect this most precious natural resource.



## **Context: Too Much Point Source Pollution Burdens Wisconsin's Waterways**

### ***Far From Zero Discharge***

The Clean Water Act established a goal of “zero discharge” of pollution into the nation’s waterways by 1985. More than eighteen years later, polluters continue to dump large amounts of toxic chemicals directly into Wisconsin’s surface waters.

### **Toxic Discharge**

According to the US EPA’s Toxics Release Inventory, Wisconsin’s waterways directly received more than 3 million pounds of toxic chemicals in 2002, more than the neighboring states of Minnesota and Michigan combined (2.6 million).<sup>8</sup> This is all the more striking when one considers that the population of Wisconsin is about one half the combined population of Minnesota and Michigan (5.4 million versus 10.6 million).<sup>9</sup> Ten of the most common toxins dumped into Wisconsin waterways are listed in Table 1.

**Table 1. Top 10 Toxins Discharged to Wisconsin Water<sup>10</sup>**

<b>TOXIN</b>	<b>POUNDS</b>
NITRATE COMPOUNDS	2,810,615
MANGANESE COMPOUNDS	69,133
METHANOL	65,423
AMMONIA	57,553
COPPER COMPOUNDS	12,504
BARIUM COMPOUNDS	9,864
METHYL ETHYL KETONE	6,017
CHLORINE	5,753
ETHYLENE GLYCOL	5,634
ZINC COMPOUNDS	4,335

In addition, millions of pounds of water pollutants were discharged indirectly into the state’s waterways after being transferred by industry to Publicly Owned Treatment Works (POTWs). When these transfers are included, the total rises to 9.6 million pounds of toxins.<sup>11</sup>

These toxic discharges are not spread evenly across the state. A small set of rivers bear the brunt of the toxic discharge: the Wisconsin River, Lower Fox River, Waumandee Creek, East Twin River, and Honey Creek received 90% of major industrial facilities’ reported direct discharge of toxic pollution statewide in 2002. (See Table 2.) The Wisconsin River, for example, received three quarters of the 8,747 pounds of carcinogens discharged statewide in 2002 directly into surface waters.

Together, waterways in the counties of Marathon and Portage received more than half of the reported toxic discharge to surface waters statewide. (See Table 3.) This was largely driven by one discharger in each of these counties: The Wausanee Paper Mill in Marathon County, which reported discharging 902,634 pounds of toxins to water; and McCain Foods USA, Inc. in Portage, which reported discharging 513,234 pounds of toxins to water.

One industrial sector discharged a disproportionate amount of toxic pollution into the state's waterways: eight of top ten emitters of carcinogens into the state waterways in 2002 were paper mills.

**Table 2: Top Ten Waterways Receiving Toxic Discharge From Wisconsin's Industrial Facilities<sup>12</sup>**

River	Pounds of Surface Water Discharge
WISCONSIN RIVER	1,973,166
HONEY CREEK (Walworth County)	350,522
LOWER FOX RIVER	230,159
WAUMANDEE CREEK (Buffalo County)	117,249
EAST TWIN RIVER	75,015
CHIPPEWA RIVER	54,080
CEDAR CREEK (Washington County)	42,500
FOX RIVER	42,313
MANITOWOC RIVER	41,651
LITTLE LAKE BUTTE DES MORTES	36,384

**Table 3. Top Ten Counties Receiving Toxic Releases From Wisconsin TRI Industries<sup>13</sup>**

County	Releases to Waterways
MARATHON	974,725
PORTAGE	591,559
WALWORTH	350,522
WOOD	258,499
BROWN	231,064
LINCOLN	145,745
BUFFALO	118,276
KEWAUNEE	75,015
OUTAGAMIE	69,180
CALUMET	67,082
Grand Total	2,881,666

**Table 4. Top Ten Facilities Discharging Toxins To Waterways in Wisconsin<sup>14</sup>**

FACILITY	COUNTY	DISCHARGE TO WATER
Wausau-Mosinee Paper Corp. Brokaw Mill	Marathon	902,634
Mccain Foods Usa Inc.	Portage	513,234
Crucible Materials Corp. (Trent Tube Plants 1 2 3)	Walworth	350,522
Fort James Operating Co.	Brown	230,649
Total Foremost Farms <sup>15</sup>	4 Counties	227,732
Domtar A.W. Corp.(Nekoosa Mill)	Wood	188,512
Packaging Corp. Of America	Lincoln	145,745
Trega Foods Inc.	Kewaunee	75,015
Cascades Tissue Group Wisconsin Inc.	Eau Claire	54,080
Stora Enso N.A. Water Quality Center	Wood	43,800
<b>Grand Total</b>		<b>2,731,923</b>

**Table 5. Top Ten Facilities Discharging Carcinogens Into Wisconsin's Waters<sup>16</sup>**

Facility	County	Discharge
Stora Enso N.A. Water Quality Center [Wisconsin Rapids Pulp Mill]	Wood	3,700
Domtar A.W. Corp. Port Edwards Mill	Wood	1,331
Domtar A.W. Corp. Nekoosa Mill	Wood	1,311
Crucible Materials Corp. Trent Tube Plants 1 2 3 [Steel Mill]	Walworth	500
Fraser Papers Inc.	Price	352
Wausau-Mosinee Paper Corp.	Marathon	346
Team Inds. Inc.	Outagamie	255
P.H. Glatfelter Co. Bergstrom Div.	Winnebago	250
Lignotech Usa Inc.[Refine Pulp Production Products]	Marathon	250
International Paper Kaukauna Mill	Outagamie	183

**Toxins Just a Tip of the Iceberg**

The toxic discharge described above is just the tip of the iceberg—representing emissions of a small set of toxic chemicals as reported by the largest industrial manufacturers and sewage treatment plants (Publicly Owned Treatment Works). It doesn't include millions of gallons a day of treated sewage discharged into the waters, or tons of fertilizers and pesticides that are washed off of agricultural fields and suburban lawns by rains.

Point sources are not the only sources of pollution affecting water quality in Wisconsin. Agriculture, grazing, and habitat modification undoubtedly have major impacts on water quality in the state. Programs to address agricultural runoff and runoff from residential and agricultural development play an important role in efforts to achieve clean water. However, runoff rules recently adopted by the Wisconsin Department of Natural

Resources and the Wisconsin Department of Agriculture, Trade, and Consumer Protection are likely make important strides in cleaning up this pollution.

At the same time, the state would be remiss to assume that point source pollution no longer poses a significant threat to the state's waterways.

Wisconsin's Water Quality Assessment Report to Congress 2002 estimates that pollution from municipal point sources (generally, sewage treatment plants) has been a primary cause of the degradation of more than 1,500 miles of rivers and streams, and industrial point source pollution has contributed to impaired water quality in more than 1,000 miles of rivers and streams.<sup>17</sup> For example, one hundred miles of the Yellow River and large segments of the Big Eau Pleine River, the Fox River, the Rock River, and the Milwaukee River are impaired by this pollution.

### **What is a Point Source?**

Any source that directly discharges pollution into waterways is considered a point source, and is overseen by the Wisconsin Department of Natural Resources (DNR). As of January 2002, more than 1,200 facilities continued to directly dump pollution into the state's waterways. These include 666 municipal sewage treatment plants, 486 industrial manufacturers, and 115 factory farms.<sup>18</sup>

Each point source receives a permit from the DNR, usually valid for five years, that stipulates exactly what can be discharged and in what quantities, over a given time period. Often, there are limits both on the maximum allowable pollution in a single day, and the maximum average pollution over the period of a month.

The Clean Water Act's National Pollutant Discharge Elimination System (NPDES) defines a point source as: "any discernible, confined, and discrete conveyance" of pollutants to a water body. This definition includes, but is not limited to, "any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged."<sup>19</sup> The state of Wisconsin has been delegated authority to regulate point sources under the Clean Water Act in a program called the Wisconsin Pollution Discharge Elimination System, or WPDES.

### **Problem With Nitrate Pollution**

Nitrates are a form of nutrient pollution. When nutrient levels in a waterway are too high, they can lead to excessive plant growth—growth that cannot be accommodated sustainably in an ecosystem. When the plants die and decompose, oxygen levels in the water plummet, often leading to the death of fish. This process is called eutrophication.

In aquatic ecosystems, the presence of nitrogen (a major component of nitrates, used by living organisms to create protein) and phosphorus – along with other factors – regulates the extent and type of plant growth. In watersheds that are unaffected by human activities, nutrient flow to waterways is generally limited because many of the nutrients

are tied up in plant life along the waterway's banks. However, when land use results in the paving over of formerly vegetated areas or results in increased erosion, or when nutrient levels are artificially increased, the amount of nutrients flowing into a waterway can increase dramatically.

Nitrate pollution does not only enter the state's waterways in runoff. In fact, it is the single toxic pollutant discharged in the greatest volume by major industry in the state, particularly by two industries: pulp and paper mills, and farms and food producers. (See Table 6.)

**Table 6: Top Ten Dischargers of Nitrates in Wisconsin, 2002<sup>20</sup>**

<b>FACILITY</b>	<b>POUNDS</b>
WAUSAU-MOSINEE PAPER CORP. BROKAW MILL	890,681
MCCAIN FOODS USA INC.	512,209
CRUCIBLE MATERIALS CORP. TRENT TUBE PLANTS 1 2 3	350,522
FORT JAMES OPERATING CO.	230,000
FOREMOST FARMS USA	227,732
DOMTAR A.W. CORP. NEKOOSA MILL	132,950
PACKAGING CORP. OF AMERICA	131,365
TREGA FOODS INC.	75,015
CASCADES TISSUE GROUP WISCONSIN INC.	53,000
LEVEL VALLEY CREAMERY	42,500

## **Weak Enforcement of End-of-Pipe Discharge Exacerbates the Problem**

### ***Water Pollution Permit Violations Are Not Infrequent:***

An analysis of discharge monitoring reports from the state's major and minor industrial polluters reveals that polluters often can violate their permits without facing any formal enforcement consequences.

According to records obtained from the Wisconsin DNR's SWAMP [System for Wastewater Applications, Monitoring, and Permits] database, between January 1999 and December 2002 (a 3 year time period), 160 facilities (22 majors, 138 minors.) committed at least 2,069 significant effluent violations (above factors DEP uses to eliminate borderline cases).<sup>21</sup> These facilities with violations represent one in six major facilities (22 of 133) and one in eight minor facilities (138 of 1075). However, our analysis shows only a small percentage of these violations led to any formal enforcement action during this time.

Enforcement action of some kind was taken against 4 major facilities (or 18% of 22 major facilities who violated their permit limits), and against 16 minor facilities (12 % of 138 minor facilities who violated their permit limits).

So according to our analysis of Discharge Monitoring Reports, there was record of formal enforcement action against only 1 in 8 violators of Clean Water Act effluent limits—this includes even the most preliminary stage of formal enforcement, the issuance of a Notice of Violation (NOV).

Wisconsin DNR staff warned that the state database of Discharge Monitoring Reports analyzed above may not include comprehensive information about enforcement actions taken by agency staff, particularly when so much of the enforcement may be informal phone calls and conversations. However, it is the best statewide source of information about permit exceedances and enforcement available to the public.

### ***Wisconsin's Stepped Enforcement Process May Let Polluters Off the Hook Too Easily***

#### **How Stepped Enforcement Works**

In Wisconsin and across the nation, most violations of Clean Water Act discharge permits are self-reported by the polluters, who are required by their permits to submit monitoring data. This data is submitted in the form of discharge monitoring reports (DMRs), generally on a monthly basis. Staff at Wisconsin DNR's WPDES program then use a stepped enforcement process to follow up on violations.

This stepped enforcement process in theory helps prevent or minimize damage to public health and the environment by “ resolving problems as quickly as possible and with a level of enforcement that’s appropriate for the specific circumstances of each case.”<sup>22</sup> In practice, it may lead to a process of repeated warnings, both on and off the record, and limited follow-up.

First, field staff identify violations by comparing the DMR to the permit limits for each pollutant. When a permit exceedance is identified, depending on the field staff’s judgment of whether a violation impacts water quality or is part of a consistent pattern, staff may do any of the following:

1. Take no action, and “monitor the situation.”
2. Initiate informal communications with the facility to learn about conditions at the facility and whether attempts at remediation are already underway (usually in the form of a phone call).
3. Send a written Notice of Noncompliance.
4. Send a Notice of Violation, generally establishing a date for an enforcement conference in which the agency and the polluter agree to remedial action.
5. Refer the case to the Department of Justice for prosecution, and potentially, assessment of a penalty.

### **Few Violations Result In Formal Enforcement**

While records of the first three steps of the “stepped enforcement process” are informal and not collected centrally, we were able to obtain records of formal enforcement action by the DNR between January 1999 and May 2003. These records revealed at least one stage of the enforcement process initiated at 219 facilities during this 4 year time period.

- 346 Notices Of Violation, issued over this period of time to 204 facilities.
- 246 enforcement conferences, involving 137 facilities.
- 82 referrals to the Department of Justice, involving 50 facilities.

In other words, during the time period studied, fewer than 1 in 4 facilities entering the formal “stepped enforcement” process ever reached the penalty stage, which on average occurred one year after the violation occurred. Under the stepped enforcement process, violating one’s permit, though ethically and legally flawed, may be a sound business decision.

Agency reports to Congress reveal that over a one-year time period, in 2001 (the most recent year available), 11 cases were referred to the Department of Justice for prosecution out of 491 incidents of significant noncompliance, barely 2% of the total. This represented a significant decline from the previous year, when 8% of noncompliance cases were referred to the DOJ. Furthermore, this 2001 data reveals noncompliance levels higher than any recorded between 1990 and 1998.

## Enforcement Action Is Often Delayed

According to the DNR website, “[T]he goal of Stepped Enforcement is to prevent or minimize damage to public health and the environment by resolving problems as quickly as possible and with a level of enforcement that’s appropriate for the specific circumstances of each case.”

Our analysis reveals that the stepped enforcement process, as it currently operates, is anything but quick. We found significant delays from the violation date to the enforcement action:

- For a Notice of Violation, an average delay of 147 days.
- For an Enforcement Conference, an average delay of 180 days (6 months)
- For a Referral to the Department of Justice, an average delay of 340 days (11 months).<sup>23</sup>

Studies have suggested that enforcement action should take place as close as possible to the violation date. Indeed, in many states, enforcement guidance and handbooks specifically recommend that action be taken within 45 days of detection of a violation, with formal action such as penalties taken no later than 90 days from the date of detection. For example, in Washington state<sup>24</sup>:

*“As a general objective and guideline, enforcement actions or compliance responses should be taken in 45 days or less from the date of detection of the violations. Initial formal enforcement actions [including penalties and administrative orders] should be taken as soon as possible, but not later than 90 days from the date of detection of the violation, unless adequate justification for delay exists. Significant violations must result in formal enforcement response as expeditiously as possible, but not later than 30 days from date of detection.”*

Since the Wisconsin Department of Natural Resources needs some time to process incoming monthly discharge monitoring reports and respond, one could argue a two to three month lag time is reasonable between the date of a violation and the issuance of an enforcement action.

In our analysis, however, we found that:

- 46% of NOV's were issued more than 90 days after the violation date (144 of 310).
- 45% of enforcement conferences were held more than 4 months after the violation date (87 of 191).
- 75% of referrals to the Department of Justice occurred more than six months after the violation date (49 of 65).

According to interviews with agency staff, the apparently long delay from a violation to the issuance of a Notice of Violation is not a time of inaction. Typically, in that intervening period, one or more informal notices, called Notices of Noncompliance, are filed. Staff may wait to determine whether a problem is a one-time event or chronic, giving permittees time to work to solve the problem. As a result of this long period of time in which agency staff attempts to work cooperatively with the facility, the longest



delay in the stepped enforcement process tends to occur up front, before a Notice of Violation is issued.

This wait-and-see approach is inappropriate for a number of reasons. First and foremost, informal notices never become a matter of public record, making it difficult if not impossible for citizens and neighbors of the facility to be warned of potentially health-threatening violations. Furthermore, this informal approach is particularly inappropriate in the cases where problems at a facility are chronic or ongoing. For that reason, enforcement action should always be initiated immediately. Mitigating circumstances can and should be considered later, in decisions about the appropriate penalty levels for ongoing violations.

### **Repeat Violators May Escape Enforcement Consequences**

An analysis of the DMRs reveals that a small number of facilities are responsible for a large percentage of effluent violations—yet these “recidivists” frequently escape enforcement consequences.

We obtained DMRs showing 2645 exceedances from 166 facilities. The DMRs revealed more than 50 facilities reporting 10 or more violations over this time period.

A small number of bad actors were responsible for more than half the effluent violations. Just seven facilities reported more than half the effluent violations. These facilities are listed in Table 7.

**Table 7. Facilities Reporting Large Number of Violations**

<b>Facility</b>	<b># of violations</b>
ST CROIX TRIBAL FISHERIES	569
THIEL CHEESE AND INGREDIENTS LLC	277
US ARMY BADGER AMMUNITION PLANT	161
ELKHORN CENTRAL WATER TRTMNT PLANT	158
FOREMOST FARMS USA COOP ALMA CENTER	65
ALLIANT ENERGY CORPORATION COLUMBIA PLANT	58
SCHNEIDER CHEESE INC	48

Surprisingly, even these top violators were not consistently targets of enforcement action. Two of the point sources listed above are outside of Wisconsin DNR’s jurisdiction; the US Army Badger Ammunition Plant and the St. Croix Tribal Fisheries can only be federally enforced. These two facilities committed more than 550 violations over a span of thirteen months.

Elkhorn Central Water Treatment Plant, in Columbia County, which discharges into the Wisconsin River, began violating fecal coliform and biochemical oxygen demand (BOD) standards in the spring of 1999, and continued to violate monthly limits for these pollutants and suspended solids 22 times over the next two years. We found no record of enforcement at this plant.

In addition, the plant violated weekly average chloride limits on 82 separate occasions, by up to 2000%, and daily limits 76 times. The DNR issued a Notice of Violation on May 20, 2002 for effluent violations and discharge in violation of a permit, 800 days after the first violation cited.<sup>25</sup>

Foremost Farms in Alma Center, Jackson County dumps into the Tremepeleau River. In addition to small but persistent violations of BOD, this facility repeatedly violated daily and weekly limits of discharge of toxic metals, including copper (by 300% to 1000%) and zinc. Other Foremost Farms Coops in the towns of Clayton, Appleton, Chilton, and Wilson are also frequent violators. We found no record of enforcement taken against Foremost Farms, Alma Center.

Records show 50 violations of BOD and suspended solids between March 1999 and May 2002 at the Columbia Plant of Alliant Energy, with no enforcement action taken—rather, the notes indicate “no action necessary.” From February 2000 to 2001, 27 violations are reported, but the notes indicate that the “violation is being addressed by the facility.” However, more than 25 violations followed this point. No Notice of Violation was issued to Alliant Energy, Columbia Plant until February 2003. Ultimately, a civil suit by a nongovernmental association was necessary to win compliance from the plant. In July 2004, Wisconsin Environmental Law Advocates won a court settlement requiring Alliant Energy to pay \$150,000 in fines, court costs and legal fees for violating state water pollution laws.<sup>26</sup> This case helps illustrate the flaw of a stepped enforcement process that sometimes fails to result in any meaningful agency oversight.

Thiel Cheese has been subject to formal enforcement action, however, this enforcement did not begin until 118 violations had been recorded over an 8-month time period ending December 2001. At that point, a Notice of Noncompliance was sent to the facility. The records track 156 additional distinct violations through December of the following year after the Notice of Noncompliance.

### **Case Study: Milwaukee Metropolitan Sewerage District**

The Milwaukee Metropolitan Sewerage District violated their permit limits for chlorine in April of 1998 without any enforcement consequences. The facility went on to consistently violate total residual chlorine limits for sixteen months, from January 1999 through April 2000. The records obtained from DNR showed no enforcement action initiated for any of these violations –not even a Notice of Violation.

In fact, when a local environmental protection group stepped in to examine detailed effluent records, they found over 100 Clean Water Act violations at the facility since 1995, only 8 of which had been cited by the Wisconsin DNR<sup>27</sup>.

In March 2002, the Lake Michigan Federation and Friends of Milwaukee’s Rivers filed a lawsuit in Milwaukee federal court to require phaseout of raw industrial and domestic

waste discharges at the facility. Only then did DNR initiate a suit against the MMSD in state court.

In August 2004, DNR called on the Attorney General to take legal action against the facility for violations that occurred following heavy rainstorms in May 2004—violations that occurred outside the period of time studied in this report.<sup>28</sup>

### Permits to Pollute Are Not Delayed

While Wisconsin's WPDES program is slow to initiate enforcement action when polluters violate their permits, the WPDES program is quick to issue permits to industrial polluters. As of January 2003, the Wisconsin DNR had one of the fastest permit turnaround times in the nation, and the fastest in the six-state EPA Region V. The average turnaround time is about five and a half days<sup>29</sup>.

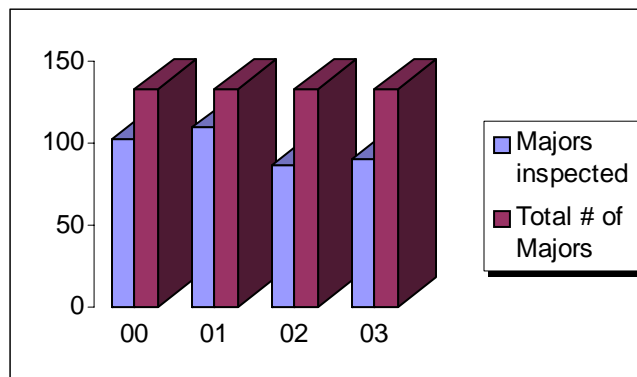
### Inspection Rates Appear To Be Declining

Agency strategy published in April 2003 requires inspections of majors annually and minors at least twice during the permit term. An analysis of inspection rates of the entire set of WPDES permitted facilities in 2002 revealed 153 inspections at 139 facilities, including 34 major facilities.

Analyzing data from the state's centralized inspection tracking system, we found that while the agency's goal is to inspect every major facility every year, in 2002 they performed compliance inspections at only 34 of 133 major facilities.

The state database was not complete for years before 2002. However, we did analyze inspection rates at major facilities, reported to the Environmental Protection Agency's permit compliance system. We found an appreciable decline in inspection rates at major facilities, down from three in every four facilities in 2000.

**Figure 1. Many Major Facilities Go Uninspected Each Year**



In Figure 1 above, 2003 rates are extrapolated from rates as of midyear (June 30, 2003.) In addition, data we obtained from the DNR reports 218 inspections at minor facilities between January 2000 and June 27, 2003. This data is likely to be significantly incomplete (since agency staff may not follow up on all inspections by entering them into

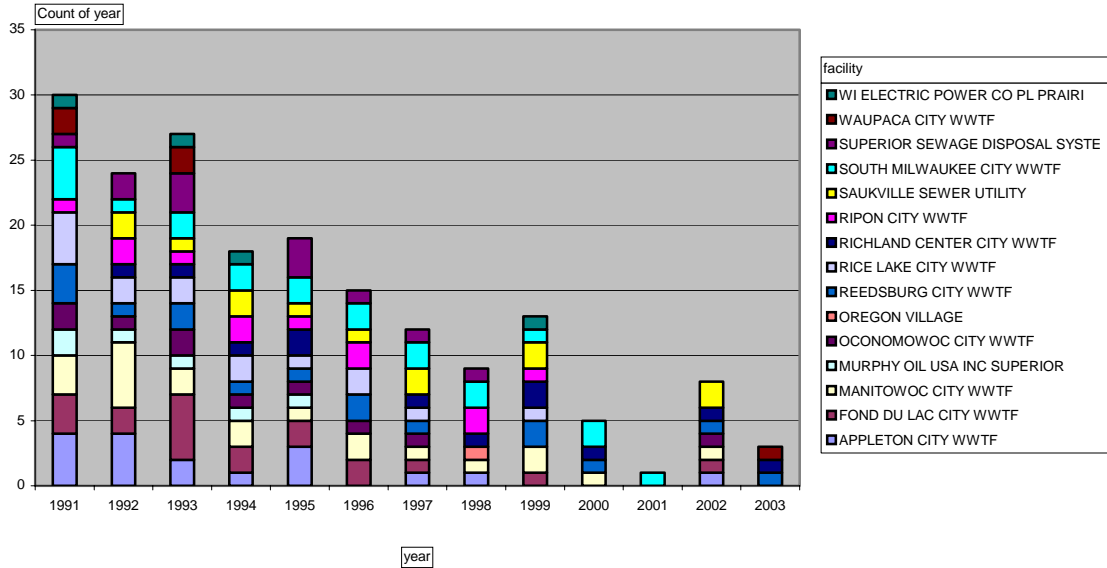
the central tracking database) but would indicate only a 20% inspection rate annually for minor facilities.

The lack of adequate inspections may be contributing to noncompliance with Clean Water Act pollution permits.

We examined inspections records of 15 major industrial facilities with significant noncompliance (as reported by EPA’s permit compliance system) in the last 2 years.<sup>30</sup>

While the database included reports of 30 inspections at these facilities in 1991 (an average of two per facility) this number had plummeted to fewer than 10 in 2002. (See Figure 2.)

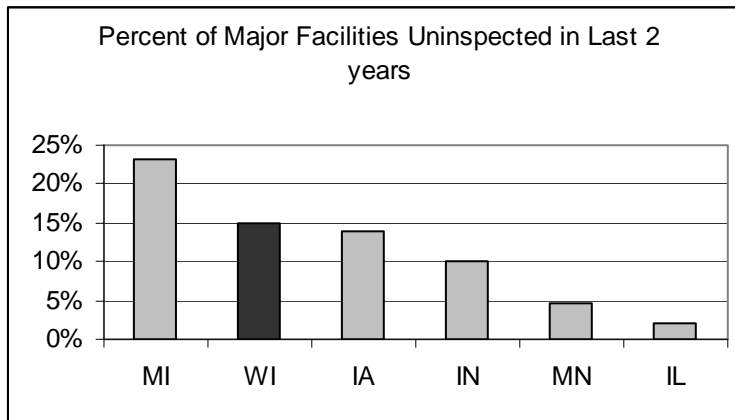
**Figure 2. Inspections at Major Facilities Have Been Declining**



[2003 data is incomplete, including only reports from January through August of 2003]

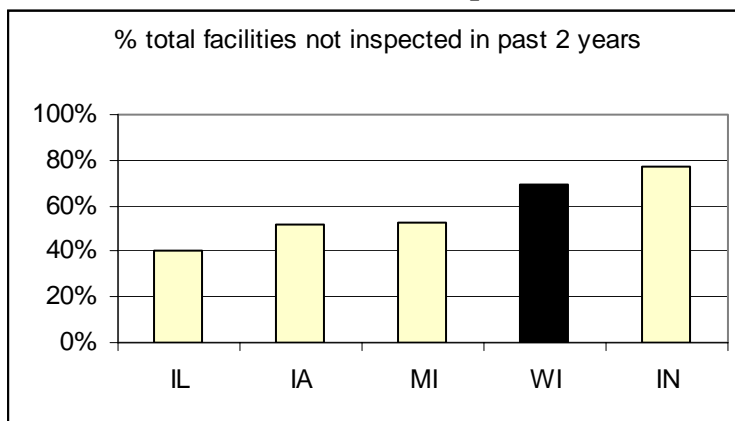
A different interpretation of reported inspection rates could be that rates of reporting inspections may have dropped, not actual inspection rates. This would be true if state databases did not adequately reflect the actual number of inspections being performed by agency staff due to staff failure to report these inspections to the central database.

**Figure 3. Wisconsin lags behind most of its neighboring states in inspecting major facilities<sup>31</sup>**



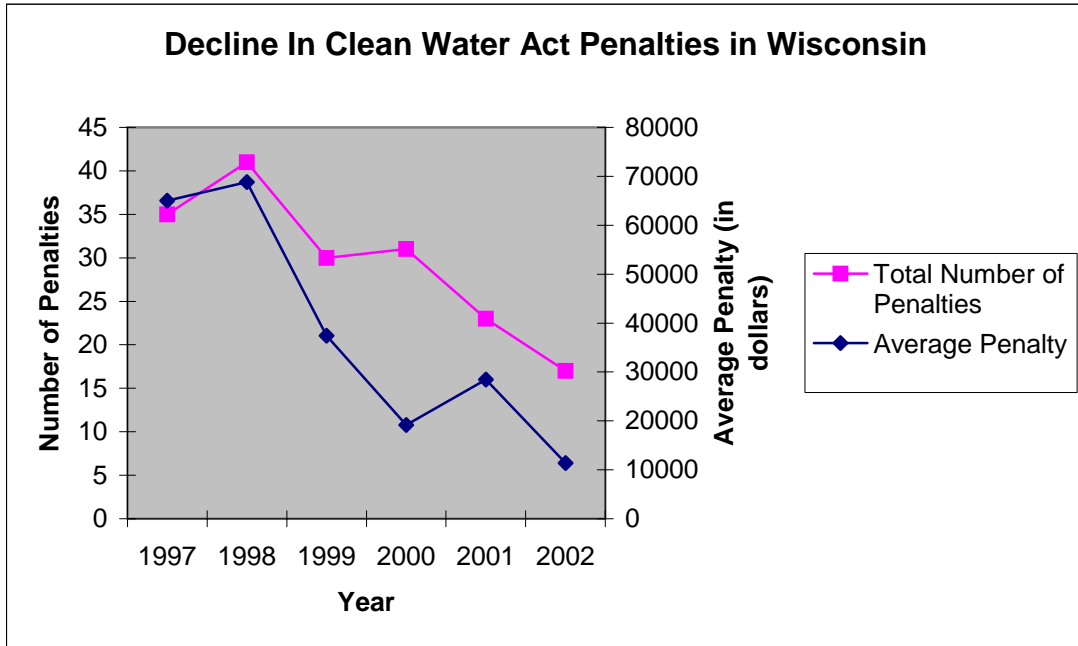
Wisconsin also lags most neighboring states in percentage of total (major and minor) facilities inspected

**Figure 4. Percent of Total Facilities Not Inspected Over Two Year Period**



## Region 5 Penalties Have Declined

In the small fraction of cases that are referred to the Department of Justice, polluters may be facing increasingly less stringent penalties. While we did not obtain penalty data from the state Department of Natural Resources, EPA Region 5 enforcement shows both a decline in the number of penalties assessed for Clean Water Act and a decline in the average penalty assessed on the regional level.



# Fulfilling The Promise Of The Clean Water Act in Wisconsin

## ***Strengthening Permitting***

Under the CWA's National Pollutant Discharge Elimination System (NPDES), any facility discharging into a waterway must obtain a permit that sets limits on its effluent. As its name implies, the NPDES program is designed to meet the Act's goal of "zero discharge." Toward that end, permitting authorities are supposed to base effluent limits in NPDES permits on the *stricter* of two factors - what is technically/economically feasible and what preserving (or restoring) water quality requires. Moreover, agencies are supposed to review each NPDES permit every five years and "ratchet down" effluent limits as new technology allows or as new water quality data shows is necessary—eventually eliminating all discharge into waterways.

Currently, state regulators are not systematically considering cumulative pollution impacts in a waterway when making permitting decisions for renewals. Without doing so, NPDES permits are not being ratcheted down to levels sufficiently protective of waterways.

## ***Publicizing Enforcement Actions***

Publicizing violations and regulator responses helps provide public accountability for poor compliance with the Clean Water Act. While the Wisconsin Department of Justice does post press releases announcing settlements on their website, these are difficult to find. The Department of Natural Resources should post this information clearly on their website to gain additional deterrent effect from their enforcement responses. According to an Office of the Inspector General Report, one option would be to produce a compliance report card annually showing compliance rates, enforcement actions taken, and penalties assessed by the courts.

## ***Addressing the Resource Gap***

Wisconsin DNR staff performed a 'gap' analysis to determine the difference between those resources currently available to State water quality management programs and the resources necessary to manage and implement State water quality management programs in a way that enables achievement of the environmental and public health goals of the Clean Water Act (CWA).<sup>32</sup>

The analysis found an ongoing need in the state water quality management programs for 780 FTE and \$63.4 million dollars in the first year, growing over the next 5 years more than 150% (due to expanded Clean Water Act program requirements) to 947 FTE and \$83.7 million.

In contrast, the Water Quality Division's base funding and staffing in 2003 were \$57.5 million, and 700 FTE<sup>33</sup>--a \$17 million gap from projected 2003 need.

This situation is likely to continue to worsen. **DNR's budget was cut by \$20.4 million and 90 FTE positions in fiscal year 2004** and the anticipated additional cut in 2005 is \$4.7 million and 60 FTE.<sup>34</sup>

One of the first divisions to be cut has been Administration and Technology—the division including information management staff. This division's budget was cut by more than \$5 million in 2003-2004, and will be cut an additional \$3.5 million in 2004-2005.

This translates to a loss of 28 staff positions this year, and potentially as many as 70 staff cuts in 2004-2005. These budget cuts may undermine efforts to fix DNR's antiquated reporting and database systems in a manner that finally allows better public access to water quality violation and enforcement histories.

### ***Some Recent Changes Point in a Positive Direction***

According to data supplied by the Attorney General's office, 27 percent more cases against polluters were initiated in 2003 than the previous year, perhaps indicating a shift to stronger enforcement of environmental laws in the state.<sup>35</sup>

Furthermore, the creation of an electronic system for keeping track of permit violations and recent efforts to accelerate the stepped enforcement process for livestock violators together point the way towards a potentially stronger clean water enforcement program in Wisconsin.

### **The Electronic Data Submittal Program**

The Wisconsin DNR has just entered the second phase of a pilot system in which 12 facilities are directly entering their discharge monitoring reports into a relational database that can be accessed, in real time, by DNR staff. This program, funded largely by a Challenge grant from EPA, is part of an effort in which Michigan, Florida, and others are also engaged.

The E-DMR program should help ensure timely, efficient review of DMR reports, better public access to discharge reports, and a better basis for analysis of the performance of polluters regulated by the DNR.

While the program should help free up skilled staff for inspections and enforcement, it also depends on continued funding--a one time grant helped create the system, but



without adequate resources to keep up with information technology software changes and ensure the quality of the data, its potential value will not be fully realized.

### **Accelerating “Stepped Enforcement”—Livestock Violators Go Directly To DOJ**

In at least one program, DNR seems to have moved away from the stepped enforcement process toward more timely referrals of violations to the Department of Justice, with the result of increased enforcement of Wisconsin Pollutant Discharge Elimination System (WPDES) permits. Several widely-publicized livestock violations in which manure applications led to runoff events led to vigorous investigations by Wisconsin Department of Natural Resources (WDNR), leading to a change in enforcement policy.

A dairy industry newsletter expressed concern about this change, describing it as follows<sup>36</sup>:

*WDNR appears to have changed its enforcement policy on alleged permit violations. WDNR has historically responded to alleged permit violations using its stepped enforcement policy, which involves an initial enforcement conference, followed by a notice of noncompliance (NON), then a notice of violation (NOV) and finally a referral for prosecution as a last resort or if significant environmental harm (i.e., fish kills) resulted from the violation.*

*In the last few months, WDNR has begun direct referrals to the Wisconsin Department of Justice seeking civil lawsuits be filed against livestock operators.*

As the bulletin alluded, the decision to step up enforcement, moving to direct referrals of violations to the Department of Justice, may have resulted from several high visibility events, such as fish kills, that raised the public concern about how well, or poorly, water resources were being protected from the impact of facilities in this industrial sector.

If this policy of bypassing the “stepped” enforcement process were applied to other WPDES facilities, a larger portion of the 160 facilities with initiated enforcement action might have faced penalties resulting from referral to the Department of Justice.

## Policy Recommendations

The delays built into the stepped enforcement approach, coupled with DNR's inability to assess fines directly, place unnecessary burdens on Wisconsin's ability to prevent Clean Water Act violations with an enforcement program that acts as a powerful deterrent.

### Wisconsin's Clean Water Act program should

- Steadily decrease allowable pollutant discharge through strengthening permit requirements based on technological improvements and water quality needs.
- Hold polluters accountable through frequent, adequate inspections and consistent state review of self-monitoring reports.
- Take timely enforcement actions against serious violators and assess penalties that, at minimum, eliminate the economic benefit of polluting.
- Follow up appropriately to ensure that violators return to compliance with the law, pay penalties on time, and complete promised environmental improvements.
- Give the public and the EPA the tools to hold states accountable for enforcement of the laws, including readily accessible, easily understandable information on the environmental performance of regulated facilities.

### To implement the above principles, DNR should take the following steps:

#### **1. Ratchet down permit limits to lessen pollution legally entering Wisconsin's waterways.**

Every 5 years, industrial dischargers apply for permit renewals that specify how much they can legally discharge into the state's waterways. The DNR should consistently add conditions to industrial permit renewals that would ratchet down discharges and eliminate them on specified timetables, thus meeting the intent of a longstanding Wisconsin law "to eliminate the discharge of pollutants into the waters of the state by 1985."

**2. Within a given watershed, issue permits based on the cumulative impacts of those permits on waterways rather than issuing each in isolation.** For example, ten major industrial facilities discharge toxins to the Wisconsin River, which receives three quarters of the statewide direct discharges of carcinogens into surface waters. Permitting decisions for any given discharge should consider the impacts of the cumulative discharge from the ten facilities, not the single facility in isolation.

#### **3.. Refer more cases to the Department of Justice.**

Increasing a violator's likelihood of facing penalties creates a fairer playing field for those good actors who are following the law, and helps remove the financial incentive some polluters may have to avoid making capital upgrades that would prevent such violations from occurring. One interview with agency staff revealed that DOJ referrals are in some cases considered a resource drain, requiring significant time and resources which cannot be recouped to the agency under the current penalty structure and which divert staff from playing other critical roles. While no one would argue that penalties

should become a cash cow for the agency, the current penalty structure should be adjusted to allow “No Net Loss,” allowing DNR to recoup reimbursement for staff time required to prepare a case for the courts.

#### **4.. Implement timeline benchmarks for the stepped enforcement process**

Currently, agency staff are updating the enforcement handbook that provides guidance on how violations should be enforced. To provide consistency and certainty to the regulated community, state enforcement handbook guidance should require that a Notice of Violation be issued within 6 weeks of the violation date, and set strict timelines for compliance that must be met to avoid referral to the Department of Justice for the assessment of a penalty. DOJ referrals should happen within 3 months of the violation date.

#### **5. Publicize Violations and Enforcement Actions**

Publicizing violations and regulator responses helps provide public accountability for poor compliance with the Clean Water Act. While the Wisconsin Department of Justice does post press releases announcing Clean Water Act settlements on their website, these are difficult to find. The Department of Natural Resources should post this information, as well as Notices of Violations and referrals to the Department of Justice, clearly on its Web site to gain additional deterrent effect from their enforcement responses. According to an Office of the Inspector General Report, one option would be to produce a compliance report card annually showing facility compliance rates, enforcement actions taken, and penalties assessed by the courts. This information is not available centrally from the state at this time.

#### **Furthermore, DNR enforcement would benefit from the following law and policy changes:**

##### **1. Give DNR ability to assess penalties administratively (without DOJ referral)**

Wisconsin is one of the few states in which the environmental agency does not have the independent authority to assess administrative penalties for Clean Water Act violations. For penalties to be assessed to violators, the state must go through a costly and time-consuming judicial process. The Department of Agriculture, Trade, and Consumer Protection has authority to issue citation for violation of permits it issues, and the DNR has such authority in the recycling and solid waste programs.

Giving the DNR authority to set clean water penalties administratively would enable the Department of Natural Resources to directly fine polluters for violations, without involving the courts. In addition to saving staff resources, this gives DNR greater bargaining power to win strong enforcement agreements earlier in the “stepped enforcement” process. Furthermore, it frees up the Wisconsin Department of Justice to devote more resources to prosecuting the most serious environmental crimes.

##### **2. Raise polluter permit fees to fill resource gap**

The Wisconsin Department of Natural Resources WPDES enforcement program receives 40% of its funding from the state general fund and 20% from a federal matching grant. The program receives only 4% from permit fees and 0% from penalties. In contrast, New Jersey collected \$13,500,000 in permit fees alone in 2002. Wisconsin should assess permit fees at a level

sufficient to cover the full costs of the WPDES program. This should include funding to ensure the electronic monitoring pilot program is maintained and expanded to include mandatory participation by all WPDES facilities.

**3. Don't issue permits without adequate review.** Given high workloads resulting from the resource gap, businesses and dischargers have sought “presumptive approval” of permits—essentially, a rubberstamp from the DNR if review is not completed by the required deadline. Permit renewals, which generally occur once every 5 years, are one of the only times permits can receive scrutiny and be ratcheted down given technological developments or water resource needs. DNR should not issue permits without adequate review, and adopt a position of “presumptive denial,” particularly in the case of previous violators.

## Endnotes

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<sup>1</sup> US EPA, “TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds), Trend Report for facilities in All Industries, for 2000 Core Chemicals,” for Michigan 2000 – 2002; Minnesota 2000-2002, and Wisconsin 2000-2002.

<sup>2</sup> Water Quality Report to Congress 2002

<sup>3</sup> Data obtained from Gail S. Mills, Wisconsin DNR, Bureau of Watershed Management, Permits Process & Facility Management Section SWAMP Monitoring File, July 15 through July 17, 2003.

<sup>4</sup> “Wastewater Permits Now Issued Faster than National Average,” 16 September 2003, as posted on [wispolitics.com/index.html?Article=1678](http://wispolitics.com/index.html?Article=1678), downloaded on 8 March 2004.

<sup>5</sup> Major facilities are those defined by the Clean Water Act, based on a number of criteria including design flow for municipals, and on effluent volume, characteristics and nature of the receiving waterway for industrial discharges. Generally, if the flow is over a million gallons a day for the facility; the discharger is classified as a major discharger.

<sup>6</sup> See Wisconsin DNR “Waterway and Wetland Permits” at [www.dnr.state.wi.us/org/water/fhp/waterway/](http://www.dnr.state.wi.us/org/water/fhp/waterway/).

<sup>7</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>8</sup> US EPA, “TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds), Trend Report for facilities in All Industries, for 2000 Core Chemicals,” for Michigan 2000 – 2002; Minnesota 2000-2002, and Wisconsin 2000-2002.

<sup>9</sup> US Census Bureau, “Table ST-EST2002-01 - State Population Estimates: April 1, 2000 to July 1, 2002, Population Division,” released 20 December 2002.

<sup>10</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>11</sup> US EPA, “TRI Transfers Off-site for Further Waste Management (in pounds) Trend Report for facilities in All Industries for 2000 Core Chemicals U.S. 2000 – 2002,” downloaded 15 June 2004.

<sup>12</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>13</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>14</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>15</sup> Foremost Farms includes multiple facilities, in Buffalo, Calumet, Marathon, and Portage Counties.

<sup>16</sup> US EPA, Toxic Release Inventory Data for Wisconsin 2002, as presented by Envirofacts EZ Query, “Combined Discharges to Water,” last updated June 30th, 2004, at [oaspub.epa.gov/enviro](http://oaspub.epa.gov/enviro).

<sup>17</sup> To date, water quality assessments have been performed at 42% of the state’s rivers and streams. 24,422 miles were “assessed” of 57,698 total stream miles

<sup>18</sup> Wisconsin DNR, “2002 Water Quality Report to Congress (305b), Part II,” p. 28.

<sup>19</sup> River Network, “The National Pollutant Discharge Elimination System,” derived from The Clean Water Act: An Owners' Manual, by Don Elder, Gayle Killam and Paul Koberstein (River Network 1999).

<sup>20</sup> US EPA, “TRI Surface Water Discharges (in pounds), for facilities in All Industries, for All Chemicals, Wisconsin, 2001,” downloaded 23 October 2003.

<sup>21</sup> Data obtained from Gail S. Mills, Wisconsin DNR, Bureau of Watershed Management, Permits Process & Facility Management Section SWAMP Monitoring File, July 15 through July 17, 2003. There are factors by which EPA allows a value to be over the limit before it is considered significant. These guidelines may allow violations of up to 140% of effluent limits for conventional pollutants

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and 120% of limits for toxic pollutants to escape reporting as a violation. WI DNR has applied for a grant to modify the WPDES database to identify violations as significant or not. All violations are considered apparent, but not confirmed until the compliance specialist for each facility reviews and confirms the violation. This total excludes nearly 600 violations at facilities over which Wisconsin DNR has no jurisdiction (federal, tribal.)

22 [www.state.wi.us/dnr](http://www.state.wi.us/dnr), Environmental Enforcement Section, 1 May 2001, downloaded 5 February 2004.

23 These numbers are conservative, based on an analysis which did not include a number of long-delayed cases from before 1999 that were enforced during the time period under study. If those cases were included, the average delays would be significantly longer:

- to the issuance of a notice of violation was 249 days.
- to an enforcement conference, 325 days.
- to a referral to the Department of Justice, 627 days.

24 Washington State Water Quality Program enforcement guidelines, as cited in D. Wrye, "Water Quality Enforcement Review – Report of the Enforcement Subcommittee, Water Quality Partnership," 1999, p.27, downloadable at [www.ecy.wa.gov/biblio/9918.html](http://www.ecy.wa.gov/biblio/9918.html)

25 Elkhorn's permit expired Dec 31, 2003.

26 Judy Newman, "Alliant Settles Suit For \$150,000: The Madison Company Was Accused Of Violating State Water Pollution Laws," Wisconsin State Journal, 13 July 2004, C10.

27 Lake Michigan Federation, "Federation, Milwaukee Citizens Group Press in Federal Appeals Court to Stop Lake Michigan Sewage Overflows," downloaded 6 March 2004 from [www.lakemichigan.org/news/mmsd\\_appeal.asp](http://www.lakemichigan.org/news/mmsd_appeal.asp)

28 Larry Sandler, "NR calls for legal action in MMSD dumps," Milwaukee Journal-Sentinel, 3 August 2004.

29 "Wastewater Permits Now Issued Faster than National Average," 16 September 2003, as posted on [wispolitics.com/index.iml?Article=1678](http://wispolitics.com/index.iml?Article=1678), downloaded on 8 March 2004.

30 Obtained from James Coleman, US EPA Region 5, based on his records as of August 29, 2003.

31 Based on a query of US EPA's Enforcement and Compliance History Online database,

32 Kevin Scott, "Wisconsin Gap Analysis 5.11.01" based on model designed by the Cadmus Group,

33 Robert Fassbender, "2003-05 Budget Overview – Agency Requests: Department of Natural Resources," The Hamilton Consulting Group, 22 November 2002

34 Scott Hassett, Wisconsin Department of Natural Resources, "Department of Natural Resources FY 2001 – 2003 Biennial Report," 15 October 2003.

35 Peter Rebhahn, "Lautenschlager surpasses Doyle in actions for environment offenses," Green Bay Press-Gazette, 2 February 2004.

36 Wisconsin Dairy Business Association, "WDNR Dairy Enforcement Actions Increase," DBA Activities Update, July 2003, downloadable at [www.widba.com](http://www.widba.com).