

Wasting Our Water Wonderland

Michigan Officials Violate the Public's Trust

*Sewage Overflows Under-Reported
by Tens of Billions of Gallons*

Clean Water Action and Clean Water Fund

October 8, 2001

Acknowledgments

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Finally, we greatly appreciate the support of Clean Water Action's 65,000-plus Michigan members, without whom our public health and environmental protection efforts would not be possible.

About Clean Water Action

www.cleanwateraction.org

Clean Water Action (CWA) is a national 501(c)4 citizen's organization with more than 750,000 members nationwide. CWA works for clean, safe and affordable water, prevention of health-threatening pollution, creation of environmentally-safe jobs and businesses, and empowerment of people to make democracy work. CWA organizes strong grassroots groups, coalitions and campaigns to protect our environment, health, economic well-being and community quality of life.

About Clean Water Fund

www.cleanwaterfund.org

Clean Water Fund (CWF) is a national 501(c)3 research and education organization promoting the public interest since 1978, which promotes the public interest in protection of natural resources, with a special emphasis on water issues. CWF's programs build on and complement those of CWA. The organizations have helped to develop, pass, strengthen and defend the nation's major water and toxics laws such as the Clean Water Act, Safe Drinking Water Act, Superfund, and others. CWF's organizing has empowered citizen leaders, organizations and coalitions to improve environmental conditions in hundreds of communities and strengthen policies at all levels from the local to the national.

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EXECUTIVE SUMMARY

While it is clear that sewage overflows are a widespread source of pollution in Michigan, residents and tourists still lack access to information about the location, amount and quality of sewage entering the state's waterways.

Because Clean Water Action (CWA) and Clean Water Fund (CWF) have actively worked on sewage overflows and related issues for years, the groups were anticipating the usefulness of the new MDEQ website, which is required to include statewide sewage overflow data. Although CWA acknowledges that the website is relatively new (launched in March 2001) and the overflow reporting requirements have been recently modified, the groups found *immense* discrepancies between the data received from county/regional health departments and that posted on MDEQ's website.

Although CWA and CWF thoroughly reviewed the available data, three important points should be made about the completeness of the report's data:

- 1) Since CWA and CWF did not receive *any* response from nine county/regional health departments and the fee requested by four others was deemed unreasonable, a significant number of overflow events are not included in the report.
- 2) Because CWA and CWF did not have the resources to survey each sewer system, the groups were unable to verify at the system level how accurately this report reflects the overflows that actually took place during this period. Therefore, when referring to overflow data throughout the report, CWA and CWF is referring to the data *reported* by the 32 county/regional health departments that provided data and to the relevant MDEQ website data.
- 3) Finally, the nearly 52 billion gallons reported by the county/regional health departments included in this report fails to include additional gallons which appear on the MDEQ website, but not in the data provided to CWA and CWF by the health departments.

In other words, the actual amount of raw and partially treated sewage containing toxic chemicals and numerous other contaminants that was discharged in Michigan between January 2000 and June 2001 was undoubtedly much higher than the 52 billion gallons reported by the responding health departments.

KEY FINDINGS

- Based on data received from 32 of Michigan's 45 county/regional health departments, CWA and CWF found that from January 2000 through June 2001 *at least 52 billion gallons* of raw

and/or partially treated sewage were released in Michigan. Unbelievably, the Michigan Department of Environmental Quality (MDEQ), the state agency charged with tracking sewage overflows and enforcing sewage overflow laws, is under-reporting overflow volumes by tens of billions of gallons: *the MDEQ website reported 23 billion gallons of sewage overflows.*

- The MDEQ's data accounted for *less than 50%* of the overflow volumes reported by the county/regional health departments. Astonishingly, nearly 29 billion gallons of sewage overflows were reported by the health departments but did not appear on the MDEQ website.
- Because 95% of the sewage overflows occurring between January 2000 and June 2001 took place in Oakland, Wayne, Macomb and St. Clair Counties, billions and billions of gallons of raw and partially treated sewage containing health threatening toxic chemicals were dumped into the drinking water source for 4.4 million people in Southeast Michigan.
- After reviewing the 1,104 events, the groups identified 327 identical events, which means that the events matched identically only about one-third of the time. It is noteworthy that the counties with the closest identical matches for event date *and* total volume between health department and MDEQ data were: Bay County (87%), Kent County (81%), St. Clair County (73%), and Mason County (58%). *The remaining health department data matched MDEQ's data less than 50 % of the time.*
- Wayne County's discharges accounted for 87% of the total reported overflow volume and was responsible for the single largest overflow event (June 24, 2000), which resulted in 6.7 billion gallons of sewage (and the toxic chemicals contained therein) entering area waterways.
- As of July 2001, a year after the enactment of P.A. 286 and 287 took effect, MDEQ had not yet provided health departments with clear directions for compliance.
- It is highly likely that numerous overflow events have occurred which would have led to area beach closings but, for whatever reason, health departments apparently lacked the basic information that might have led them to test the effected waters.
- The MDEQ must annually publish a report compiling and detailing reported CSO and SSO events. Although the requirement went into effect on July 10, 2000, as of September 2001 no report had been released.
- Funding is severely lacking for water infrastructure improvements as well as community education about low cost solutions to reducing CSO and SSO events.
- In July 2001, the Engler Administration turned its back on Michigan's share of \$10 million in federal funding for beach monitoring made available to the nation's shoreline states through

last year's passage of the federal Beaches Environmental Assessment and Coastal Health Act (B.E.A.C.H.) Act.

RECOMMENDATIONS

- Because the public has a right to know about potentially dangerous contaminants in the state's waterways, Michigan laws should be amended to require discharging sewer systems to provide MDEQ with detailed overflow data within 24 hours after the discharge has ended. Further, the statute should require MDEQ to post this information within 24 hours of receiving it from the sewer system so the public will have far more timely access to sewage overflow information.
- Officials from MDEQ, health departments, and sewer systems should work together to develop uniform reporting guidelines to facilitate accurate and efficient communication between parties.
- MDEQ, as the enforcing agency, should provide clear reporting directions to sewer systems, and must impose penalties for those systems that do not provide the overflow information within a specified timeframe.
- Compliance information from CSO events should be readily available on the MDEQ website so the public knows whether the discharge was permitted or unpermitted as well as easy access to the details of what is being done to eliminate the discharge
- Unfortunately, Michigan residents will not benefit from their share of federal Beaches Environmental Assessment and Coastal Health Act (B.E.A.C.H.) Act dollars in 2002, which will instead be put to work monitoring beaches in other states. CWA and CWF strongly urges the Administration to do what needs to be done to ensure Michiganders benefit from these dollars in 2003.
- Governor Engler and Michigan's other state and federal officials must take a leadership role in very actively pushing for increases in federal dollars earmarked to stop the dumping of sewage into our waterways.

“Sewage overflows are a widespread source of pollution in Michigan, occurring in many communities and affecting watersheds throughout the state. As the only state entirely in the Great Lakes Basin, Michigan plays a key role in determining the quality of the world’s largest freshwater resource.”

“Managing the Cost of Clean Water: An Assessment of Michigan’s Sewer Infrastructure Needs,”
Public Sector Consultants, Inc. and Environmental Consulting Technology, Inc.
for Clean Water Michigan, October 2000.

TAKING A CLOSER LOOK AT MICHIGAN’S SEWAGE OVERFLOWS

While it is clear that sewage overflows are a widespread source of pollution in Michigan, residents and tourists still lack access to information about the location, amount and quality of sewage entering the state’s waterways. Based on data received from 32 of Michigan’s 45 county/regional health departments, Clean Water Action (CWA) and Clean Water Fund (CWF) found that from January 2000 through June 2001 ***at least 52 billion gallons*** of raw and/or partially treated sewage were released in Michigan.

Unbelievably, the state agency charged with tracking sewage overflows and enforcing sewage overflow laws is under-reporting overflow volumes by tens of billions of gallons. Even as incomplete as this data is¹, this total is vastly more than the amount which has previously

“... the state agency charged with tracking sewage overflows and enforcing sewage overflow laws is under-reporting overflow volumes by tens of billions of gallons.”

been reported. According to information gathered by the Legislative Service Bureau’s Science and Technology Division in February 2000, the estimated sewage overflow volume statewide

¹As discussed throughout the report: 13 health departments did not respond or charged unreasonable fees (especially given that this information was to be posted on a website for public review); MDEQ reported data *in addition* to what the health departments provided for the counties that responded; and the data was not verified at the sewer system level, which might have increased the volume given that they are the “source.”

totaled 9.2 billion gallons annually². Although CWA’s data covered a recent 18 month period, rather than a 12 month period, the difference is dramatic.

Public Acts 286 and 287 of 2000³ modified the reporting requirements by which sewage overflow information is conveyed from sewer system officials to the Michigan Department of Environmental Quality (MDEQ), relevant county/regional health department(s), and the local daily newspaper(s). In addition, under P.A. 287, MDEQ is now required to maintain a website⁴ detailing each reported sewage overflow event and to publish an annual report detailing all events. As a result, the public might finally have timely access to information about potential health risks associated with overflows in local waterways throughout Michigan.

Because CWA and CWF have actively worked on sewage overflows and related issues for years, the groups were anticipating the usefulness of the new MDEQ website. Although the groups acknowledge that the website is relatively new (launched in March 2001) and the overflow reporting requirements have been modified (P.A. 286 and P.A. 287), they were surprised by the *immense* discrepancies between the data received from the 32 health departments (hereafter referred to as “health department(s)”) and that posted on MDEQ’s website, as evidenced by Tables 1, 2 and 3.

It is obvious that extensive under-reporting of sewage overflow events occurred between January 2000 and June 2001. Although there are many causes for concern, none are quite as disturbing as those

“Although there are many causes for concern, none are quite as disturbing as those associated with public health threats posed by the billions of gallons of sewage overflows that were “missed” in the reporting process.”

²February 24, 2000 memorandum to State Senator Kenneth DeBeaussaert from Jan Williams, Science Research Analyst with the Legislative Service Bureau’s Science and Technology Division.

³ Public Act 286 of 2000 (Appendix 2) and Public Act 287 of 2000 (Appendix 3), which both took effect on July 10, 2000, amended Part 31, Chapter 324 of the Natural Resources and Environmental Protection Act.

⁴Visit: www.deq.state.mi.us/SWQ/cso_sso/cso_sso_index.html

associated with public health threats posed by the billions of gallons of sewage overflows that were “missed” in the reporting process.

Sewage overflows pose risks to both public health and wildlife, and they could undermine Michigan’s \$15 billion annual tourist industry⁵. Discharges contain pathogens such as bacteria and viruses, fecal matter, industrial wastes, and household chemicals that can cause nausea, gastroenteritis, hepatitis, respiratory illnesses, and other potential health threats.

Combined and Sanitary Sewer Overflows

■ **Combined sewer overflows (CSOs)** are caused by combined sewer systems, which are sewers designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Ideally, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. When CSOs occur, which is typically during rain events or snowmelt, the system discharges excess sewage directly into nearby waterways.

■ **Sanitary Sewer Overflows (SSOs)** are illegal. They are caused by separate sanitary sewer systems, which are designed to carry sewage but not stormwater. When SSOs occur, the sewer system is not functioning properly resulting in raw or partially treated sewage releases into nearby waterways. Problems that may cause frequent SSOs include too much infiltration and inflow into the sanitary system from groundwater infiltrating or leaking through cracks in the pipes; rain or snowmelt, undersized sewers and pumps; tree roots growing into the sewer; pipes settling or shifting so joints no longer match; sediment and other material accumulating in pipes causing blockages; equipment and pump failures; and power failures.

⁵“Managing the Cost of Clean Water: An Assessment of Michigan’s Sewer Infrastructure Needs,” Public Sector Consultants, Inc. and Environmental Consulting Technology, Inc. for Clean Water Michigan, October 2000, pg. 4.

Because 95% of the sewage overflows occurring between January 2000 and June 2001 took place in Oakland, Wayne, Macomb and St. Clair Counties, billions and billions of gallons of raw and partially treated sewage containing health threatening toxic chemicals were dumped into the drinking water source for 4.4 million people in Southeast Michigan.

“Because 95% of the overflows....took place in Oakland, Wayne, Macomb, and St. Clair Counties, billions and billions of gallons of raw and partially treated sewage containing health threatening toxic chemicals were dumped into the drinking water source for 4.4 million people in Southeast Michigan.”

Additionally, in 2000, 276 beach closings/advisories were reported in the Michigan counties bordering the Great Lakes. Of these, 85% were linked to sewage overflows, an alarming number considering that only 47% of Michigan’s shoreline beaches are monitored (at least once a week).⁶

“...85% [of the 276 beach closings/ advisories in 2000] were linked to sewage overflows, an alarming number given that only 47% of Michigan’s shoreline beaches are monitored.”

⁶ Dorfman, Mark, Testing the Waters 2001, National Resources Defense Council, New York, 2001, p. 172.

MICHIGAN’S SEWER OVERFLOW REPORTING LAWS

Michigan’s sewer overflow reporting laws⁷ require the sewer system discharging the overflow to immediately, but not more than 24 hours after the discharge begins, notify the MDEQ, the health department(s), and local daily newspaper(s). When the event has ended, the following details must be provided by the sewer system in writing to the same parties:

- the volume and quality of the discharge;
- the reason for the discharge;
- the waters or land area, or both, receiving the discharge;
- the time the discharge began and ended; and
- verification of the municipality’s compliance status with its permit and applicable state and federal statutes, rules, and orders.

On an ongoing basis, MDEQ must post the following information on its website:

- the volume and quality of the discharge;
- the time the discharge began and ended;
- a description of actions taken by MDEQ to address the discharge;
- whether the system is subject to a schedule of compliance; and
- any other information the MDEQ deems relevant.

In addition, MDEQ must also publish an annual report including the above listed information but, as of this report’s completion, the annual report had not been compiled.

“... MDEQ must also publish an annual report including the above listed information but, as of this report’s completion, the annual report had not been compiled.”

⁷ See Appendix 4 for flowchart summarizing overflow reporting responsibilities by sewer systems, health departments and MDEQ.

METHODOLOGY

CWA and CWF analyzed the data received from the 32 *responding* health departments and the corresponding data from the MDEQ website to determine the accuracy of the data being reported to the public on the website. Through the FOIA process, CWA and CWF requested sewage overflow records for the period January 2000 through June 2001 from each of Michigan's 45 health departments. The following summarizes the outcome of CWA and CWF's FOIA requests⁸.

- 36 out of the 45 health departments responded (80%) 32 health departments (covering 53 counties) provided data (71%)
- 9 health departments (covering 19 counties and the City of Detroit) did not respond to the FOIA request (20%)
- 12 health departments either did not maintain local records or did not have any CSO events
- An additional 7 health departments charged fees ranging from \$7.50 to \$55.00. Due to the costs, CWA and CWF did not obtain information from 4 of these health departments (covering 15 counties).

Three important points should be made about the completeness of the report's data:

- Since CWA and CWF did not receive *any* response from nine health departments and the fee requested by four others was deemed unreasonable, a significant number of overflow events are not included in the report.
- Because CWA and CWF did not have the resources to survey each sewer system, the groups were unable to verify at the system level how accurately this report reflects the

⁸The counties covered by each health department along with the specifics of each department's responsiveness to CWA's and CWF's request is included in Appendix 5.

overflows that actually took place during this period. Therefore, when referring to overflow data throughout the report, CWA and CWF is referring to the data *reported* by the *responding* health departments and the relevant MDEQ website data.

- Finally, the nearly 52 billion gallons reported by the health departments in this report fails to include additional gallons which appear on the MDEQ website, but not in the data provided to CWA and CWF by the health departments.

In other words, the actual amount of raw and partially treated sewage containing toxic chemicals and numerous other contaminants that was discharged in Michigan between January 2000 and June 2001 was undoubtedly much higher than the 52 billion gallons reported by the responding health departments.

“ ... the actual amount of raw and partially treated sewage containing toxic chemicals and numerous other contaminants that was discharged in Michigan between January 2000 and June 2001 was undoubtedly much higher than the 52 billion gallons reported by the responding health departments.”

As the project unfolded, CWA and CWF decided it was necessary to set a deadline for gathering information from the MDEQ website to ensure information received from the health departments was compared with website data for roughly the same time frame. Therefore, data collection from the MDEQ website ended on July 23, 2001. Overflow events have obviously occurred since that date so a review of the website data after July 23rd will not coincide with the data CWA and CWF used in this report.

Health departments frequently do not report discharge data in the same way as MDEQ (e.g., some report for each outfall while others report all discharges under the name of the municipality). ***To the best of their ability***, CWA and CWF reviewed each of the 1,121 reported overflows to match the data appropriately. Further, because sewer systems must notify both the health department for the jurisdiction in which the system operates and any additional “downstream” health department requesting notification, the groups painstakingly worked to remove duplicate events that were reported by more than one health department. After carefully

reviewing each of the 1,121 overflow events, the groups removed duplicate events appearing in the records from Bay and Saginaw Counties and from Oakland, Macomb and Wayne Counties⁹.

DISCREPANCIES IN REPORTED OVERFLOWS

After comparing the data for 1,104 reported overflow events, the groups found tremendous discrepancies between the MDEQ website data and that received from the 32 health departments (see Tables 1, 2, and 3). Statewide, the health departments that provided data in response to the groups' FOIA request reported nearly 52 billion gallons of raw or partially treated sewage overflows. For the same period and counties, the MDEQ website reported only 23 billion gallons. The MDEQ's data accounted for *less than 50%* of the overflow volumes reported by the 32 health departments.

“Statewide, the health departments that provided data in response to the groups’ FOIA request reported a total of nearly 52 billion gallons of raw or partially treated sewage overflows.

For the same period and counties, the MDEQ’s website reported only 23 billion gallons.

The MDEQ’s data accounted for less than 50% of the overflow volumes reported by the 32 health departments.”

Although not all health departments provided data to CWA and CWF, and events were reported by MDEQ but not included in the health department data, the groups concluded that the health department overflow data (nearly 52 billion gallons) is more representative of the volume

⁹Some data reported in Bay County was also reported in Saginaw County, and some data reported by Macomb County was also reported by Oakland and Wayne Counties. To avoid duplicate inclusion, the events and gallons were assigned to the county of origin. Approximately 1.3 billion gallons were removed from the total as a result.

of overflows occurring statewide. However, this volume should not be interpreted as the total overflow volume for Michigan or, for that matter, for the counties included in this report.

CWA and CWF reviewed the event data to determine how often the identical event date *and* total volume information matched between health department and MDEQ data. After reviewing the 1,104 events, the groups identified 327 identical events, which means that the events matched identically only about one-third of the time. It is noteworthy that the counties with the closest identical matches for event date *and* total volume between health department and MDEQ data were: Bay County (87%), Kent County (81%), St. Clair County (73%), and Mason County (58%). *The remaining health department data matched MDEQ's data less than 50 % of the time.*

Between January 2000 and June 2001, Wayne County was responsible for the single largest overflow event, which resulted in 6.7 billion gallons of sewage (and the toxic chemicals contained therein) entering area waterways. The event occurred on June 24, 2000.

Wayne County's discharges accounted for 87% of the total reported overflow volume and was responsible for the single largest overflow event, which resulted in 6.7 billion gallons of sewage (and the toxic chemicals contained therein) entering area waterways. The event occurred on June 24, 2000.

Wayne County's reported overflows accounted for 87% of the total reported overflow volume provided by the health departments. Because the City of Detroit's health department did not reply to CWA's and CWF's request for data, the groups are not certain that all overflows are included in the Wayne County totals.

Table 1:
Summary of MDEQ Website and Health Department Survey Response Data
OVERFLOW EVENTS AND GALLONS BY COUNTY

County	Total Events	Total gallons reported by MDEQ	Total gallons reported by HD	CSO Events	SSO Events	Unspecified Sources
ALLEGAN	2	46,000	0	0	2	0
BARRY	15	162,182	66	0	9	6
BAY	30	364,565,750	274,006,750	30	0	0
BENZIE	1	0	250,000	0	1	0
BERRIEN	67	78,094,340	61,146,640	62	4	1
BRANCH	1	3,000	0	0	1	0
CALHOUN	4	3,115	0	0	4	0
CASS	1	12,000	0	0	1	0
EATON	4	4,627,000	45,000	0	3	1
GENESSEE	86	82,354,900	57,713,811	0	86	0
GRAND TRAVERSE	2	5,000	0	0	2	0
HILLSDALE	2	39,000	0	0	2	0
HURON	2	1,550	0	0	2	0
INGHAM	95	1,161,963,110	1,113,908,560	86	9	0
KALAMAZOO	2	4,200	0	0	2	0
KENT	47	28,244,460	27,505,100	42	5	0
LAPEER	7	500,600	0	0	7	0
LENAWEE	20	52,930,883	40,503,760	8	7	5
LIVINGSTON	5	67,500	0	0	5	0
MACOMB	159	2,007,803,010	3,412,721,573	68	91	0
MASON	33	2,486,696	2,356,251	0	33	0
MUSKEGON	11	27,967,000	0	0	11	0
OAKLAND	80	170,327,766	713,248,765	37	43	0
OGEMAW	1	18,000	0	0	1	0
OTTAWA	2	350	0	0	2	0
SAGINAW	30	881,252,973	865,348,000	19	4	7
SANILAC	5	6,372,250	5,200,000	4	1	0
ST. CLAIR	44	211,775,150	230,131,150	40	4	0
TUSCOLA	1	0	899,000	0	0	1
VAN BUREN	1	3,600	0	1	0	0
WASHTENAW	15	7,835	2,550	0	15	0
WAYNE	329	17,964,700,645	45,070,213,862	292	37	0
TOTALS	1,104	23,046,339,865	51,875,200,838	689	394	21

NOTES:

- Health Department (HD) data, which was obtained from 32 out of 45 departments, was obtained via FOIA request
- MDEQ data was obtained from the MDEQ website as of July 23, 2001
- All data covers the period January 1, 2000 through June 30, 2001

- While the Wayne County Health Department (WCHD) reported discharges totaling more than 45 billion gallons, the MDEQ website for the same period reported only 17.9 billion gallons. *The MDEQ's website, therefore, accounted for only about one-third of the volume of discharges going into local waterways.*
- The WCHD reported 254 overflow events while the MDEQ listed only 154. Of those events reported by the Wayne County Health Department and the MDEQ, only 69 (21%) were identical (meaning that the exact volume was reported on the same day by each entity). *Thus, as staggering as the total volumes reported by WCHD appear to be, MDEQ had data for dozens of additional events that are not included in the 45 billion gallon total.*
- After reviewing the data from both the WCHD and the MDEQ, it was determined that 292 of the reported events resulted from CSOs and 37 resulted from SSOs.

**Table 2:
Top 10 Counties in Gallons Reported by MDEQ and Health Departments**

COUNTY	REPORTED ON MDEQ WEBSITE	REPORTED BY HEALTH DEPT. BY FOIA
Wayne	17,964,700,645	45,070,213,862
Macomb	2,007,803,010	3,412,721,573
Ingham	1,161,963,110	1,113,908,560
Saginaw	881,252,973	865,348,000
Bay	364,565,750	274,006,750
St. Clair	211,775,150	230,131,150
Oakland	170,327,766	713,248,765
Genesee	82,354,900	57,713,811
Berrien	78,094,340	61,146,640
Lenawee	52,930,883	40,503,706

NOTE: Survey data reported for January 2000 - June 2001

Table 3: Top 10 Counties in CSO and SSO Events

County	Total Events	CSO Events	SSO Events	Unspecified
Wayne	329	292	37	
Macomb	159	68	91	
Ingham	95	86	9	
Genesee	86		86	
Oakland	80	37	43	
Berrien	67	62	4	1
Kent	47	42	5	
St. Clair	44	40	4	
Mason	33		33	
Saginaw	30	19	4	7

Note: Survey data reported for January 2000 - June 2001

FINDINGS AND RECOMMENDATIONS

I. COMMUNICATION BETWEEN ACCOUNTABLE PARTIES IS SEVERELY LACKING

Findings

- CWA and CWF contacted both the MDEQ and the President of the Michigan Association of Local Environmental Health Directors, to obtain copies of the documents that were issued following the enactment of P.A. 286 and 287. As of July 2001, a year after the laws took effect, MDEQ had not yet provided health departments with clear directions for

“... health department officials are waiting for MDEQ to provide instructions about the modified reporting requirements, and MDEQ is waiting for health department officials to do so.”

compliance. In fact, CWA and CWF learned that health department officials are waiting for MDEQ to provide instructions about the modified reporting requirements, and MDEQ is waiting for health department officials to do so.¹⁰

- CWA and CWF found that, while some health departments kept detailed records of their overflows and reported the events on websites and provided them to area newspapers, others either did not keep any records or kept only limited records. In the latter case, CWA and CWF were unable to determine if these health departments had been informed of overflow events by the discharging sewer system(s).

- The closest event date and total volume matches between health department and MDEQ data were: Bay County (87%), Kent County (81%), St. Clair County (73%), and Mason County (58%). The remaining health department data matched MDEQ's data less than 50 percent of the time.

- According to P.A. 286 of 2000, based on the data the discharging sewer system provides, the health department decides whether or not testing should be conducted and, if so, when and where. Since it is up to the discretion of the health departments to require testing, it is improbable testing will occur if the health departments do not know about the overflow events. Logic dictates that without testing area beaches will not be closed. Based on CWA and CWF's review of the data, it is highly likely that numerous overflow events have occurred which would have led to area beach closings but, for whatever reason, health departments apparently lacked the basic information that might have led them to test the effected waters. Further, since several health departments did not maintain their own records, either because no events occurred or they did not have a record keeping system, it was impossible to determine whether or not these health departments required testing for overflow events.

¹⁰ Telephone conversations with Paul Blakeslee, Senior Environmental Engineer, Surface Water Quality Division, Michigan Department of Environmental Quality, August 28, 2001 and Michael Kight, President of Michigan Association of Local Environmental Health Directors, August 28, 2001.

Recommendations

- Officials from MDEQ, health departments, and sewer systems should work together to develop uniform reporting guidelines to facilitate accurate and efficient communication between parties.
- Health departments should maintain records of all local overflow events in their offices.
- Since CWA and CWF's review only focused on the reporting between health departments and MDEQ, the groups recommend outreach to sewer systems to learn if efforts were made to inform them of the modified reporting requirements and to ensure they are complying with the law.

II. TIMELINESS OF PUBLIC ACCESS TO OVERFLOW DATA

Findings

- The discharging sewer systems do not have a statutory deadline by which they are to report event overflow details to MDEQ.
- On an on-going basis, the MDEQ is required by statute¹¹ to post overflow events on its website thus making this information readily available to the public. Astonishingly, nearly 29 billion gallons of sewage overflows were reported by the health departments but did not appear on the MDEQ website.
- Further, a sampling of specific overflow events indicated that MDEQ was severely lagging in its posting of event data reported by health departments. For example, the Benzie-Leelanau District County Health Department provided data to CWA and CWF

"Astonishingly, nearly 29 billion gallons of sewage overflows were reported by the health departments but did not appear on the MDEQ website."

¹¹ P.A. 287 of 2000

indicating that Frankfort had a CSO event in September 2000. At approximately the same time, the Grand Traverse District Health Department also indicated that an event had occurred in Traverse City. The Frankfort event has yet to appear on the MDEQ website, and the Traverse City event appeared after approximately three weeks (although the website did not include specific data detailing the event).

- CWA and CWF could not determine if discharging sewer systems are reporting overflow events immediately (or at least within 24 hours) to either the MDEQ or the health department(s).
- Finally, under the new reporting procedures, the MDEQ must annually publish a report compiling and detailing reported CSO and SSO events. Although the requirement went into effect on July 10, 2000, as of September 2001 no report had been released.

Recommendations

- Because the public has a right to know about potentially dangerous contaminants in the state's waterways, Michigan laws should be amended to require discharging sewer systems to provide MDEQ with detailed overflow data within 24 hours after the discharge has ended. Further, the statute should require MDEQ to post this information within 24 hours of receiving it from the sewer system so the public will have far more timely access to sewage overflow information.

"Michigan laws should be amended to require discharging sewer systems to provide MDEQ with detailed overflow data within 24 hours after the discharge has ended.

Further, the statute should require MDEQ to post this information within 24 hours of receiving it from the sewer system so the public will have far more timely access to sewage overflow information."

- In addition, two possible explanations for missing or delayed posting of data are that the discharging sewer systems are not providing the data to MDEQ and/or the health departments or they are not providing it in a timely manner. MDEQ, as the enforcing agency, should provide clear reporting directions to sewer systems, and the department

must impose penalties for those systems that do not provide the overflow information within the specified timeframe.

III. OVERFLOW EVENT REPORTING LACKS STANDARDIZATION

Findings

- In reviewing the data, CWA and CWF found that the overflow volumes are reported in different units of measure. For some events, the amount is reported in gallons or in gallons per minute while other events are reported in cubic feet.
- In addition, CWA and CWF found inconsistencies in how the data was presented. For example, some health departments provided data in whole numbers (2,765,432 gallons) while others provided data in decimals rounded up to the nearest million (.0000005 million gallons).
- Some systems report events by outfall location while others report by entire system or groupings of outfalls.
- A major inconsistency also exists between the overflow event report forms used by the discharging sewer systems. While an SSO reporting form is available on the MDEQ website, no reporting form is available for CSO events.

Recommendations

- Sewage overflow information on the MDEQ website should be presented in a uniform and user-friendly format, and it should contain at least the following: standardized measurements; date and time of event; type of event; duration of overflow; by what method the event was publicized; and, if health advisories were issued, by whom and by what method were the advisories publicized.
- To eliminate many inconsistencies in reported information, MDEQ should develop a uniform

"Sewage overflow information on the MDEQ website should be presented in a uniform and user-friendly format..."

reporting form that all systems, regardless of district, must use to report information.. CWA and CWF prepared a sample CSO reporting form, which is included as Appendix 6.

IV. POLLUTION PERMIT INFORMATION LACKING

Finding

- Pollution permits for CSO facilities designate the timeframe and associated steps by which sewer systems must bring their CSO discharges into compliance with their permit (see “NPDES and Sewage Overflows”). The "CSO and SSO Discharge Information" section of the MDEQ website does not contain detailed information about discharger pollution permits nor does it link the user to this information. While in rare instances the website included minimal information indicating the discharge pipe was “subject to a schedule of compliance,” for the most part, it was impossible to determine if overflow events from discharge pipes were in compliance with water pollution permits.

"... for the most part, it was impossible to determine (from MDEQ's website) if overflow events ... were in compliance with water pollution permits."

Recommendation

- Compliance information from CSO events should be readily available on the MDEQ website so the public knows whether the discharge was permitted or unpermitted. The public should also have easy access to the details of what is being done to eliminate the discharge. This information could be provided via links from the MDEQ's CSO and SSO Discharge Information section of their website to actual NPDES permits for each CSO event reported.

V. PUBLIC HEALTH RISKS AND IMPACTS OF UNDERREPORTING

Findings

-
- CWA and CWF reviewed both health department data and MDEQ website data for the relevant counties covered by the 32 health departments that responded. Based on these incomplete results (as previously explained), the data indicates that nearly 52 billion gallons of sewage and the toxic contaminants contained therein were discharged between January 2000 and June 2001.

 - While these numbers are staggering, they do not fully represent what is happening in the state's waterways, as described in "Discrepancies in Reported Overflows" (above). Undoubtedly, these massive volumes of sewage and the multitude of contaminants contained therein are in many cases being dumped into Michigan's waterways where the unsuspecting public is swimming, fishing or otherwise recreating.

 - Based on the data reviewed for this report, there were clearly numerous times when the health departments did not know about overflow events. Obviously, when a health department is not informed of an event, the opportunity does not exist for the health department to make a determination of whether or not it should test the waters downstream of the overflow. As a result, the health department cannot inform the public of potential health risks.
- "Based on the data reviewed for this report, there were clearly numerous times when the health departments did not know about overflow events.***

Obviously, when a health department is not informed of an event, the opportunity does not exist for the health department to make a determination of whether or not it should test the waters ... "
-
- In addition to the communication breakdown between health departments and discharging sewer systems, the state lacks mandatory uniform beach water quality monitoring and beach closing standards, and it has not provided adequate funding to implement these programs. Such measures would provide another layer of public health protection since, as the Auditor General's report indicated¹², MDEQ has failed to increase its efforts to detect unreported sewage overflows. In the case where overflows are unreported, increased monitoring could

¹²Performance Audit of Sewage Issues of Department of Environmental Quality, Office of Auditor General, October 2000, pg. 18.

assist health departments with detecting these unreported overflows and to correct the problems.

Recommendations

- Communication must improve between sewer system and health department officials.
- The public has a right to know the frequency and location of beach monitoring efforts, and they deserve to know that all Michigan beaches are held to the same standards for monitoring and closing. All public beaches should be monitored at least three times each week during recreational usage months and consistent monitoring and beach closing procedures should be utilized.
- Pre-emptive rainfall closings or rainfall advisories should supplement water monitoring where there is a correlation between rainfall and high bacteria levels.
- Michigan officials should use the EPA recommended indicator organism (*enterococcus*) for beach monitoring (either alone or in combination with other indicators) and set a standard at least as strict as EPA's recommended standard for ALL Michigan beaches. Further, Michigan's beaches should be closed and advisories posted when health standards are exceeded.
- Until uniform standards are established, each public beach should provide information to visitors disclosing whether or not the beach is monitored and, if so, how frequently. Further, information should be provided explaining what the county's procedures for closing or otherwise notifying the public is if the beaches are monitored and if the results indicate they are unsafe.
- In July 2001, the Engler Administration turned its back on Michigan's share of \$10 million in federal funding for beach monitoring made available to the nation's shoreline states through last year's passage of the federal Beaches Environmental Assessment and Coastal Health Act (B.E.A.C.H.) Act. Unfortunately, Michigan residents will not benefit from their share of the dollars in 2002, which will instead be put to work monitoring beaches in other states. CWA and CWF strongly urges the Administration to do what needs to be done to ensure Michiganders benefit from these dollars in 2003.

VI. *DECAYING AND OVERBURDENED INFRASTRUCTURE*¹³

FINDINGS

- It is a well known fact that funding for water infrastructure improvements is severely lacking, and this was reinforced during CWA's and CWF's contacts with several health department officials and by their review of the overflow data.
- Additionally, efficient use of water and efforts to direct "clean" water away from sewers will ease pressures on wastewater systems.
- Unfortunately, in most cases, community education about these low cost solutions is lacking.

RECOMMENDATIONS

- At the federal level, the Water Infrastructure Network, on whose steering committee Clean Water Action serves, is advancing a bi-partisan initiative to bridge the funding gap for the

"Governor Engler and Michigan's other state and federal officials must take a leadership role in very actively pushing for increases in federal dollars earmarked to stop the dumping of sewage into our waterways."

nation's water infrastructure needs¹⁴ Governor Engler and Michigan's other state and federal officials must take a leadership role in very actively pushing for increases in federal dollars earmarked to stop the dumping of sewage into our waterways.

- Further, Governor Engler and Michigan's legislative leaders should increase the state's funding commitment to both infrastructure and non-engineering solutions to sewage overflows.

¹³ See Appendix 7, "The Bill is Coming Due for Michigan's Neglected Water Infrastructure"

¹⁴ The Water Infrastructure Network (WIN) is a broad-based coalition of local elected officials, drinking water and wastewater service providers, state environmental and health program administrators, engineers and environmentalists dedicated to preserving and protecting the health, environmental and economic gains that America's drinking water and wastewater infrastructure WIN's membership list is provided in Appendix 8.

-
- Communities can also implement non-engineering strategies to prevent or reduce the risk of sewage overflows. Regular cleaning and maintenance of existing sewers ensure that the system is working smoothly and help municipalities identify potential problems before they develop. Communities can also actively protect wetlands and open spaces, which absorb water and filter pollutants.
 - Further, efficient water use for commercial, industrial, institutional and household can dramatically reduce demands on both wastewater and drinking water treatment plants.

Appendix 2:
[Public Act 286 of 2000]
Natural Resources And Environmental Protection Act (Excerpt)
Act 451 of 1994

324.3112a Discharge of untreated sewage from sewer system; notification; duties of municipality; legal action by state not limited; penalties and fines; ““partially treated sewage”” and ““sewer system”” defined.

Sec. 3112a. (1) If untreated sewage or partially treated sewage is discharged from a sewer system onto land or into the waters of the state, the municipality responsible for the discharge shall immediately, but not more than 24 hours after the discharge begins, notify the department; local health departments as defined in section 1105 of the public health code, 1978 PA 368, MCL 333.1105; a daily newspaper of general circulation in the county or counties in which a municipality notified pursuant to subsection (3) is located; and a daily newspaper of general circulation in the county in which the municipality responsible for the discharge is located of all of the following: (a) Promptly after the discharge starts, by telephone or in another manner required by the department, that the discharge is occurring.

(b) At the conclusion of the discharge, in writing or in another manner required by the department, all of the following: (i) The volume and quality of the discharge as measured pursuant to procedures and analytical methods approved by the department.

(ii) The reason for the discharge.

(iii) The waters or land area, or both, receiving the discharge.

(iv) The time the discharge began and ended as measured pursuant to procedures approved by the department.

(v) Verification of the municipality's compliance status with the requirements of its national pollutant discharge elimination system permit and applicable state and federal statutes, rules, and orders.

(2) Upon being notified of a discharge under subsection (1), the department shall promptly post the notification on its website.

(3) Each time a discharge occurs under subsection (1), the permittee shall test the affected waters for E. coli to assess the risk to the public health as a result of the discharge and shall provide the test results to the affected local county health departments and to the department. The

testing shall be done at locations specified by each affected local county health department but shall not exceed 10 tests for each separate discharge event. The requirement for this testing may be waived by the affected local county health department if the affected local county health department determines that such testing is not needed to assess the risk to the public health as a result of the discharge event.

- (4) A municipality that operates a sewer system that may discharge untreated sewage or partially treated sewage into the waters of the state shall annually contact other municipalities whose jurisdictions contain waters that may be affected by the discharges. If those contacted municipalities wish to be notified in the same manner as provided in subsection (1), the municipality operating the sewer system shall provide that notification.
- (5) A municipality that is responsible for a discharge of untreated sewage or partially treated sewage from a sewer system into the waters of the state shall comply with the requirements of its national pollutant discharge elimination system permit and applicable state and federal statutes, rules, and orders.
- (6) This section does not authorize the discharge of untreated sewage or partially treated sewage into the waters of the state or limit the state from bringing legal action as otherwise authorized by this part.
- (7) The penalties and fines provided for in section 3115 apply to a violation of this section.
- (8) As used in this section: (a) ““Partially treated sewage”” means any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is not treated to national secondary treatment standards for wastewater or that is treated to a level less than that required by the municipality's national pollutant discharge elimination system permit.
(b) ““Sewer system”” means a sewer system designed and used to convey sanitary sewage or storm water, or both.

History: 1994, Act 451, Eff. Mar. 30, 1995 ;--Am. 1998, Act 3, Imd. Eff. Jan. 30, 1998 ;--Am. 2000, Act 286, Imd. Eff. July 10, 2000 .

Popular Name: Act 451

Appendix 3:
[Public Act 287 of 2000]
Natural Resources And Environmental Protection Act (Excerpt)
451 of 1994

324.3112c Discharges of untreated or Act partially treated sewage from sewer systems; list of occurrences; ““partially treated sewage”” and ““sewer system”” defined.

Sec. 3112c. (1) The department shall compile and maintain a list of occurrences of discharges of untreated or partially treated sewage from sewer systems onto land or into the waters of the state that have been reported to the department or are otherwise known to the department.

This list shall be made available on the department's website on an ongoing basis. In addition, the department shall annually publish this list and make it available to the general public. The list shall include all of the following: (a) The entity responsible for the discharge.

(b) The waters or land area, or both, receiving the discharge.

(c) The volume and quality of the discharge.

(d) The time the discharge began and ended.

(e) A description of the actions the department has taken to address the discharge.

(f) Whether the entity responsible for the discharge is subject to a schedule of compliance approved by the department.

(g) Any other information that the department considers relevant.

(2) As used in this section: (a) ““Partially treated sewage”” means any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is not treated to national secondary treatment standards for wastewater or that is treated to a level less than that required by a national pollutant discharge elimination system permit.

(b) ““Sewer system”” means a sewer system designed and used to convey sanitary sewage or storm water, or both.

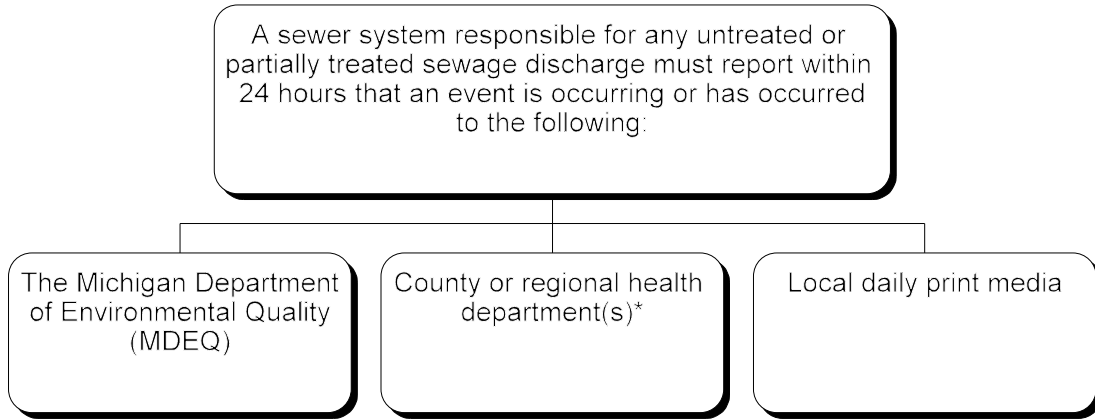
History: Add. 2000, Act 287, Imd. Eff. July 10, 2000 .

Popular Name: Act 451

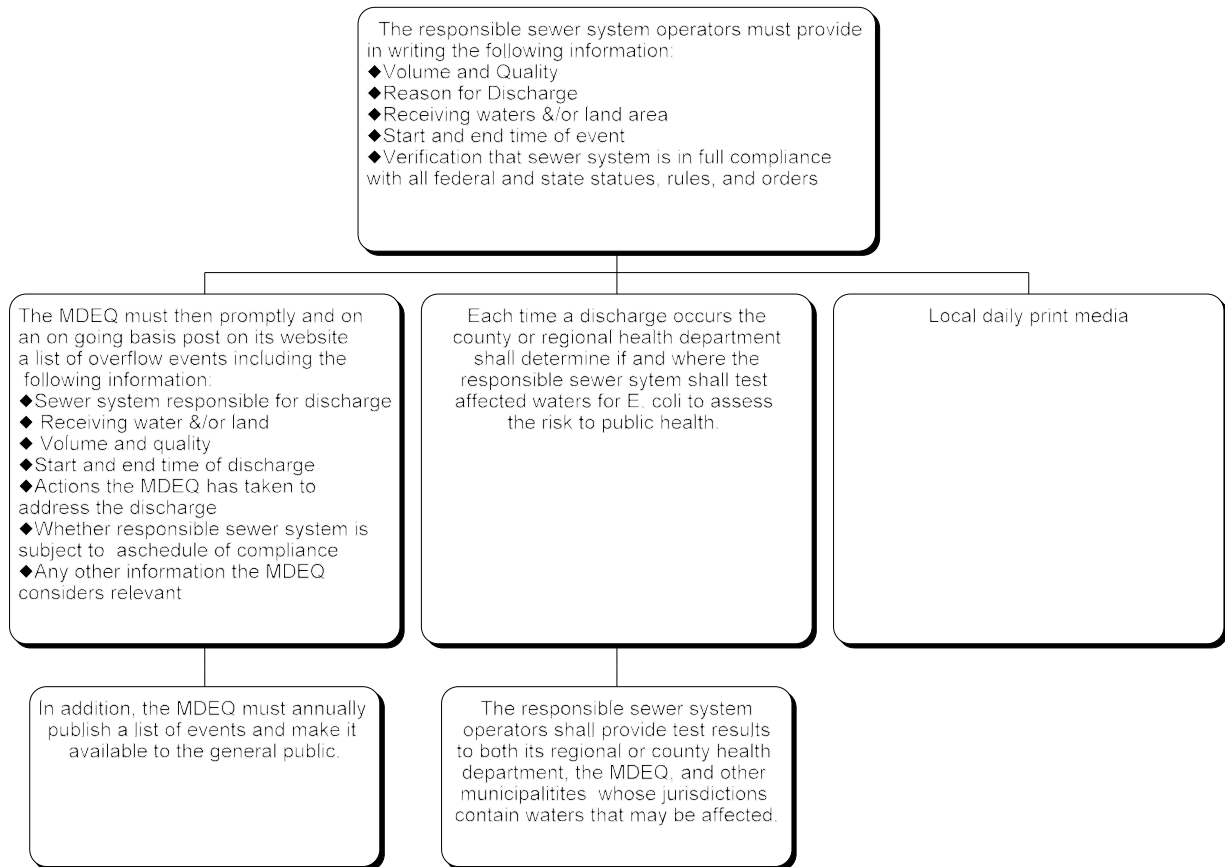
APPENDIX 4:

Michigan's Reporting System for CSO's and SSO's

When an overflow event occurs:



At the conclusion of an event:



*Sewer systems are to annually contact other municipalities whose jurisdictions contain waters that may be affected by its discharges to determine if those municipailites wish to be notified of discharge events.

Appendix 5: Health Department Responses to FOIA Request

<u>REGIONAL/COUNTY HEALTH DEPT</u>	<u>COUNTIES</u>	<u>RESPONDED</u>
Allegan County H.D.	Allegan	Y
Barry-Eaton District H.D.	Barry, Eaton	Y
Bay County H.D.	Bay	Y -fee-paid
Benzie-Leelanau District H.D.	Benzie, Leelanau	Y
Berrien County H.D.	Berrien	Y
Branch-Hillsdale-St.Joseph CHA	Branch, Hillsdale, St. Joseph	Y
Calhoun County H.D.	Calhoun	Y
Central Michigan District H.D.	Arenac, Claire, Gladwin, Isabella, Osceola, Roscommon	N
Chippewa County H.D.	Chippewa	N
City of Detroit H.D.	City of Detroit	N
Delta & Menominee Counties H.D.	Delta, Menominee	Y
Dickinson-Iron District H.D.	Dickinson, Iron	Y fee-didn't pay
District Health Department #10	Newaygo, Oceana, Mason, Lake, Manistee, Wexford, Missaukee, Kalkaska, Crawford, Mecosta	Y
District Health Department #2	Oscoda, Alcona, Ogemaw, Iosco	Y
District Health Department #4	Alpena, Cheboygan, Montmorency, Presque Isle	Y
Genessee County H.D.	Genessee	Y
Grand Traverse County H.D.	Grand Traverse	Y
Huron County H.D.	Huron	Y
Ingham County H.D.	Ingham	Y
Ionia County H.D.	Ionia	Y-fee-didn't pay
Jackson County H.D.	Jackson	N
Kalamazoo County Human Service Dept.	Kalamazoo	Y
Kent County H.D.	Kent	Y-fee-paid
Lapeer County H.D.	Lapeer	Y
Lenawee County H.D.	Lenawee	Y
Livingston County H.D.	Livingston	Y
Luce-Mackinac-Alger-Schoolcraft H.D.	Luce, Mackinaw, Alger, Schoolcraft	N
Macomb County H.D.	Macomb	Y
Marquette County H.D.	Marquette	N
Midland County H.D.	Midland	N
Mid-Michigan District H.D.	Montcalm, Gratiot, Clinton	Y-fee-didn't pay
Monroe County H.D.	Monroe	Y-fee-paid
Muskegon County H.D.	Muskegon	Y
Northwest MI Community Health Agency	Antrim, Charlevoix, Emmet, Otsego	N
Oakland County H.D.	Oakland	Y
Ottawa County H.D.	Ottawa	Y
Saginaw County H.D.	Saginaw	Y
Sanilac County H.D.	Sanilac	Y
Shiawassee County H.D.	Shiawassee	N
St. Clair County H.D.	St. Clair	Y
Tuscola County H.D.	Tuscola	Y
Van Buren-Cass District H.D.	Van Buren, Cass	Y
Washtenaw County H.D.	Washtenaw	Y
Wayne County H.D.	Wayne	Y
Western Upper Peninsula District H.D.	Gogebic, Ontonagon, Houghton, Keewenaw, Baraga	Y-fee-didn't pay

"Fee" means the health department required a fee to obtain requested information.

"Paid" means CWA and CWF chose to pay the fee associated with request.

"Did not pay" means CWA and CWF chose not to pay fee and thus did not obtain data.

Appendix 6: SAMPLE CSO REPORTING FORM

Combined Sewer Overflow Reporting Form				
Report Submitted by:		Date:		
Municipality:				
Address:				
City, Zip:				
County:				
Name:		Position:		
Telephone Number:		Fax:		
E-mail Address:				
Discharge Information				
Location of discharge:				
Outfall:				
Outfall:				
Outfall:				
Outfall:				
Outfall:				
Outfall:				
Start date and time:	/	/01	:	AM or PM
End date and time:	/	/01	:	AM or PM
Precipitation type and measurement	Rain	Snow	Sleet	Other: _____
	Amount: _____ inches			
Volume in gallons:				
Quality of discharge:	Treated sewage	Untreated sewage	Storm Runoff	Groundwater
	Other: _____			
Waters impacted:				
Land impacted:				
Response Information				
Initial notification (within 24 hours)	Health Dept.	MDEQ	Media	Other:
Time Notified:	__M	: __M	: __M	: __M

Was the public directly advised of the affected waters and possible health risks? If yes, specify the method; if no, explain why:	Yes No
Were actions taken to stop or minimize the discharge? If yes, specify the actions; if no, explain why.	Yes No
Were actions taken to minimize the impacts of the discharge? If yes, explain the actions; if no, explain why.	Yes No
Were actions taken to prevent reoccurrence of the discharge? If yes, specify the actions; if no, explain the failure to do so:	Yes No
Is the municipality in compliance with its NPDES discharge permit:	Yes No
NPDES Permit Number	
Additional Comments:	

This report must be submitted to the appropriate county or regional health department, the Michigan Department of Environmental Quality's Surface Water Quality Division, and a local daily (or dailies) print media of general circulation.

Appendix 7:

The Bill is Coming Due for Michigan's Neglected Water Infrastructure

Nationwide, 75 percent of the capital investment in wastewater and drinking water infrastructure is buried under ground. Much of this pipe was laid during the 1950s and 1960s as suburban areas developed rapidly following World War II. These pipes, which are now 40 to 50 years old, were connected to drinking water and wastewater pipes that date back to the late 1800s and early 1900s.¹

As of 2000, an estimated \$1.7 billion will be required to address the state's remaining CSO problems over the following 12 years. The full magnitude of the SSO problems in Michigan is unknown but preliminary estimates indicate that several hundred million dollars will be needed to address known problems over the next decade.²

The burden for capital improvements to sanitary sewer infrastructure has fallen disproportionately on older urban areas in the state, which can least afford them. In many of these, the tax base is shrinking and average household income is below the state average. Urban sprawl increase the need for sanitary sewer infrastructure and ultimately raises the cost per household for maintenance of systems that serve less dense populations in the suburbs.³

Much needed repairs and upgrades have been neglected for generations and now the bill is coming due. To date, Governor Engler and others in positions of power within the state legislature have not actively worked to alert the public to the problems posed by our decaying infrastructure, and they have not played a leadership role in averting this looming crisis. Last summer's problems with Detroit's drinking water system made front page news as the dry spell placed tremendous demands on pipes, which literally crumbled under the systems water usage. Scenarios such as this will continue occurring -- and will likely intensify -- on both the drinking water and the wastewater fronts unless significant investments are made within the next few years.

¹"The Infrastructure Investment Gap Facing Drinking Water and Wastewater Systems," Steve Albee, Project Director, Gap Analysis, U.S. EPA presented to the Association of Metropolitan Water Agencies, St. Pete Beach, Florida, October 24, 2000

² "Managing the Cost of Clean Water: An Assessment of Michigan's Sewer Infrastructure Needs," Public Sector Consultants, Inc. and Environmental Consulting Technology, Inc. for Clean Water Michigan, October 2000

³ Ibid

The MDEQ is responsible for administering the state program designed to aid municipalities with the costs of improving sewage infrastructure. The program, known as the Clean Water State Revolving Fund (SRF) provides low interest loans to communities, but these funds do not go far enough to assist all the municipalities in need of such assistance. For example, only 9 of 29 municipalities that applied for loans in 2000 received state aid. Of the 20 municipalities that applied but were rejected, 6 were under an enforcement order for noncompliance with their NPDES permit⁴. For these six municipalities, there are very few alternatives to help fund improvements for their infrastructure. Without such funding, the six municipalities will likely continue to have sewage overflows.

This lack of funding also makes it difficult for municipalities not under an enforcement order to obtain the aid that would foster preventive, routine system maintenance. The office of the Auditor General's report states:

"If SRF is unable to meet the needs of the municipalities under enforcement orders, the scoring system leaves little chance that funds will be available for needed changes in municipalities not under enforcement orders. If this situation discourages municipalities from taking action before they experience problems serious enough to warrant an enforcement order, it may result in the need for more expensive modifications or emergency repairs in the future."⁵

Non-engineering solutions designed to divert stormwater from sewer systems should be prioritized in community planning efforts. Examples of these approaches include: protecting and restoring open spaces, wetlands and other filter strips; disconnecting all downspouts or gutters from sewer systems and ensure that water draining from them is directed toward vegetation (rather than onto cement that leads to the sewer system's storm drain); and water efficiency or conservation practices such as replacing older toilets, faucets, and showerheads with lowflow models.

⁴ Office of Auditor General, Performance Audit of Sewage Issues of Department of Environmental Quality, October 2000

⁵ Ibid

Appendix 8: Water Infrastructure Network

The following organizations comprise the Water Infrastructure Network (WIN) -- a broad-based coalition of local elected officials, drinking water and wastewater service providers, state environmental and public health administrators, engineers and environmentalists dedicated to preserving and protecting the health, environmental and economic gains that America's drinking water and wastewater infrastructure provides.

American Coal Ash Association
American Concrete Pipe Association
American Concrete Pressure Pipe Association
American Consulting Engineers Council
American Public Works Association
American Society of Civil Engineers
American Water Works Association
Associated General Contractors of America
Association of California Water Agencies
Association of Metropolitan Sewerage Agencies
Association of Metropolitan Water Agencies
California Rebuild America Coalition
Clean Water Action
Environmental and Energy Study Institute
Environmental Business Action Coalition
International Union of Operating Engineers, AFL-CIO
National Association of Counties
National Association of Flood and Stormwater Management Agencies
National Association of Towns and Townships
National League of Cities
National Rural Water Association
National Society of Professional Engineers
National Urban Agriculture Council
Prestressed/Precast Concrete Institute
Rural Community Assistance Program, Inc.
Water Environment Federation
WaterReuse Association
Western Coalition of Arid States