



Preserving The Environment •
Improving Water Quality

Memorandum

Audit Response

TO: MMSD Commissioners
FROM: Kevin L. Shafer, P.E. *KS*
Executive Director
DATE: September 23, 2002
SUBJECT: Response Action Plan to LAB Audit

At the September 9 Policy, Finance & Personnel Committee meeting, State Auditor Janice Mueller gave MMSD Commission members an overview of the Legislative Audit Bureau's recent audit of MMSD.

As I mentioned at that meeting, in all of the instances where the LAB has raised issues, MMSD already had projects started to improve those specific operations prior to the initiation of the audit. As you know, some of the sewer projects, such as the Northwest Side Relief Sewer, will not be completed for several years. In the meantime, District staff believes it is important to implement several short-term steps aimed at reducing the volume of sewer overflows that occur.

These steps include:

- Implement a phased disconnection of downspouts in the combined sewer area over the next several years. During 2002 and the first half of 2003, MMSD will work with City of Milwaukee, Milwaukee Public Schools and Village of Shorewood officials to target municipal buildings for the disconnection of downspouts.

Starting in 2004, MMSD will work with Milwaukee and Shorewood to target 10,000 homes per year to have residents disconnect their downspouts. The District intends to offer residents the same program currently being used in downspout disconnection demonstration projects in the City of Milwaukee. Under that program, residents can be reimbursed \$50 for each downspout they disconnect, with a maximum paid to each homeowner being \$100. In 2007, any downspouts that are still connected will be mandated to be disconnected with no reimbursement from MMSD.

In all, there is an estimated 45,000 homes and businesses in the combined sewer area that would be targeted for downspout disconnection. A similar program in the City of Saint Paul, Minn., in the mid-1980s resulted in the disconnection of 99 percent of downspouts and reduced sewer flows at least 20 percent in heavy rains.

District staff will also work with Milwaukee, MPS and Shorewood officials to determine if there are any opportunities on the public buildings for either green roofs, rain barrels to collect water from downspouts or roof restrictors which allow water to be stored on a roof during a rainstorm. All of these items will reduce the surface runoff that gets to the sewer system.

- Inspect all sewers near the combined sewer area in the City of Milwaukee and Shorewood to determine if there are any storm sewers connected that can be rerouted

to area waterways. For example, during the District's Central Metropolitan Interceptor Sewer Project, a City of Milwaukee storm sewer near Miller Brewing Co. was rerouted to the Menomonee River. This eliminated up to 21 million gallons of stormwater a year from entering the Deep Tunnel System.

- District staff is working with the State of Wisconsin on the reconstruction of the Marquette Interchange to install a system that would allow the first flush of water during a rain storm to be conveyed to the Deep Tunnel System, but the remainder to be rerouted to the Menomonee River. This would allow the District to capture the most polluted of the stormwater, but reduce the overall volume of stormwater that is conveyed to the Deep Tunnel during a heavy rain storm.
- Stormwater Trees program – a great deal of information is available that says a proper tree canopy will significantly reduce the runoff from an urban setting. In fact a study by the American Forests Organization says that a 35% tree canopy can reduce the runoff potential by 12.8%. Additional information will be developed to determine the impact a tree program might have on surface runoff in the District. A full report will be forwarded to the Commission at a future date.

Other actions that I plan to initiate in response to issues raised in the audit include:

- A mid-term performance audit of United Water Services, which is in the fifth year of a 10-year contract. This effort will be led by an independent national wastewater expert that I am currently working to secure. This expert will work closely with the District's Technical Environmental Committee, which was setup in 1998 to help MMSD oversee its contract with United Water. Its members include representatives from the Wisconsin Department of Natural Resources, Metropolitan Milwaukee Association of Commerce, University of Wisconsin-Milwaukee and local businesses and environmental groups.

I expect to be able to bring a contract for MMSD Commission approval to your October or November meeting.

- An analysis by the Army Corps of Engineers of the cost-benefit of the Lincoln Creek Environmental Restoration and Flood Control Project. The Army Corps completed a similar study in the mid-1990s, but during this analysis the federal agency would compare the cost of the project with all of the benefits it created, including increase in property values in neighborhoods near the 9-mile long creek, the recreational opportunities created, the environmental benefits, along with the fact that residents who were removed from the 100-year floodplain will no longer need flood insurance.
- MMSD staff, led by Budget Manager Steve Kreklow and Technical Services Director Michael Martin, will review all District procedures for planning and estimating costs on both conveyance and watercourse projects to develop recommendations to improve cost estimating and reporting.

If you have any questions, please let me know.

Plan proposed to reduce overflows

The Milwaukee Metropolitan Sewerage District has proposed a short-term action plan to help reduce the volume of sewer overflows, including a plan for the disconnection of downspouts in the combined sewer area in Milwaukee and Shorewood.

MMSD Executive Director Kevin Shafer said the action plan was developed in response to the recent State Legislative Audit Bureau report on the District and will implement actions to reduce the volume of sewer overflows over the next several years. All of the initiatives need approval by the MMSD Commission.

The District's Deep Tunnel System has substantially reduced the frequency and volume of both combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs). After its completion, the average annual volume of SSOs was reduced by 1.7 billion gallons per year, or 93.4 percent, while the average annual volume of CSOs was reduced by 5.5 billion gallons per year, or 78.3 percent.

Shafer said MMSD wants to further reduce the number and volume of sewer overflows. The District is building several conveyance projects, including the Northwest Side Relief Sewer, which will add 88 million gallons of storage.

However, those projects will take several years to build and District staff believes it is important to implement several short-term projects aimed at reducing the volume in the small number of sewer overflows that occur.

"The projects we are building will continue to reduce the risk of sewer overflows, but it takes time to build those projects and we want to have an impact on the volume sooner," Shafer said.

The projects include:

- Implementation of a phased disconnec-

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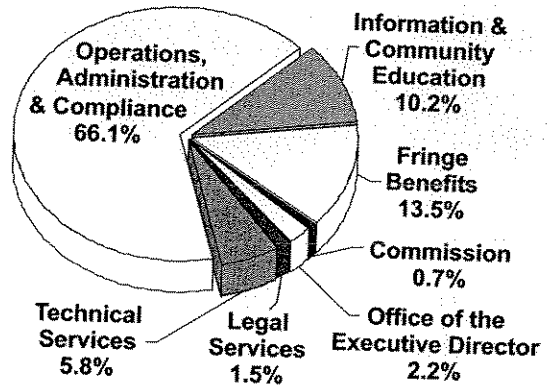
Proposed O&M budget holds user charge increase to rate of inflation

The Milwaukee Metropolitan Sewerage District has proposed a \$57.6 million Operation & Maintenance Budget for 2003 that would allow the District to limit the increase in its user charge billings to 1.8 percent, equal to the 2001 rate of inflation in the Milwaukee area.

The total amount of residential and commercial user fees would be about \$42.7 million, an increase of about \$750,000 from 2002. The average 2002 District residential charge was \$71.15, a decrease from the 2001 charge of \$72.01. The 2003 charges to communities will vary depending on population and flow data not yet available. Prior to the signing of the District's competitive contract, the average District residential charge was about \$85.

Kevin Shafer, MMSD executive director, said the proposed budget meets the MMSD Commission's goal of limiting any increase in user charge billings to the rate of inflation as a result of the District's

2003 Expenditures by Division



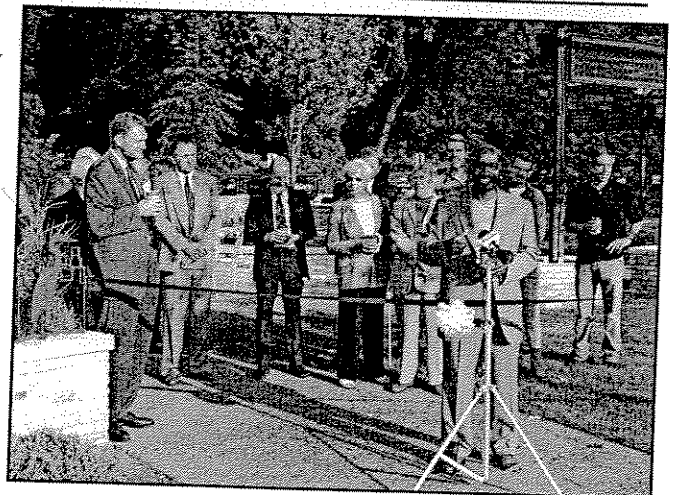
The proposed 2003 Operation & Maintenance Budget meets the MMSD Commission's goal of limiting any increase in user charge billings to the rate of inflation.

competitive contract with United Water Services.

"We have worked very hard to reduce our expenses and limit any overall increase in user charges caused by lowering interest income and rising health care costs," Shafer said. "Milwaukee-area businesses and residents have told us how

Continued on page 8

MMSD Commission Chairman Antonio Riley is joined by District Commissioners, Milwaukee Mayor John Norquist and others during a Sept. 9 ribbon-cutting ceremony at the Milwaukee River Flushing Station. The new cafe/education center is attracting thousands of visitors and good reviews from customers and public officials.



Proposed O&M budget limits user charge increases

Continued from page 1

important it is for us to maintain stable, predictable user charge rates."

Overall, division expenses increased by about \$467,000 from 2002's Operation & Maintenance Budget. In addition, health care expenses for employees and retirees increased \$1.8 million and interest income is expected to decrease by about \$800,000.

"We have worked very hard to reduce our expenses and limit any overall increase in user charges caused by lowering interest income and rising health care costs."

— Kevin Shafer,
MMSD
executive director

Budget initiatives include:

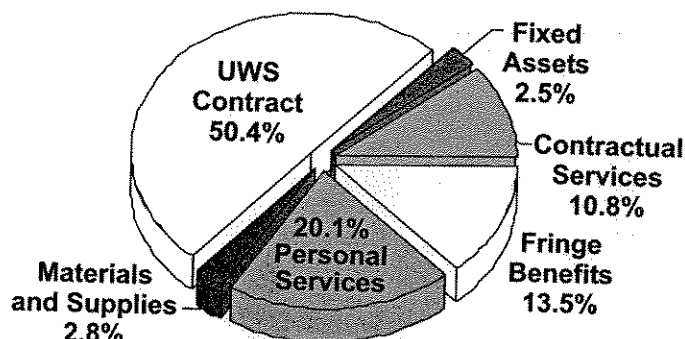
- Due to continuing skyrocketing health care costs, the District intends to implement in July 2003 a new health care plan design for management and non-represented employees, and retirees. The plan design changes are intended to increase the cost-consciousness of plan participants without extensive shifting and are expected to reduce the future growth rate of health care expenses.

- The addition of seven new positions in the Technical Services Division, six of which are inspec-

tor aides to help implement the District's extensive construction program. In all, the District will increase its employment by six to 231.5.

- The continuation of the 2020 Facilities Plan in which District staff is developing a comprehensive plan for its facilities, the growth needs of the community and the continued improvement

2003 Expenditures by Category



Budget initiatives include measures to address the skyrocketing costs of health care for employees and retirees, which increased \$1.8 million over the 2002 budget. The District plans to implement a new health care plan in mid 2003.

of water quality in the Milwaukee area through 2020. District staff will be leading an extensive public education and input process that will get underway in 2003.

- A study team has been set up to explore ways to increase revenues for Milorganite, the District's fertilizer product, which produced about \$5.8 million in annual net revenue in 2001. In recent years, Milorganite sales have been steady or declined slightly as the District has been faced with increasing competition and a struggling national fertilizer market.

The MMSD Commission will hold two public hearings on the proposed Operation & Maintenance Budget — Oct. 21 at 6 p.m. and Oct. 28 at 8:30 a.m. — at the District's headquarters.

District to work with Milwaukee, Shorewood to disconnect downspouts

Continued from page 1

tion of downspouts in the combined sewer area of the City of Milwaukee and the Village of Shorewood over the next several years. During 2002 and 2003, plans call for review of municipal buildings for the disconnection of downspouts. Starting in 2004, MMSD will work with Milwaukee and Shorewood to target 10,000 homes per year to have residents disconnect their downspouts through a planned reimbursement program.

In all, there are an estimated 45,000 homes and businesses in the combined sewer area that would be targeted for downspout disconnection. In 2007, any downspouts still connected will be mandated to be disconnected with no reimbursement from MMSD.

- District staff will work with Milwaukee, MPS and Shorewood officials to determine if there are opportunities on public build-

ings for either a green roof, rain barrels to collect water from downspouts or roof restrictors which allow water to be stored on a roof during a rainstorm.

An estimated 45,000 homes and businesses in the combined sewer area would be targeted for downspout disconnection.

- Inspect all sewers near the combined sewer area to determine if there are any storm sewers connected that can be rerouted to waterways.

- District staff is working with the state on the reconstruction of the Marquette Interchange to install a system that would allow the first flush of water during a rainstorm to be conveyed to the Deep Tunnel System, but the remainder to be rerouted to the Menomonee River.

In addition, Shafer said the District will undertake a mid-term performance audit of United Water Services, which is in the fifth year of a 10-year contract. This effort will be led by an independent national wastewater expert that the District currently is working to secure.



TO: JERRY JAROME
FROM: Jim Kohl

CORRESPONDENCE/MEMORANDUM

State of Wisconsin
Department of Natural Resources

DATE: September 1, 1995
TO: WRM File
FROM: Steve Galarnau WRM
SUBJECT: Algas Odor Complaint Along Lake Michigan - Milwaukee

FID # 241010000
Program DW
Category Filter
FILE REF: 3200

On August 15, 1995 Don Behm, a reporter with the Milwaukee Journal/Sentinel, inquired about odor complaints due to decaying algae along Lake Michigan shores. He was specifically interested in the shoreline south of Linnwood, adjacent to where the gun club used to be up to "picnic point". He wanted to know why it was there and whether the Linnwood Water Filtration Plant backwash water was the cause.

I inspected the site with Don Behm. Large amounts of Cladophora algae were observed washed up along the shoreline and adjacent waters. The decay carried a pungent sewage odor. To determine whether the Linnwood Filtration Plant backwash water was resulting in excessive algae growth I went to Linnwood to speak with Pat Klappa the water chemist for the Linnwood facility (Don Behm was present). Pat showed us the outfall location, which is at the seawall on the south side of the facility. Pat shared the water chemistry data results that the Department had requested to date. She further agreed to collect dissolved phosphorus and total phosphorus samples from the backwash, as it is being actively discharged into Lake Michigan, for at least five separate dates as per my request.

On August 17, 1995 John Nelson and I canoed the nearshore region of Lake Michigan and observed the presence of Cladophora to be very extensive between Linnwood and picnic point. This survey was to determine the water quality condition away from the immediate shoreline and to determine if any obvious nutrient sources could be observed from the water. The survey was not to establish the areal extent of Cladophora algae along southeast Wisconsin Lake Michigan shoreline. Anecdotal observations of nuisance algae were and have been reported along the Lake Michigan shoreline this year (this was not passed on to Don Behm on Aug. 15th because I was not aware that there had been complaints at that time).

Water Chemistry Results

As of August 30, 1995 I have received 8 sample results for the backwash water and 5 concurrent raw water intake samples (which were not requested but are appreciated). Pat has indicated that they will continue to collect additional data to establish a more complete data set.

The water chemistry results from the raw water (water drawn into the plant prior to any treatment) and the backwash water from the flushing of the filter beds. The filter beds are

backwashed once or twice a day with total discharge of 2.5 mgd or less. The results of dissolved phosphorus and total phosphorus concentrations are shown in Table 1 and graphically in Figure 1.

In nearly all cases, that both raw water and backwash water were tested, phosphorus concentrations were higher in the backwash. Given the concentration that occurs during filtration of raw water, it is expected that the backwash water would have a higher concentration of phosphorus. The average dissolved phosphorus and total phosphorus concentrations for the raw water was 0.009 mg/l and 0.024 mg/l respectively (n=5). The average dissolved phosphorus and total phosphorus concentrations for the backwash water was 0.019 mg/l and 0.034 mg/l respectively (n=8). The maximum concentration of dissolved and total phosphorus observed in the backwash water being discharged to Lake Michigan was 0.036 mg/l and 0.081 mg/l respectively.

Probable factors causing of excessive Cladophora growth in 1995

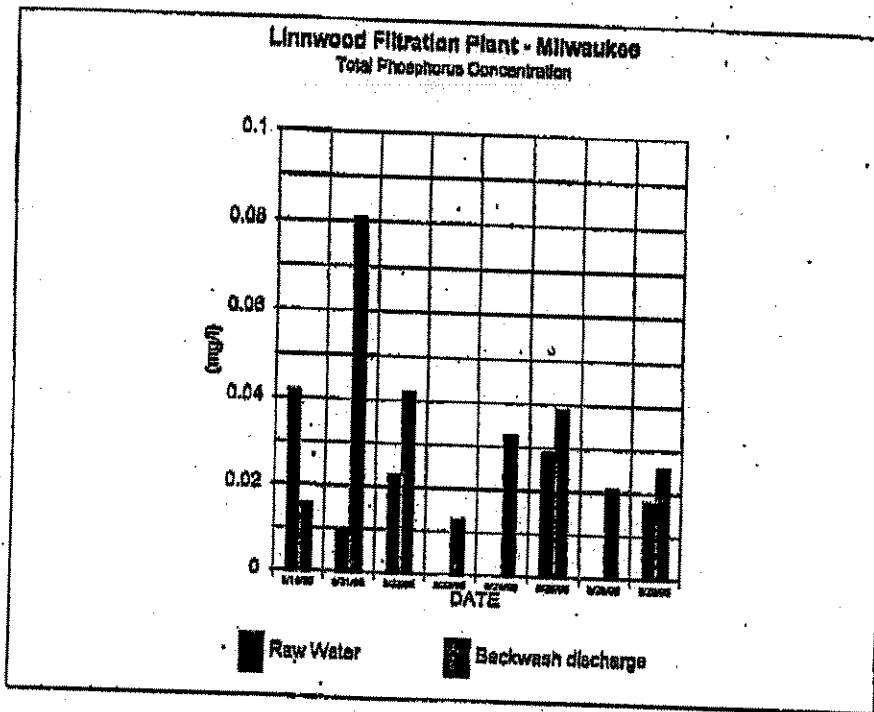
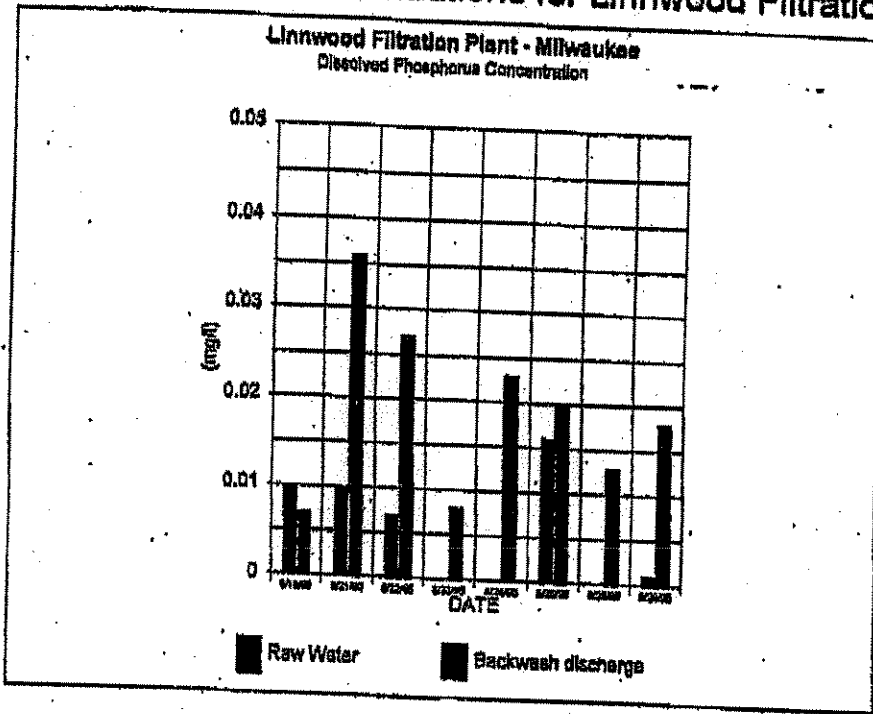
Cladophora occurs naturally in the nearshore waters of Lake Michigan. Aside from the backwash discharge from Linnwood Filtration Plant, there has been riprap placed along the lake at the old gun club site which provides more suitable substrate for Cladophora growth. Furthermore the gun club site does not have adequate erosion control practices and has not been revegetated consequently sediment and nutrients runoff into Lake Michigan from this site. (The problem does not appear to be great but some runoff was apparent and the potential for substantial runoff during a large storm exist). Zebra mussels are very abundant in the nearshore region of Lake Michigan and have improved water clarity enabling more extensive attached algal growth. Also as zebra mussels die and wash-up along the shores they decay causing an odor and releasing nutrients. Finally we have been having a very warm, sunny summer.

Hence, I do not believe that the Linnwood Filtration Plant is the sole nor primary cause of the extensive Cladophora growth. The backwash discharge does concentrate phosphorus from the water intake and release in the nearshore region but the concentrations are low. I recommend continued monitoring of the backwash discharge for phosphorus and examinations into limiting and reducing the levels of phosphorus in the discharge.

Table 1: Phosphorus results from the City of Milwaukee - Linnwood Water Filtration Plant, raw water intake and backwash water.

DATE	SAMPLE SITE	DISSOLVED PHOSPHORUS CONCENTRATION (MG/L)	TOTAL PHOSPHORUS CONCENTRATION (MG/L)
08/18/95	RAW	0.010	0.042
	BACKWASH	0.007	0.016
08/21/95	RAW	0.010	0.010
	BACKWASH	0.036	0.081
08/22/95	RAW	0.007	0.023
	BACKWASH	0.027	0.042
08/23/95	RAW	N/A	N/A
	BACKWASH	0.008	0.013
08/24/95	RAW	N/A	N/A
	BACKWASH	0.023	0.033
08/25/95	RAW	0.016	0.029
	BACKWASH	0.020	0.039
08/28/95	RAW	N/A	N/A
	BACKWASH	0.013	0.021
08/29/95	RAW	0.001	0.018
	BACKWASH	0.018	0.026

Figure 1: Phosphorus concentrations for Linnwood Filtration Pla



NUISANCE ALGAE ALONG MILWAUKEE SHORE SUBCOMMITTEE MEETING

 FID # 24101000

 Program 1W0

Category _____

ATTENDEES: (in alphabetical order)

Michael Bauer, Center for Great Lakes Studies
 Art Brooks, Center for Great Lakes Studies
 Jim Goules, Milwaukee County Parks
 Patricia Klappa, Milwaukee Water Works
 Mark Munzenmeyer (for John Wiesinger), Milwaukee Municipal Sewage District
 Jack H. Takarla, Milwaukee County Parks-Aquatic
 Bill Waldron, Milwaukee County Parks

MEETING DATE: August 2, 1996

The meeting was called to order at 10:06 AM by Art Brooks. Dr. Brooks and Mr. Bauer went out on Lake Michigan on August 1, 1996 to determine the status of the zebra mussel population, the depth of light penetration and the extent of the *Cladophora* growth. Sampling was started at the north corner of the breakwall behind the Linnwood Filtration Plant and proceeded south. Sampling started at the breakwall and continued out into the lake to a distance of 50 feet. There does not appear to be any sample of live *Cladophora* that is not attached to zebra mussels. At "Pionia Point," darker and lighter areas were observed in the water. The dark areas had *Cladophora* growth that appears to be dead and not attached to a substrate. If there is a northeast wind, the *Cladophora* would wash up on the beach. *Cladophora* does not seem to grow well in the harbor. Phosphate determinations will be done on the collected water samples. The persulfate digestion method will be used to determine total phosphorus and the ascorbic acid method will be used to determine the amount of total dissolved phosphorus. The Secchi disc depth was 3-4 meters. Light penetration is about three times the Secchi depth. *Cladophora* growth is not just occurring south of Linnwood Filtration Plant. There appears to be no direct effect from Linnwood on the growth of *Cladophora*.

Mr. Bauer reported on the progress of his experiment. The containers held filtered lake water, filtered lake water with 10µM PO₄, filtered lake water with 20µM PO₄, filtered lake water with 20% outfall water, and filtered lake water with 50% outfall water. The *Cladophora* in the containers of filtered lake water showed zoosporogenesis and branching. The containers with the addition of 10µM PO₄ showed *Cladophora* branching and reproducing. The addition of 20µM PO₄ produced more branching and reproduction. This clearly shows that phosphate enhances the alga's growth. The addition of outfall water produced no change in the alga's filaments. Any alum in the outfall water appeared to coat the filaments and kill the alga. All of the shaken cultures showed more branching and reproduction. These results will be quantified.

Mr. Galarneau was unable to assess the *Cladophora* growth in Port Washington due to the heavy June rains damaging the beaches. He requests that any future meetings not be held on Fridays.

A question was raised as to why the beaches at South Shore, Doctor's Park and Grant Park do not have much of a problem from *Cladophora*. The physical aspects of Lake Michigan near Bradford Beach contribute to the accumulation of *Cladophora* in that area. The lake is shallow and forms an embayment near Bradford Beach.

Mr. Takarla reported on the amount of *Cladophora* removed from Bradford Beach over an eight day period from July 25 to August 1, 1996. The *Cladophora* was collected by manually raking of shovelling the beach area. The weight was determined by counting the number of wheelbarrow loads.

The approximate weight of a wheelbarrow load was known. The amount of *Cladophora* removed during this time was:

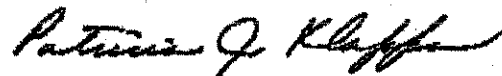
July 26	2200 pounds
July 27	2500 pounds
July 28	2000 pounds
July 29	1500 pounds
July 30	3000 pounds
July 31	2800 pounds
August 1	2000 pounds.

Over the eight day period, a total of 165 man-hours was needed to clean Bradford Beach. The *Cladophora* is placed into a hole and covered. It was suggested that a specific area be cleaned each day instead of the entire beach.

Beach closings are based on fecal coliform counts. The beaches have not been closed much this summer.

The subcommittee has decided that there is no further need to meet and has disbanded. The meeting was adjourned at 11:30 AM.

Submitted by,



Patricia J. Kleppa
Milwaukee Water Works

cc: Paul Bladzycki, Milwaukee Health Department
 Ted Bosch, Wisconsin Department of Natural Resources
 Michael D'Amato, Alderman, City of Milwaukee
 Pate de Arceaga, Milwaukee Health Department
 Steve Galarnsau, Wisconsin Department of Natural Resources
 Jim Goulee, Milwaukee County Parks
 Steve Gradus, Milwaukee Health Department
 Kevin Haley, Milwaukee County Parks
 Jerry Kaster, Center for Great Lakes Studies
 David Kroy, Milwaukee Health Department
 Carrie Lewis, Milwaukee Water Works
 Jim Lubner, LW-Sea Grant
 Dale Mejaki, Milwaukee Water Works
 Gary Mick, Milwaukee County Environmental Services
 RoseMary Oliveira, County Board of Supervisors, Milwaukee County
 Kevin P. O'Brien, Milwaukee County, DPW-Environmental Services
 Greg Pileraki, Wisconsin Department of Natural Resources
 Jim Plested, City of Milwaukee, Alderman O'Amato's office
 Penny Podell, County Board, County of Milwaukee
 Ajaib Singh, Milwaukee Health Department
 Eric Waldmer, Milwaukee Metropolitan Sewage District
 John Wiesinger, Milwaukee Metropolitan Sewage District

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Dale Mejaki	MWW	286-2802	286-2672	dmejaki@ci.mil.wi.us
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Bill Waldron	MCP	257-4505	257-6486	
John Wiesinger	MMSD	277-6374	277-0318	

ALGAE GROWING ON RESERVOIR WALLS



ALGAE IN WATER SUPPLIES

common tube which is attached at one end to the substrate. It is one of the first algae to develop in abundance in the cold water of streams and pools after the ice melts in early spring.

In reservoirs and lakes having rocky rather than sandy shores, *Cladophora* and other large filamentous algae often develop during the summer as extensive massive growths. When this material becomes detached by wave action and is thrown up on the shore, it may require immediate removal to prevent the development of septic odors (4).

Drastic measures often have to be taken to control the attached algae, especially if the growths are neglected until large quantities threaten to cause trouble. One city adapted a floor-cleaning machine, fitted with a cylindrical wire brush, for use in scraping the algal growth from the concrete floor of a 18 million gallon reservoir. The machine proved to be much more effective than hand scrapers in removing the attached portions of the algae from the more than 100,000 square feet of concrete. The detached algae were then flushed from the reservoir floor by streams of water from a fire hose (5). The use of chemicals to kill attached algae when they are present in quantity may not solve the

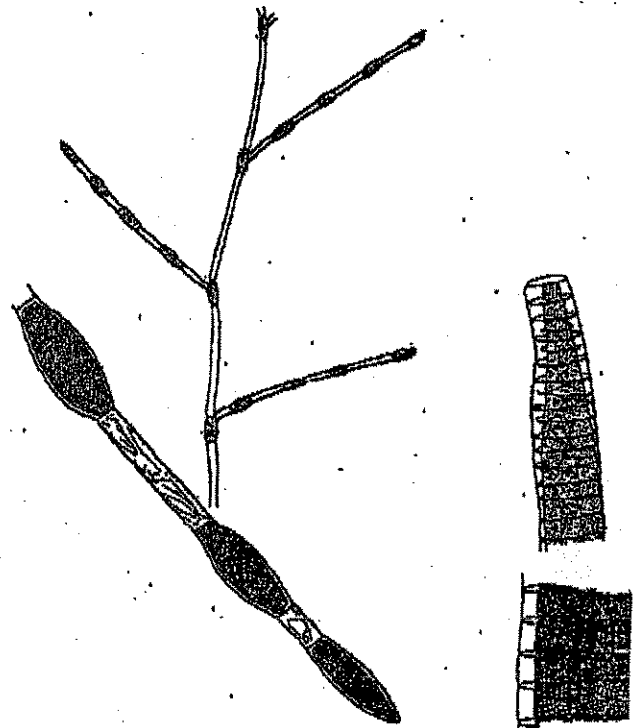
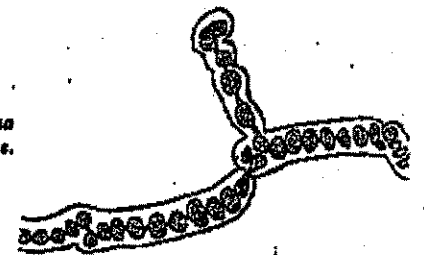
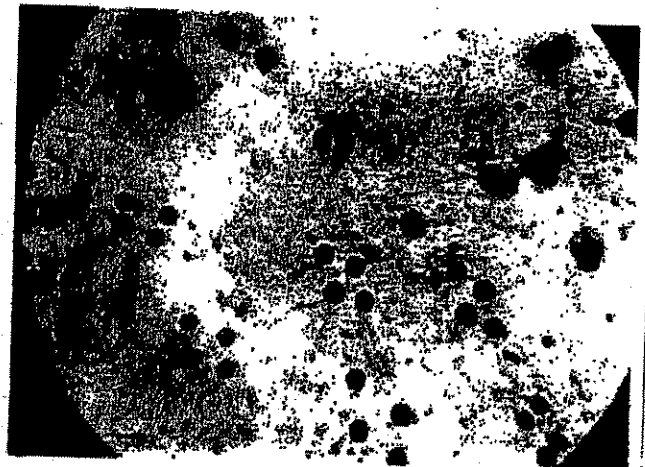
Figure 41.—*Pithophora oedogonia*.Figure 42.—*Schizomeris leibleinii*.

Table 10.—Algae Attached to Reservoir Walls

Group and algae	Plate or Figure
Blue-Green Algae (Myxophyceae):	
<i>Calothrix braunii</i>	6
<i>Lyngbya lagerheimii</i>	
<i>Lyngbya oeracea</i>	Fig. 30
<i>Nostoc pruniforme</i>	
<i>Oscillatoria tenuis</i>	6
<i>Phormidium retzii</i>	6
<i>Phormidium uncinatum</i>	6
<i>Stigonema minutum</i>	6
<i>Tolypothrix tenuis</i>	6
Green Algae (Nonmotile Chlorophyceae, Charophyceae):	
<i>Bulbochaete insignis</i>	6
<i>Chaetophora attenuata</i>	6
<i>Chaetophora elegans</i>	6
<i>Chara globularis</i>	6
<i>Cladophora crispata</i>	6
<i>Cladophora glomerata</i>	4
<i>Draparnaldia glomerata</i>	6
<i>Gloeoxytia gigas</i>	6
<i>Microspora amoena</i>	6
<i>Nitella flexilis</i>	6
<i>Oedogonium boseii</i>	
<i>Oedogonium grande</i>	
<i>Oedogonium suevicum</i>	6
<i>Palmella mucosa</i>	2
<i>Phytoecia botryoides</i>	6
<i>Pithophora oedogonia</i>	Fig. 41
<i>Rhizoclonium hieroglyphicum</i>	4
<i>Schizomeris leibleinii</i>	Fig. 42
<i>Stigeoclonium lubricum</i>	6
<i>Tetraspora galatinosa</i>	6
<i>Ulothrix zonata</i>	6
<i>Vaucheria geminata</i>	6
<i>Vaucheria sessilis</i>	Fig. 39
Red Algae (Rhodophyceae):	
<i>Audouinella violacea</i>	6
<i>Batrachospermum moniliforme</i>	6
<i>Compsopogon coeruleus</i>	6
Diatoms (Bacillariophyceae):	
<i>Achnanthes microcephala</i>	6
<i>Coenosis pediculus</i>	6
<i>Cymbella prostrata</i>	6
<i>Epithemia turgida</i>	6
<i>Gomphonema gaminatum</i>	6
<i>Gomphonema olivaceum</i>	6
<i>Rhizosiphonia curvata</i>	6

Figure 43.—*Stigonema hormoides*.Figure 44.—*Tetraspora*. Portion of colony showing cells grown in four. Pseudocells are barely visible on a few of the cells.

ALGAE IN WATER SUPPLIES

blue-green algae, together with others such as *Gomphosphaeria* (which now includes *Coelosphaerium*), *Cylindrospermum*, and *Rivularia* have a natural odor which is commonly described as "grassy." This often changes to the odor of nasturtium stems, probably as a result of oxidation.

Green algae are less often associated with tastes and odors in water. In fact, their growth may help to keep in check the blue-green algae and the diatoms and thus be a positive factor in the control of water quality. However, *Hydrodictyon* (water net), the desmid, *Staurastrum*, and the large

massive stone-warts, *Nitella* and *Chara*, may offend rather than help in this biological competition between types. *Dictyosphaerium* is regarded as one of the worst offenders among the green algae, giving a fishy, as well as a grassy to nasturtium odor (12). Some of the swimming green algae which are listed with the flagellates, including *Volvox*, *Pandorina*, and *Chlamydomonas*, are able to produce fishy odors.

Research is now being conducted at the Robert A. Taft Sanitary Engineering Center to determine what particular

Table 5.—Odors, Tastes, and Tongue Sensations Associated With Algae in Water

Algal genus	Algal group	Odor when algae are—		Taste	Tongue sensation
		Moderate	Abundant		
<i>Actinastrum</i>	Green		Grassy, musty		
<i>Anabaena</i>	Blue-green	Grassy, nasturtium, musty	Septic		
<i>Anabaenopsis</i>	Blue-green	Grassy	Grassy		
<i>Anacystis</i>	Blue-green	Grassy, nasturtium, musty	Septic	Sweet	
<i>Aphanizomenon</i>	Blue-green	Grassy, nasturtium, musty, Geranium, sploy	Septic	Sweet	Dry
<i>Asterionella</i>	Diatom	Fishy	Fishy		
<i>Ceratium</i>	Flagellate	Fishy	Septic	Bitter	
<i>Chara</i>	Green	Skunk, garlic	Spiced, garlic		
<i>Chlamydomonas</i>	Flagellate	Musty, grassy	Fishy, septic	Sweet	Slick
<i>Chloralla</i>	Green		Musty		
<i>Chrysochloris</i>	Flagellate		Fishy		
<i>Cisodophora</i>	Green		Septic		
(<i>Cisthocyctis</i>)	See <i>Anacystis</i>				
<i>Closterium</i>	Green		Grassy		
(<i>Coelosphaerium</i>)	See <i>Gomphosphaeria</i>				
<i>Cosmarium</i>	Green		Grassy		
<i>Cryptomonas</i>	Flagellate	Violet	Violet	Sweet	
<i>Cydotella</i>	Diatom	Geranium	Geranium		
<i>Cylindrospermum</i>	Blue-green	Grassy	Septic		
<i>Diatoma</i>	Diatom		Aromatic		
<i>Dictyosphaerium</i>	Green	Grassy, nasturtium	Fishy		
<i>Dinobryon</i>	Flagellate	Violet	Fishy		Slick
<i>Eudorina</i>	Flagellate		Fishy		
<i>Euglena</i>	Flagellate		Fishy	Sweet	
<i>Fragilaria</i>	Diatom	Geranium	Musty		
<i>Glenodinium</i>	Flagellate		Fishy		Slick
(<i>Gloeocapsa</i>)	See <i>Anacystis</i>				
<i>Gloeoecystis</i>	Green		Septic		
<i>Gloeotrichia</i>	Blue-green		Grassy		
<i>Gomphosphaeria</i>	Blue-green	Grassy	Grassy	Sweet	
<i>Gonium</i>	Flagellate		Fishy		
<i>Hydrodictyon</i>	Green		Septic		
<i>Mellomonas</i>	Flagellate	Violet	Fishy		
<i>Melosira</i>	Diatom	Geranium	Musty		Slick
<i>Meridion</i>	Diatom		Spicy		
(<i>Microcystis</i>)	See <i>Anacystis</i>				
<i>Nitella</i>	Green	Grassy	Grassy, septic	Bitter	
<i>Noston</i>	Blue-green	Musty	Septic		
<i>Ocellularia</i>	Blue-green	Grassy	Musty, spicy		
<i>Pandorina</i>	Flagellate		Fishy		
<i>Pediastrum</i>	Green		Grassy		
<i>Peridinium</i>	Flagellate	Cucumber	Fishy		
<i>Pleurosigma</i>	Diatom		Fishy		
<i>Rivularia</i>	Blue-green	Grassy	Musty		
<i>Scenedesmus</i>	Green		Grassy		
<i>Spirogyra</i>	Green		Grassy		
<i>Staurastrum</i>	Green		Grassy		
<i>Stephanodiscus</i>	Diatom	Geranium	Fishy		Slick
<i>Synedra</i>	Diatom	Grassy	Musty		Slick
<i>Synura</i>	Flagellate	Cucumber, muskmelon, sploy	Fishy	Bitter	Dry, metall slick
<i>Tabellaria</i>	Diatom	Geranium	Fishy		
<i>Tribonema</i>	Green		Fishy		
(<i>Uroglena</i>)	See <i>Uroglenopsis</i>				
<i>Uroglenopsis</i>	Flagellate	Cucumber	Fishy		Slick
<i>Ulothrix</i>	Green		Grassy		
<i>Volvox</i>	Flagellate	Fishy	Fishy		

**SUMMARY of WATER QUALITY INFORMATION
BACKWASH WATER OVERFLOW to LAKE MICHIGAN
LINNWOOD WATER PLANT - October 17, 2000**

Background: The Linnwood Water Plant generates a backwash water waste stream from the daily cleaning and rinsing of a portion of the 32 multi-media gravity filters at the plant. The filters enhance the water treatment process by physically removing particles such as bacteria, viruses, floc and natural lake sediments. The material that is accumulated in the filters is removed by backwashing after the individual filters have been in service from 100 to 120 hours on average. The water used for backwashing is from the clearwell prior to ~~the backwash water~~.

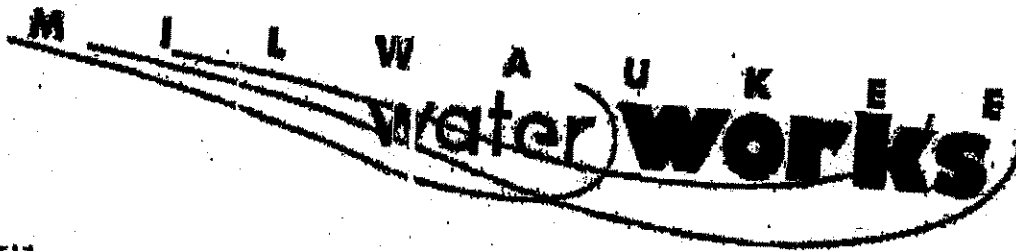
The backwash water waste stream represents approx. 1.8 % of total daily water production. This backwash water is sent to a settling tank (residence time ~~is approximately 10 minutes~~). This represents from 6 to 25% of the total waste stream volume. The remaining clarified water overflows into Lake Michigan at the breakwall on the East side of the Linnwood Plant. Prior to 1993, this backwash water was recycled by pumping it to the head of the treatment works at the coagulation basin.

There has been a considerable amount of water quality testing and analyses completed on the backwash water overflow from the Linnwood Water Treatment Plant over the past 7 years. The available data concerning the discharge to Lake Michigan is summarized below:

- Protozoa (Cryptosporidium & Giardia) monitoring – over 150 backwash water overflow samples have been collected and analyzed since 1993. Only three samples have tested positive, and in each case a single Cyst was detected, or found.
- Bacteria monitoring – 13 twice-weekly samples were collected and analyzed in 2000 for both Total Coliform and E. coli. All samples were negative for the presence of these bacteria.
- Phosphorus Loading - A major study was conducted in 1995-1996 by a task force made up of officials from MWW, MMSD, UWM and others to locate sources of phosphorus as a nutrient for Cladophora, a local algal species. Several dozen samples of Linnwood Water Plant backwash water overflow were collected and analyzed. Phosphorus was detected in only a few samples > 0.05 ppm. ~~The Linnwood Water Plant was not a contributor of phosphorus to the lake.~~
- Trace Metals - Backwash water overflow is monitored quarterly for 4 trace metals: Lead, Copper and Zinc have not been detected. The average Aluminum value from 1993-1999 is 2.2 ppm. In addition, MMSD laboratories completes a scan of selected parameters annually on a sample of the settled sludge from the backwash water overflow tank. No contaminants have been found.

Prepared by:
Lon A. Cuillard
Water Quality Manager
Milwaukee Water Works

From data supplied by: Milwaukee Water Works, Milwaukee Health Department,
Wisconsin Dept. of Natural Resources, and MMSD



Milwaukee Water Works
 Water Quality Section
 3000 N. Lincoln Memorial Drive
 Milwaukee, Wisconsin 53211

FAX CORRESPONDENCE

To: **THEERA RATARASARN**

Location: **WI - DNR**

Date: **07 - 20 - 01**

Subject: **W. Q. SUMMARY OF
 LINNWOOD BACKWASH DISCHARGE**

From: **Lon A. Couillard, Water Quality Manager**
 Phone: (414) 286-2226
 Fax: (414) 286-0244
 e-mail: lcouill@mpw.wisconsin.gov

Cover plus 2 pages to follow

*(Detailed Data Sheets
 Avail upon request)*
 Lon

STATE OF WISCONSIN

CIRCUIT COURT
BRANCH _____

MILWAUKEE COUNTY

STATE OF WISCONSIN
17 West Main Street
Post Office Box 7857
Madison, Wisconsin 53707-7857,

Plaintiff,

v.

Case No. 04-CV-_____

Unclassified - Civil: 30703

MILWAUKEE METROPOLITAN
SEWERAGE DISTRICT
A Wisconsin municipal body corporate,
260 West Seeboth Street,
Milwaukee, Wisconsin 53204-1446,

VILLAGE OF BAYSIDE
A Wisconsin municipal corporation,
9075 North Regent Road
Bayside, Wisconsin 53217,

VILLAGE OF BROWN DEER
A Wisconsin municipal corporation,
4800 West Green Brook Drive
Brown Deer, Wisconsin 53223,

CITY OF MILWAUKEE
A Wisconsin municipal corporation,
200 East Wells Street
Milwaukee, Wisconsin 53202,

VILLAGE OF ELM GROVE
A Wisconsin municipal corporation,
13600 Juneau Boulevard
Elm Grove, Wisconsin 53122,

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VILLAGE OF FOX POINT

A Wisconsin municipal corporation,
7200 North Santa Monica Boulevard
Fox Point, Wisconsin 53217,

VILLAGE OF HALES CORNERS

A Wisconsin municipal corporation,
5635 South New Berlin Road
Hales Corners, Wisconsin 53130,

VILLAGE OF BUTLER

A Wisconsin municipal corporation,
12621 West Hampton Avenue
Butler, Wisconsin 53007,

CADDY VISTA SANITARY DISTRICT

A Wisconsin municipal body corporate,
10201 Caddy Lane
Caledonia, Wisconsin 53108,

CONCORDIA UNIVERSITY WISCONSIN, INC.

A Wisconsin non-stock corporation,
12800 North Lakeshore Drive
Mequon, Wisconsin 53097-2402,

CITY OF FRANKLIN

A Wisconsin municipal corporation,
9229 West Loomis Road
Franklin, Wisconsin 53132,

DRAFT

VILLAGE OF GERMANTOWN

A Wisconsin municipal corporation,
N112 W17001 Mequon Road
Germantown, Wisconsin 53022,

CITY OF GLENDALE

A Wisconsin municipal corporation,
5909 North Milwaukee River Parkway
Glendale, Wisconsin 53209,

VILLAGE OF GREENDALE
A Wisconsin municipal corporation,
6500 Northway
Greendale, Wisconsin 53129-0257,

CITY OF GREENFIELD
A Wisconsin municipal corporation,
7325 West Forest Home Avenue
Greenfield, Wisconsin 53220,

VILLAGE OF MENOMONEE FALLS
A Wisconsin municipal corporation,
W156 N8480 Pilgrim Road
Menomonee Falls, Wisconsin 53051-3140,

CITY OF MEQUON
A Wisconsin municipal corporation,
11333 North Cedarburg Road 60W
Mequon, Wisconsin 53092,

COUNTY OF MILWAUKEE
A Wisconsin county body corporate,
901 North 9th Street
Milwaukee, Wisconsin 53233,

CITY OF MUSKEGO
A Wisconsin municipal corporation,
W182 S8200 Racine Avenue
Muskego, Wisconsin 53150,

DRAFT

CITY OF NEW BERLIN
A Wisconsin municipal corporation,
3805 South Casper Drive
New Berlin, Wisconsin 53151-5097,

CITY OF OAK CREEK
A Wisconsin municipal corporation,
8640 South Howell Avenue
Oak Creek, Wisconsin 53154,

VILLAGE OF RIVER HILLS
A Wisconsin municipal corporation,
7650 North Pheasant Lane
River Hills, Wisconsin 53217,

CITY OF ST. FRANCIS
A Wisconsin municipal corporation,
4235 South Nicholson Avenue
St. Francis, Wisconsin 53235,

VILLAGE OF SHOREWOOD
A Wisconsin municipal corporation,
3930 North Murray Avenue
Shorewood, Wisconsin 53211,

VILLAGE OF THIENSVILLE
A Wisconsin municipal corporation,
250 Elm Street
Thiensville, Wisconsin 53092,

VILLAGE OF WEST MILWAUKEE
A Wisconsin municipal corporation,
4755 West Beloit Road
West Milwaukee, Wisconsin 53214,

CITY OF CUDAHY
A Wisconsin municipal corporation,
5050 South Lake Drive
Cudahy, Wisconsin 53110-6108,

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CITY OF WEST ALLIS
A Wisconsin municipal corporation,
7525 West Greenfield Avenue
West Allis, Wisconsin 53214,

VILLAGE OF WHITEFISH BAY
A Wisconsin municipal corporation,
5300 North Marlborough Drive
Whitefish Bay, Wisconsin 53217-5399,

CITY OF WAUWATOSA,
A Wisconsin municipal corporation,
7725 West North Avenue
Wauwatosa, Wisconsin 53213

CITY OF BROOKFIELD
A Wisconsin municipal corporation,
2000 North Calhoun Road
Brookfield, Wisconsin 53005-5095,

THE AMOUNT CLAIMED IS
GREATER THAN THE
AMOUNT CLAIMED UNDER
WIS. STAT. § 799.01(1)(d).

Defendants.

COMPLAINT

The plaintiff State of Wisconsin, by its attorneys, Peggy A. Lautenschlager, Attorney General, and Thomas L. Dosch, Assistant Attorney General, at the request of the Department of Natural Resources ("DNR"), and pursuant to Wis. Stat. §§ 283.89, 283.91, and 299.95, brings this complaint against the defendants, Milwaukee Metropolitan Sewerage District and others named below, and alleges as follows:

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PAGES

1. The plaintiff is a sovereign state of the United States having its seat of government and principal offices at the State Capitol, Madison, Dane County, Wisconsin. It has enacted Wis. Stat. ch. 283, and through the DNR administers regulations promulgated pursuant thereto to prevent and reduce water pollution.

2. The defendant Milwaukee Metropolitan Sewerage District (MMSD) is a metropolitan sewerage district and a Wisconsin municipal body corporate created pursuant to Wis. Stat. ch. 200 and having authority to collect, treat, and dispose of

sewage, industrial wastes, and other wastes. MMSD provides wastewater services for 28 municipalities and approximately 1.2 million people. It is the seventh largest regional wastewater system in the United States. MMSD's primary office is located at 260 West Seeboth Street, Milwaukee, Milwaukee County, Wisconsin 53204-1446.

3. The defendant Village of Bayside (Bayside) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Bayside's primary address is 9075 North Regent Road, Bayside, Wisconsin 53217.

4. The defendant Village of Brown Deer (Brown Deer) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Brown Deer's primary address is 4800 West Green Brook Drive, Brown Deer, Wisconsin 53223.

5. The defendant City of Milwaukee is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. City of Milwaukee's primary address is 200 East Wells Street, Milwaukee, Wisconsin 53202.

6. The defendant Village of Elm Grove (Elm Grove) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Elm Grove's primary address is 13600 Juneau Boulevard, Elm Grove, Wisconsin 53122.

7. The defendant Village of Fox Point (Fox Point) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Fox Point's primary address is 7200 North Santa Monica Boulevard, Fox Point, Wisconsin 53217.

8. The defendant Village of Hales Corners (Hales Corners) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Hales Corners' primary address is 5635 South New Berlin Road, Hales Corners, Wisconsin 53130.

9. The defendant Village of Butler (Butler) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Butler's primary address is 12621 West Hampton Avenue, Butler, Wisconsin 53007.
10. The defendant Caddy Vista Sanitary District (Caddy Vista) is a municipal body corporate with the powers of a municipal corporation pursuant to Wis. Stat. § 60.77. Caddy Vista's primary address is 10201 Caddy Lane, Caledonia, Wisconsin 53108.
11. The defendant Concordia University Wisconsin, Inc. (Concordia) is a Wisconsin non-stock corporation. Concordia's primary address is 12800 North Lakeshore Drive, Mequon, Wisconsin 53097-2402.
12. The defendant City of Franklin (Franklin) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Franklin's primary address is 9229 West Loomis Road, Franklin, Wisconsin 53132.
13. The defendant Village of Germantown (Germantown) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Germantown's primary address is N112 W17001 Mequon Road, Germantown, Wisconsin 53022.
14. The defendant City of Glendale (Glendale) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Glendale's primary address is 5909 North Milwaukee River Parkway, Glendale, Wisconsin 53209.
15. The defendant Village of Greendale (Greendale) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Greendale's primary address is 6500 Northway, Greendale, Wisconsin 53129-0257.

16. The defendant City of Greenfield (Greenfield) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Greenfield's primary address is 7325 West Forest Home Avenue, Greenfield, Wisconsin 53220.

17. The defendant Village of Menomonee Falls (Menomonee Falls) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Menomonee Falls' primary address is W156 N8480 Pilgrim Road, Menomonee Falls, Wisconsin 53051-3140.

18. The defendant City of Mequon (Mequon) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Mequon's primary address is 11333 North Cedarburg Road 60W, Mequon, Wisconsin 53092.

19. The defendant County of Milwaukee (Milwaukee County) is a county body corporate pursuant to Wis. Stat. § 59. Milwaukee County's primary address is 901 North 9th Street, Milwaukee, Wisconsin 53233.

20. The defendant City of Muskego (Muskego) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Muskego's primary address is W182 S8200 Racine Avenue, Muskego, Wisconsin 53150.

21. The defendant City of New Berlin (New Berlin) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. New Berlin's primary address is 3805 South Casper Drive, New Berlin, Wisconsin 53151-5097.

22. The defendant City of Oak Creek (Oak Creek) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Oak Creek's primary address is 8640 South Howell Avenue, Oak Creek, Wisconsin 53154.

23. The defendant Village of River Hills (River Hills) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. River Hills' primary address is 7650 North Pheasant Lane, River Hills, Wisconsin 53217.

24. The defendant City of St. Francis (St. Francis) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. St. Francis' primary address is 4235 South Nicholson Avenue, St. Francis, Wisconsin 53235.

25. The defendant Village of Shorewood (Shorewood) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Shorewood's primary address is 3930 North Murray Avenue, Shorewood, Wisconsin 53211.

26. The defendant Village of Thiensville (Thiensville) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Thiensville's primary address is 250 Elm Street, Thiensville, Wisconsin 53092.

27. The defendant Village of West Milwaukee (West Milwaukee) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. West Milwaukee's primary address is 4755 West Beloit Road, West Milwaukee, Wisconsin 53214.

28. The defendant City of Cudahy (Cudahy) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Cudahy's primary address is 5050 South Lake Drive, Cudahy, Wisconsin 53110-6108.

29. The defendant City of West Allis (West Allis) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. West Allis' primary address is 7525 West Greenfield Avenue, West Allis, Wisconsin 53214.

30. The defendant Village of Whitefish Bay (Whitefish Bay) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Whitefish Bay's primary address is 5300 North Marlborough Drive, Whitefish Bay, Wisconsin 53217-5399.

31. The defendant City of Wauwatosa (Wauwatosa) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Wauwatosa's primary address is 7725 West North Avenue, Wauwatosa, Wisconsin 53213.

32. The defendant City of Brookfield (Brookfield) is a municipal corporation incorporated pursuant to Wis. Stat. §§ 66.0201 to 66.0213. Brookfield's primary address is 2000 North Calhoun Road, Brookfield, Wisconsin 53005-5095.

ALLEGATIONS COMMON TO ALL CLAIMS

33. Wisconsin Stat. ch. 283 establishes a legislative framework by which the DNR can protect the water resources of the state through, *inter alia*, DNR issuance of a water pollutant discharge elimination system ("WPDES") permit.

34. Wisconsin Stat. § 283.31(1) prohibits "[t]he discharge of any pollutant into any waters of the state . . . by any person . . . unless such discharge . . . is done under a [WPDES] permit issued by the department under this section or s. 283.33."

35. Wisconsin Stat. §§ 283.89 and 283.91 provide for a forfeiture of not less than \$10 and not more than \$10,000 for each day of violation of a WPDES permit issued pursuant to Wis. Stat. ch. 283.

36. Wisconsin Stat. § 283.91(1) authorizes the Department of Justice to seek an injunction for any violation of chapter 283 or of a term or condition of any permit issued under that chapter.

37. Wisconsin Stat. § 299.95 authorizes the Attorney General to enforce Wis. Stat. ch. 283 and rules promulgated and permits issued under that chapter, and provides that the circuit court for any county where a violation has occurred has jurisdiction to enforce this chapter "by injunctive and other relief appropriate for enforcement." It further provides that where this chapter or the permit "prohibits in whole or in part any pollution, a violation is considered a public nuisance."

FIRST CLAIM
(MMSD's Unlawful SSOs)

38. On March 26, 2003, the DNR issued WPDES Permit No. WI-0036820-02-0 ("the MMSD permit") to MMSD. The MMSD permit authorized MMSD to discharge pollutants into the waters of the state, but only from certain locations and only under certain conditions.

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39. At all times relevant to this proceeding, Section 4.3 of the MMSD permit has specifically prohibited any overflows from MMSD's sanitary sewage system (hereinafter referred to as "sanitary sewer overflows" or "SSOs"). Similarly, at all times relevant to this proceeding, Section 9.2.6 of the MMSD permit has specifically prohibited "unscheduled bypassing or overflow of wastewater . . . from the collections system."

40. Contrary to Section 4.3 of the MMSD permit, on the dates and in the quantities indicated in the attached "Exhibit A," MMSD had SSOs which resulted in the

discharge of more than 473 million gallons of untreated sewage directly or indirectly into waters of the state in Milwaukee County, including the Menominee River, the Milwaukee River and Lake Michigan.

ALLEGATIONS COMMON TO CLAIMS TWO THROUGH TWENTY-SEVEN

41. On or about May 31, 2001, pursuant to Wis. Stat. § 283.35, the DNR issued general permit number WPDES WI-0047341-3, entitled "Bypasses or Overflows from Sewage Collection Systems" ("the general permit").

42. At all times relevant to this proceeding, the general permit has prohibited permittees from bypassing or overflowing wastewater from the permittee's sanitary sewage collection system.

43. At all times relevant to this proceeding, the general permit also has prohibited permittees from causing any municipal sewage system that receives the permittee's wastewater to bypass or overflow, or from otherwise causing unscheduled bypassing of any sewage collection system.

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SECOND CLAIM (Village of Bayside)

44. On or about August 2, 2001, the DNR issued its determination that Bayside's sewage collection system would be subject to the requirements of the general permit.

45. Contrary to the general permit, on or about April 21, 2004, Bayside bypassed a total of approximately 8,000 gallons of sewage from one manhole within its sanitary sewer collection system into Lake Michigan in Milwaukee County.

46. Contrary to the general permit, on or about May 10, 2004, Bayside bypassed a total of approximately 84,000 gallons of sewage from two different manholes within its sanitary sewer collection system into Lake Michigan in Milwaukee County.

47. At all times relevant to this proceeding, Bayside's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

48. On information and belief, and contrary to the general permit, Bayside caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

THIRD CLAIM
(Village of Brown Deer)
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49. On or about August 2, 2001, the DNR issued its determination that Brown Deer's sewage collection system would be subject to the requirements of the general permit.

50. Contrary to the general permit, beginning on May 10, 2004, and continuing until May 11, 2004, Brown Deer bypassed a total of approximately 175,770 gallons of sewage from its sanitary sewer collection system into the Milwaukee River in Milwaukee County.

51. At all times relevant to this proceeding, Brown Deer's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

52. On information and belief, and contrary to the general permit, Brown Deer caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

FOURTH CLAIM
(City of Milwaukee)

53. On or about December 23, 2002, the DNR issued its determination that the City of Milwaukee's sewage collection system would be subject to the requirements of the general permit.

54. Contrary to the general permit, on or about May 13, 2004, the City of Milwaukee bypassed a total of approximately 332,000 gallons of sewage from its sanitary sewer collection system into surface waters in Milwaukee County.

55. Contrary to the general permit, on or about May 14, 2004, the City of Milwaukee bypassed a total of approximately 1,500,000 gallons of sewage from its sanitary sewer collection system into surface waters in Milwaukee County.

56. Contrary to the general permit, on or about May 22, 2004, the City of Milwaukee bypassed a total of approximately 1,000,000 gallons of sewage from its sanitary sewer collection system into surface waters in Milwaukee County.

57. Contrary to the general permit, on or about May 23, 2004, the City of Milwaukee bypassed a total of approximately 300,000 gallons of sewage from its sanitary sewer collection system into surface waters in Milwaukee County.

58. At all times relevant to this proceeding, the City of Milwaukee's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

59. On information and belief, and contrary to the general permit, the City of Milwaukee caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

FIFTH CLAIM
(Village of Hales Corners)

60. On or about August 2, 2001, the DNR issued its determination that Hales Corners' sewage collection system would be subject to the requirements of the general permit.

61. Contrary to the general permit, on or about May 22, 2004, Hales Corners bypassed a total of approximately 24,000 gallons of sewage from its sanitary sewer collection system to a tributary of Whitnall Park Creek in Milwaukee County.

62. Contrary to the general permit, on or about May 23, 2004, Hales Corners bypassed a total of approximately 165,000 gallons of sewage from its sanitary sewer collection system to a tributary of Whitnall Park Creek in Milwaukee County.

63. At all times relevant to this proceeding, Hales Corners' sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose

of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

64. On information and belief, and contrary to the general permit, Hales Corners caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

SIXTH CLAIM
(Village of Fox Point)

65. On or about August 2, 2001, the DNR issued its determination that Fox Point's sewage collection system would be subject to the requirements of the general permit.

66. Contrary to the general permit, on or about May 10, 2004, Fox Point bypassed a total of approximately 1,020 gallons of sewage from its sanitary sewer collection system onto a beach and into the waters of Lake Michigan in Milwaukee County.

67. At all times relevant to this proceeding, Fox Point's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

68. On information and belief, and contrary to the general permit, Fox Point caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

SEVENTH CLAIM
(Village of Butler)

69. On or about August 2, 2001, the DNR issued its determination that Butler's sewage collection system would be subject to the requirements of the general permit.

70. At all times relevant to this proceeding, Butler's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

71. On information and belief, and contrary to the general permit, Butler caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

EIGHTH CLAIM
(Caddy Vista Sanitary District)

72. On or about August 2, 2001, the DNR issued its determination that Caddy Vista's sewage collection system would be subject to the requirements of the general permit.

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73. At all times relevant to this proceeding, Caddy Vista's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

74. On information and belief, and contrary to the general permit, Caddy Vista caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

NINTH CLAIM
(Concordia University Wisconsin, Inc.)

75. On or about August 7, 2001, the DNR issued its determination that Concordia's sewage collection system would be subject to the requirements of the general permit.

76. At all times relevant to this proceeding, Concordia's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

77. On information and belief, and contrary to the general permit, Concordia caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TENTH CLAIM
(City of Franklin)

78. On or about August 2, 2001, the DNR issued its determination that Franklin's sewage collection system would be subject to the requirements of the general permit.

79. At all times relevant to this proceeding, Franklin's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

80. On information and belief, and contrary to the general permit, Franklin caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

ELEVENTH CLAIM
(Village of Germantown)

81. On or about August 2, 2001, the DNR issued its determination that Germantown's sewage collection system would be subject to the requirements of the general permit.

82. At all times relevant to this proceeding, Germantown's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

83. On information and belief, and contrary to the general permit, Germantown caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWELFTH CLAIM
(City of Glendale)

84. On or about August 2, 2001, the DNR issued its determination that Glendale's sewage collection system would be subject to the requirements of the general permit.

85. At all times relevant to this proceeding, Glendale's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

86. On information and belief, and contrary to the general permit, Glendale caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

THIRTEENTH CLAIM
(Village of Greendale)

87. On or about August 2, 2001, the DNR issued its determination that Greendale's sewage collection system would be subject to the requirements of the general permit.

88. At all times relevant to this proceeding, Greendale's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

89. On information and belief, and contrary to the general permit, Greendale caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

FOURTEENTH CLAIM
(City of Greenfield)

90. On information and belief, on or about August 2, 2001, the DNR issued its determination that Greenfield's sewage collection system would be subject to the requirements of the general permit.

91. At all times relevant to this proceeding, Greenfield's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

92. On information and belief, and contrary to the general permit, Greenfield caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

FIFTEENTH CLAIM
(Village of Menomonee Falls)

93. On or about August 2, 2001, the DNR issued its determination that Menomonee Falls' sewage collection system would be subject to the requirements of the general permit.

94. At all times relevant to this proceeding, Menomonee Falls' sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

95. On information and belief, and contrary to the general permit, Menomonee Falls caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

SIXTEENTH CLAIM
(City of Mequon)

96. On or about August 2, 2001, the DNR issued its determination that Mequon's sewage collection system would be subject to the requirements of the general permit.

97. At all times relevant to this proceeding, Mequon's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

98. On information and belief, and contrary to the general permit, Mequon caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

SEVENTEENTH CLAIM
(County of Milwaukee)

99. On or about October 23, 2003, the DNR issued its determination that Milwaukee County's sewage collection system would be subject to the requirements of the general permit.

100. At all times relevant to this proceeding, Milwaukee County's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

101. On information and belief, and contrary to the general permit, Milwaukee County caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

EIGHTEENTH CLAIM
(City of Muskego)

102. On or about August 2, 2001, the DNR issued its determination that Muskego's sewage collection system would be subject to the requirements of the general permit.

103. At all times relevant to this proceeding, Muskego's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

104. On information and belief, and contrary to the general permit, Muskego caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

NINETEENTH CLAIM
(City of New Berlin)

105. On or about August 2, 2001, the DNR issued its determination that New Berlin's sewage collection system would be subject to the requirements of the general permit.

106. At all times relevant to this proceeding, New Berlin's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

107. On information and belief, and contrary to the general permit, New Berlin caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTIETH CLAIM
(City of Oak Creek)

108. On or about August 2, 2001, the DNR issued its determination that Oak Creek's sewage collection system would be subject to the requirements of the general permit.

109. At all times relevant to this proceeding, Oak Creek's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

110. On information and belief, and contrary to the general permit, Oak Creek caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-FIRST CLAIM
(Village of River Hills)

111. On or about August 2, 2001, the DNR issued its determination that River Hills' sewage collection system would be subject to the requirements of the general permit.

112. Contrary to the general permit, on or about June 3, 2002, River Hills bypassed a total of approximately 48,750 gallons of sewage from its sanitary sewer collection system into surface waters in Milwaukee County.

113. At all times relevant to this proceeding, River Hills' sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

114. On information and belief, and contrary to the general permit, River Hills caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

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TWENTY-SECOND CLAIM
(City of St. Francis)

115. On or about August 2, 2001, the DNR issued its determination that St. Francis' sewage collection system would be subject to the requirements of the general permit.

116. At all times relevant to this proceeding, St. Francis' sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose

of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

117. On information and belief, and contrary to the general permit, St. Francis caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-THIRD CLAIM
(Village of Shorewood)

118. On or about August 2, 2001, the DNR issued its determination that Shorewood's sewage collection system would be subject to the requirements of the general permit.

119. At all times relevant to this proceeding, Shorewood's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

120. On information and belief, and contrary to the general permit, Shorewood caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-FOURTH CLAIM
(Village of Thiensville)

121. On or about August 2, 2001, the DNR issued its determination that Thiensville's sewage collection system would be subject to the requirements of the general permit.

122. At all times relevant to this proceeding, Thiensville's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose

of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

123. On information and belief, and contrary to the general permit, Thiensville caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-FIFTH CLAIM
(Village of West Milwaukee)

124. On or about August 2, 2001, the DNR issued its determination that West Milwaukee's sewage collection system would be subject to the requirements of the general permit.

125. At all times relevant to this proceeding, West Milwaukee's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

126. On information and belief, and contrary to the general permit, West Milwaukee caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-SIXTH CLAIM
(Village of Elm Grove)

127. On or about August 2, 2001, the DNR issued its determination that Elm Grove's sewage collection system would be subject to the requirements of the general permit.

128. At all times relevant to this proceeding, Elm Grove's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose

of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

129. On information and belief, and contrary to the general permit, Elm Grove caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-SEVENTH CLAIM
(City of Brookfield)

130. On or about August 2, 2001, the DNR issued its determination that Brookfield's sewage collection system would be subject to the requirements of the general permit.

131. At all times relevant to this proceeding, portions of Brookfield's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

132. On information and belief, and contrary to the general permit, Brookfield caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-EIGHTH CLAIM
(City of West Allis)

133. On or about August 26, 2003, the DNR issued WPDES Permit No. WI-0030678 ("the West Allis permit") to West Allis. The West Allis permit authorized West Allis to discharge pollutants into the waters of the state, but only from certain locations and only under certain conditions.

134. At all times relevant to this proceeding, Section 2.3.2 of the West Allis permit has specifically prohibited any SSOs from West Allis' sanitary sewage system.

135. Contrary to Section 2.3.2 of the West Allis permit, on May 25, 2004, West Allis had an SSO which resulted in the discharge of approximately 3,400 gallons of untreated sewage into the Kinnickinnic River in Milwaukee County.

136. Contrary to Section 2.3.2 of the West Allis permit, on May 27, 2004, West Allis had an SSO which resulted in the discharge of approximately 7,776 gallons of untreated sewage into the Kinnickinnic River in Milwaukee County.

137. Contrary to Section 2.3.2 of the West Allis permit, on August 24, 2004, and August 25, 2004, West Allis had an SSO which resulted in the discharge of approximately 3,000 gallons of untreated sewage into the Kinnickinnic River in Milwaukee County.

138. At all times relevant to this proceeding, West Allis' sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

139. On information and belief West Allis caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

TWENTY-NINTH CLAIM
(Village of Whitefish Bay)

140. On or about August 26, 2003, the DNR issued WPDES Permit No. WI-0026191-05-0 ("the Whitefish Bay permit") to Whitefish Bay. The Whitefish Bay permit authorized Whitefish Bay to discharge pollutants into the waters of the state, but only from certain locations and only under certain conditions.

141. At all times relevant to this proceeding, Section 2.3.2 of the Whitefish Bay permit has specifically prohibited any SSOs from Whitefish Bay's sanitary sewage system.

142. Contrary to Section 2.3.2 of the Whitefish Bay permit, on May 14, 2004, Whitefish Bay had SSOs at five different sites which resulted in the discharge of approximately 225,760 gallons of untreated sewage into Lake Michigan and the Milwaukee River in Milwaukee County.

143. At all times relevant to this proceeding, Whitefish Bay's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

144. On information and belief, Whitefish Bay caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

THIRTIETH CLAIM
(City of Cudahy)

145. On or about August 26, 2003, the DNR issued WPDES Permit No. WI-0030988-07-0 ("the Cudahy permit") to Cudahy. The Cudahy permit authorized Cudahy to discharge pollutants into the waters of the state, but only from certain locations and only under certain conditions.

146. At all times relevant to this proceeding, Section 2.3.2 of the Cudahy permit has specifically prohibited any SSOs from Cudahy's sanitary sewage system.

147. Contrary to Section 2.3.2 of the Cudahy permit, on May 14, 2004, Cudahy had SSOs at three different locations which resulted in the discharge of approximately 80,304 gallons of untreated sewage into Lake Michigan in Milwaukee County.

148. At all times relevant to this proceeding, Section 3.4 of the Cudahy permit required Cudahy, by no later than December 31, 2003, to report to the DNR on Cudahy's implementation of a program to both enforce its plumbing code and to identify and remove sources of inflow and infiltration (i.e., I/I) into its sanitary sewer system. I/I refers to groundwater or stormwater which enters leaky sewerage collection systems and sometimes causes or contributes to SSOs by overloading the systems. Section 3.4 of the Cudahy permit also required Cudahy to document the corrective actions it has taken as a result of enforcement of the plumbing code at problem locations identified in smoke testing of the system conducted in 1996.

149. Contrary to Section 3.4 of the Cudahy permit, Cudahy did not submit a report of its implementation of a program to both enforce its plumbing code and to identify and remove sources of I/I until on or about February 6, 2004.

150. On information and belief, and contrary to Section 3.4 of the Cudahy permit, Cudahy has failed to date to document all corrective actions it has taken as a result of the required enforcement of its plumbing code at problem locations identified in smoke testing of the system conducted in 1996.

151. At all times relevant to this proceeding, Cudahy's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan.

152. On information and belief, Cudahy caused or contributed to causing each of MMSD's SSOs listed in Exhibit A.

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THIRTY FIRST CLAIM
(Public Nuisance - All Defendants)

153. The SSOs referred to in the preceding claims of this complaint resulted in approximately 500,000,000 gallons of untreated sewage going into various streams and Lake Michigan in Milwaukee County during the month of May 2004 which otherwise should have been retained in the defendants' sewage systems until it was treated to remove pollutants.

154. SSOs are not the only source of untreated municipal sewage discharged into public waters in Milwaukee County. In older sections of the City of Milwaukee and

the Village of Shorewood, a single system of combined municipal sewers carries both sanitary sewage and stormwater runoff. During periods of heavy rains or mechanical failures there may be combined sewer overflows or "CSOs" from those sewage systems. During May 2004, large scale CSOs from these systems resulted in approximately 4,100,000,000 gallons of untreated sewage going into surface waters in Milwaukee County. If this sewage had not overflowed from these combined sewage systems it should and would have been treated at MMSD's treatment facilities before being discharged into state waters.

155. On information and belief, both the SSOs and the large scale CSOs referred to in this complaint were the result of excessive amounts of stormwater entering the defendants' sewer systems. These SSOs and CSOs were caused or exacerbated by the defendants' failures to take sufficient practicable steps to reduce infiltration and inflow (I/I) in the separated sewer areas and to reduce runoff in the combined sewer areas. Such SSOs and CSOs are likely to recur unless the defendants take reasonable and appropriate measures to eliminate SSOs and minimize CSOs.

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156. On information and belief, the SSOs and the large scale CSOs described in this complaint sometimes have caused environmental pollution and had the effect of denying people the opportunity to exercise public rights in state waters in Milwaukee County. Those who might otherwise have engaged in the protected public rights to boat, swim or enjoy scenic beauty in and along streams and Lake Michigan in Milwaukee County were effectively denied the exercise of those rights, either directly (because, in the case of enjoyment of scenic beauty, of offensive sights and odors resulting from the

SSOs and CSOs) or indirectly (because, in the case of activities like swimming and boating, members of the public reasonably refrained out of concern for unhealthy exposure to pollution). Such SSOs and CSOs constitute a public nuisance under the common law of this State and, in the case of SSOs, under Wis. Stat. § 299.95.

157. At all times relevant to this proceeding, Wauwatosa's sewage collection system has emptied wastewater into MMSD's sewage collection system for the purpose of transporting it to MMSD's treatment plants where that wastewater is supposed to be treated to remove its pollutants prior to being discharged into Lake Michigan. On information and belief, Wauwatosa caused or contributed to causing each of MMSD's SSOs listed in Exhibit A and to the resulting public nuisance.

158. On information and belief, the defendants' failures to take sufficient practicable steps to reduce I/I in the separated sewer areas, to reduce runoff in the combined sewer areas, to install sewers of sufficient capacity, or other measures have also contributed to widespread sewage backups in the basements of homes in several City of Milwaukee neighborhoods and isolated basement backups in other neighborhoods in Milwaukee County. Such backups cause significant property damage to homes and neighborhoods, and present threats to the health of residents of such homes and neighborhoods. They are also extremely offensive in odor and appearance to the residents of such homes and neighborhoods. Such backups constitute a public nuisance under the common law of this State and will continue unless the defendants take appropriate measures to minimize or eliminate them.

WHEREFORE, plaintiff asks for judgment as follows:

1. An injunction requiring the defendants to comply with the terms and conditions of their wastewater discharge permits.
2. An injunction requiring the defendants to take actions to eliminate SSOs and to take all reasonably practicable measures to reduce CSOs.
3. The forfeitures provided for in Wis. Stat. § 283.91(2), the penalty surcharge provided for in Wis. Stat. § 814.75(18), the environmental surcharge provided for in Wis. Stat. § 814.75(12), the \$25 court costs pursuant to Wis. Stat. § 814.63(1), the \$7 crime laboratories and drug law enforcement surcharge pursuant to Wis. Stat. § 814.75(3), the \$68 court support services surcharge pursuant to Wis. Stat. § 814.75(2), the jail surcharge pursuant to Wis. Stat. § 814.75(14), the \$9 justice information system surcharge pursuant to Wis. Stat. § 814.75(15), and the \$3.50 special prosecution clerks surcharge pursuant to Wis. Stat. § 814.75(22).
4. The costs and disbursements of this action, the costs of the investigation, and the reasonable and necessary expenses of the prosecution, including attorney fees, pursuant to Wis. Stat. § 283.91(5).

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5. Such other relief as the Court deems appropriate.

Dated this ____ day of _____, 2004

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