



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

April 24, 2009

Mr. John F. O'Brien, P.E., Director
Division of Water and Waste Services
Genesee County Drain Commissioner's Office
G-4610 Beecher Road
Flint, Michigan 48532-2617

Dear Mr. O'Brien:

This letter has been sent regarding application by the Genesee County Drain Commissioner's Office (GCDCO) for a Water Withdrawal Permit. A permit application was made to the Department of Environmental Quality (DEQ) for a proposed surface water withdrawal of 85 million gallons per day (MGD) from Lake Huron. In accordance with Michigan's new water withdrawal legislation, the Water Bureau (WB) has determined that your permit application is administratively complete.

Under amendments made to Part 327, Great Lakes Preservation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, a person who intends to make a new or increased large quantity withdrawal (LQW) of over 2 MGD is required to submit a permit application for the proposed LQW. Part 327 requires a permit application include the following:

- o Place and source of the proposed or existing withdrawal
- o Location of any discharge or return flow
- o Location and nature of the proposed withdrawal or existing water user
- o Actual or estimated average annual and monthly volumes and rate of withdrawal
- o Actual or estimated average annual and monthly volumes and rate of consumptive use from the withdrawal
- o Submittal of an application fee in the amount of \$2,000.

The permit application was originally received by the DEQ on February 12, 2009, and contained the information necessary to meet the requirements for submittal under Part 327. However, in review, the DEQ ascertained the proposed LQW might be subject to the requirements of the Great Lakes–St. Lawrence River Basin Water Resources Compact (the Compact), which was signed into law in October of 2008. In accordance with a preliminary rules package for submittal of proposals under the Compact, the DEQ requested additional information to fulfill the requirements for submittal of proposals under the Compact. The additional information was received by the DEQ on April 6, 2009. Subsequent review resulted in the conclusion that the requirements for the submittal of information under both Part 327 and the Compact have been met.

Mr. John F. O'Brien

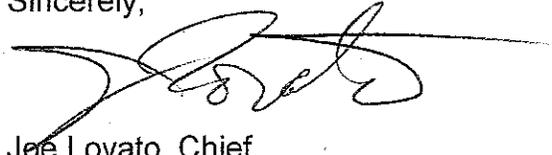
Page 2

April 24, 2009

Based upon the information that the GCDCO provided, the WB has determined your permit application is administratively complete and will proceed with the processing of the permit application. As you might be aware, the DEQ is required to provide public notification on the receipt of the GCDCO application, provide a period for public comment of not less than 45 days, and render a decision on the permit application within 120 days of the date on this correspondence. The DEQ intends to proceed accordingly.

If you have any comments, questions, corrections, or clarifications with regards to this correspondence, the permit process, or your permit application, please contact Brant Fisher, Environmental Engineer Specialist, at 517-241-1415, or you may contact me directly.

Sincerely,



Joe Lovato, Chief
Water Withdrawal and Contamination
Investigation Unit
Water Bureau
517-241-1383

JL:DLR

cc: Mr. Frank J. Ruswick, Jr., Special Assistant to the Director, DEQ
Mr. James K. Cleland, WB, DEQ
Mr. Wm. Elgar Brown, WB, DEQ
Mr. Jim Bredin, OGL, DEQ
Mr. Brant Fisher, WB, DEQ ✓



GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE

-DIVISION OF-
WATER & WASTE SERVICES

G-4610 BEECHER ROAD • FLINT, MICHIGAN 48532-2617

PHONE (810) 732-7870 • FAX (810) 732-9773

JEFFREY WRIGHT
COMMISSIONER

April 3, 2009

Brant O. Fisher
Environmental Engineer Specialist
Michigan Department of Environmental Quality
P.O. Box 30273
Lansing, MI 48909-7773

Dear Brant,

Thank you for your review of the Division's application for a withdrawal permit. We appreciate the time and effort you and other members of the Department have expended on this project.

Please find attached a copy of our application and narrative information, previously sent, along with the response to the supplemental questions that were raised in your recent correspondence. Attached, too, are copies of the pertinent parts of the NPDES Permits of the communities to whom the proposed water system will be providing service. We are also providing exhibits depicting the Great Lakes watershed and the location of the proposed water withdrawal from Lake Huron.

If you have any additional questions or would like any other material, please do not hesitate to contact this office.

Sincerely,

David M. Jansen
Assistant Director
Division of Water and Waste Services

RECEIVED
MICH DEPT OF ENVIRONMENTAL QUALITY
APR 06 2009

MICH. DEPT. OF ENVIRONMENTAL QUALITY
Water Bureau - DWWS





GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE



JEFFREY WRIGHT

COMMISSIONER

G-4608 BEECHER ROAD, FLINT, MI 48532
PHONE (810) 732-1590 FAX (810) 732-1474

February 11, 2009

Brant O. Fisher
Environmental Engineer Specialist
Department of Environmental Quality
P.O. Box 30273
Lansing, MI 48909-7773

Dear Mr. Fisher:

The Division of Water and Waste Services, WSSN #2615, is requesting a water withdrawal from Lake Huron for community water supply. The request is for a new withdrawal of 85 million gallons per day to supply several community water supply systems. Enclosed is our application fee of \$2,000.00.

This request is in compliance with Public Act 451 of 1994 (MCL 324.32723).

We are requesting the Department begin the evaluation and public notice of our request. We have enclosed the necessary information to begin the evaluation.

Should you have any questions, do not hesitate to contact Mr. John O'Brien, Director, at 810-732-7870 or via email at: jobrien@gcdcwws.com.

Sincerely,

John F. O'Brien, P.E.
Director
Division of Water and Waste

Jeff Wright
Drain Commissioner
Genesee County

Ted Henry
Chairman of the Board
Genesee County

Proposed Withdrawal Request

I. Facility: Division of Water and Waste Services
Genesee County, Michigan
WSSN: 2615

Attn: John F. O'Brien, P.E.
Director
Genesee County Drain Commissioner's Office
Division of Water and Waste Services
G-4610 Beecher Road
Flint, Michigan 48532

II. Proposed Withdrawal
New Capacity: 85 mgd
Estimated annual withdrawal: 15.5 billion gallons
Estimated consumptive use: 10%
Purpose of use: community water supply
Continuous withdrawal

III. Water Source
Lake Huron: Great Lakes and connecting water way
Latitude: 43 10' 26.84" N
Longitude: 82 26' 10.28" W

IV. Water Discharge Location

1. Genesee County Treatment Plant - Flint River
GLCW
Latitude: 43 10' 29.26" N
Longitude 82 30' 23.52 " W
Volume: 11,680 billion gallons annually
2. Flint WWTP - Flint River
GLCW
Latitude: 43 02' 17.34 " N
Longitude: 83 46' 10.13" W
Volume: 6,579 billion gallons annually
3. Flushing WWTP - Flint River
GLCW
Latitude: 43 04' 01.38 " N
Longitude: 83 51' 48.27' W
Volume: 0.2 billion gallons annually
4. Lapeer WWTP - Flint River
GLCW
Latitude: 42 56' 21.68' N
Longitude: 82 41' 33.02" W
Volume: 1.8 billion gallons annually

V. This facility does not hold a permit issued under Part 31 for cooling water intake.

Proposed Withdrawal Narrative

1. *All water withdrawn shall be returned, either naturally or after use, to the Source Watershed less an allowance for Consumptive Use;*
The water withdrawn shall be used for community water supplies that hold a permit under the Safe Drinking Water Act, 1976 PA 399. All water shall be returned to the source watershed - Great Lakes and interconnected waterways via the Flint River and treatment facilities after use less our 10% for consumptive use. (See attached distribution/collection schematic.)
*Check list: KWA schematic
 Genesee County and City of Flint water schematic
 Genesee County, City of Flint and City of Flushing collection system*

2. *The Withdrawal or Consumptive Use will be implemented so as to ensure that the Proposal will result in no significant individual or cumulative adverse impacts to the quantity or quality of the Waters and Water Dependent Natural Resources and the applicable Source Watershed;*
The withdrawal of water is from Lake Huron with a withdrawal rate of 155 cubic feet per second. The current flow rate of Lake Huron into the St. Clair River system is approximately 180,000 cubic feet per second. The withdrawal represents a negligible percentage of that flow. With a 100% return of the water to the system upstream of the intake, less the consumptive use, this withdrawal will not affect the discharge of Lake Huron to the St. Clair River. (See attached map of the Great Lakes.)

3. *The Withdrawal or Consumptive Use will be implemented so as to incorporate Environmentally Sound and Economically Feasible Water Conservation measures;*
Currently, the Division obtains its water supply from the Detroit Water and Sewerage Department's transmission system. That system currently reports approximately 20% water loss. The County system, being a relatively new transmission system, will have less than 5% water loss including water treatment backwash water. The Division complies with the accepted practices as established by AWWA. The Division participates in educational programs regarding the use of lawn sprinklers and other outside uses. The Division's policies regarding water re-use for commercial and industrial purposes encourage water conservation. The Division has established a flat rate water billing rate. There is no declining block rate for large water use. The Division requires water meters on all usages. Further, the Division has a restriction on outdoor water use during peak use periods whereby outdoor water use is allowed only three days per week. All water service is metered and bills are issued based on metered water usage.

4. *The Withdrawal or Consumptive Use will be implemented so as to ensure that it is in compliance with all applicable municipal, State and federal laws, as well as regional interstate and international agreements, including the Boundary Waters Treaty of 1909;*
The Division is an existing permitted community water supply system under PA 399 of 1976. The proposed new water withdrawal will comply with all Common Law principles of the State of Michigan. The City of Flint and Genesee County through the Division are existing permitted NPDES permit holders as either a municipal corporation or, in the case of the County, for its constituent municipalities' wastewater treatment facilities.

5. *The proposed use is reasonable, based upon a consideration of the following factors:*
- a. *Whether the proposed Withdrawal or Consumptive Use is planned in a fashion that provides for efficient use of the water, and will avoid or minimize the waste of Water;*
The proposed use is for community water supply with a 100% return of all water after use minus the consumptive use.
 - b. *If the Proposal is for an increased Withdrawal or Consumptive use, whether efficient use is made of existing water supplies;*
While this proposed withdrawal is new, in the fact that it is a new facility in a new location, it is intended to serve the population in a geographical area that is currently receiving water service from a Lake Huron water source. As such, the use and particularly the consumptive use will not result in an inverse impact upon the water level of the Great Lakes.
 - c. *The balance between economic development, social development, and environmental protection of the proposed Withdrawal and use and other existing or planned withdrawals and water uses sharing the water source;*
The current community water supply systems are users of water from the Great Lakes system. The community and the Michigan Department of Environmental Quality have identified, in its sanitary survey, the existing system is deficient in that it does not provide a reliable water supply for its users. The current system services approximately 40% of the state's population. A new supply system will be constructed to eliminate this identified deficiency and will require a new point of withdrawal.

By obtaining a new withdrawal from Lake Huron, the Division will:

1. Provide compliance with a redundant water supply thereby meeting the mandate of the Regulatory Authority and the needs of the community.
2. Provide additional security to the community water supply systems of the state by providing an alternate water source for the residents of Michigan. Reliability would be provided through mutual aid agreements with interconnected communities with compatible water supplies.
3. Based upon the engineering evaluations, constructing a new withdrawal facility will improve the reliability of the regional water supply in such a way as to be more economically responsible to the communities served and thereby the most efficient way to assure compliance with all regulatory standards.
4. The creation of the Water Authority and construction of the pipeline and treatment plants will provide the following economic stimulus:
 - a. During the five-year construction period, the system will provide over 100 million dollars in skilled trades work.
 - b. The project will provide 200 million dollars in new orders for manufacturing of pipe and equipment.
 - c. The project will provide over 30 million dollars in engineering and design services.
 - d. Once the project goes online, it will provide over 50 new, permanent technical and mechanical jobs to its employees who will operate and maintain the new water treatment facilities, intake, pipeline and pump stations.

- d. *The supply potential of the water source, considering quantity, quality, and reliability and safe yield of hydrologically interconnected water sources;*
Based upon the results from preliminary water quality sampling, the proposed Lake Huron source is essentially the same quality as the current water supply. The Division does not believe that water quantity, reliability or safe yield of Lake Huron is an issue in this new withdrawal request.
- e. *The probable degree and duration of any adverse impacts caused or expected to be caused by the proposed Withdrawal and use under foreseeable conditions, to other lawful consumptive or non-consumptive uses of water or to the quantity or quality of the Waters and Water Dependent Natural Resources of the Basin, and the proposed plans and arrangements for avoidance or mitigation of such impacts; and,*
The proposed new withdrawal will not cause any adverse impacts on the quantity or quality of the waters and water dependent natural resources of the basin.
- f. *If a Proposal includes restoration of hydrologic conditions and functions of the Source Watershed, the Party may consider that.*
The proposed new withdrawal does not include nor is any restoration of hydraulic conditions required.

GENESEE COUNTY DRAIN COMMISSIONER-AGENT

DIVISION OF WATER AND WASTE SERVICES

G-4610 BEECHER ROAD
FLINT, MICHIGAN 48532

THIS CHECK VOID AFTER 90 DAYS
JPMorgan Chase Bank, N.A.
Detroit, MI

59774

9-32
720

DATE

AMOUNT

Two Thousand Dollars and 00 Cents

2/6/2009

\$2,000.00

PAY TO THE ORDER OF: State of Michigan
Michigan Dept of Envir. Qual

[Signature]

[Signature]
_____ MP

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640503900⑈

GENESEE COUNTY DRAIN COMMISSIONER - AGENT

59774

Vendor No.	Vendor Name	Payment No.	Check Date	Acct # with Vendor	Check No.
MICH DEQ	State of Michigan	016680	2/6/2009		

Voucher No.	Invoice No.	Invoice Date	Invoice Amount	Discount	Net Amount
00026790	APPLICATION	2/6/2009	\$2,000.00	\$0.00	\$2,000.00

\$2,000.00

\$0.00

\$2,000.00

GENESEE COUNTY DRAIN COMMISSIONER - AGENT

59774

**Preliminary – Temporary Great Lakes – St. Lawrence River Basin Water
Resources Compact Rules
Supplemental Data for Request Dated February 11, 2009**

1. Identification of the Originating Party including any and all government offices or partners, the mailing address of the same, and the name of the individual authorized to act for the Originating Party.

Jeff Wright, Genesee County Drain Commissioner, County Agency, Genesee County

Authorized to act for the Originating Party:

*Jeff Wright
Genesee County Drain Commissioner
County Agency, Genesee County
Pursuant to PA 347 of 1939
G-4609 Beecher Road
Flint, MI 48532-2617
(810) 732-1590*

2. (i) Applicant information
*John O'Brien, P.E., Director
Division of Water and Waste Services
G-4610 Beecher Road
Flint, MI 48532-2617
810-732-7870
jobrien@gcdcwws.com*

(ii) Purpose of withdrawal. Provide detailed written explanation of what the water will be used for. Uses could include, for example: public water supply, commercial/industrial, irrigation or other. If the water is to be used for multiple purposes, estimate percent usage by category of use. (DEQ note: provide breakdown of use by category for GCDC, Flint, Lapeer and any other customer).

Water withdrawn from the proposed Lake Huron intake will be supplied to one or more treatment works for conditioning and distribution to the public water supplies of customer municipalities in Genesee, Lapeer, Sanilac, Saginaw and Shiawassee Counties. This water will primarily service existing customers who are already receiving water from Lake Huron.

The breakdown of usage by customer classification is estimated to be as follows:

Residential = 75% Commercial = 15% Industrial = 10%

(iii) Source of water. Identify the source body of water by type (lake, river, stream or aquifer) and exact name. The exact location of the water taking should be identified. This information should include a legal description including longitude and latitude citations.

The proposed water withdrawal will be from Lake Huron. The attached exhibits provide specific details relative to its location within the Great Lakes Basin. The specific location is projected to be at: Latitude: 43 10' 26.84"N and 82 26' 10.28" W. This is approximately 3 miles due west of the proposed submerged intake structure.

(iv) Point of taking / pump site. Indicate the legal entity that proposes to withdraw the water. The application should also provide a legal description of the location of the actual withdrawal. If the withdrawal is to be from multiple wells, all well locations should be identified. (Note: assume this to be parcel description of shoreline site)

The legal entity is the 342 Agency for water supply in Genesee County, designated by the County Board of Commissioners as the Genesee County Drain Commissioner.

The legal description of the property where the intake pumping station and shore well will be located is described above and is depicted in the attached photographs and drawings. (Exhibit 1)

(v) Means of taking and rate. Specify the method to be used for taking and the rate of withdrawal (in gallons per minute or cubic feet per second or metric equivalents). If multiple wells or pump sites are to be used, attach explanation information. (Note: obviously a Great Lakes intake)

Water will be conducted from a submerged intake structure to a shore well and pump station located as per the attached drawings. (Exhibit 2) The pumping station will be equipped with pumps adequate to move the permitted amount of water (approximately 59,000 gallons per minute) to the various treatment works of the customer municipalities.

For the purposes of the preliminary design report, we anticipate installing 5 pumps at the station, each will be rated at approximately 22 million gallons

per day (MGD). This yields a maximum capacity of 110 MGD and a firm capacity of 88 MGD.

(vi) Method of measurement. Indicate method of measurement, for example: flow meter, timing device or other.

The shore well and pumping station will be equipped with flow metering devices that will be properly sized to measure and record the flow of water taken from the lake prior to its distribution to the water treatment facilities. (See attached schematics - Exhibit 3)

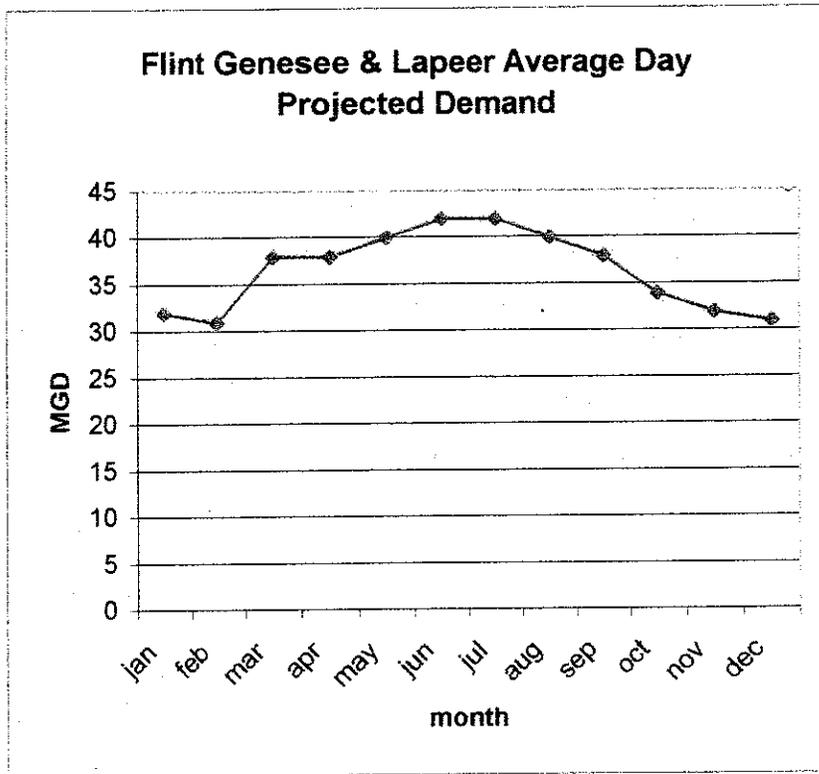
(vii) Point of measurement. Provide a legal description of the location of the measurement of withdrawal and use.

The point of withdrawal, measurement and pumping are as described above and on the attached exhibits. The flow of water will be measured on the discharge of the shore pumping station (pump discharge). Water will be used by the citizens of the municipalities to whom service will be provided in the counties as listed above. The property has been described in the narrative above and is illustrated on the attached exhibits.

(viii) Schedule of withdrawal. Include a monthly projection of withdrawals by year and information regarding whether the proposed use would be continuous, seasonal or temporary.

*The water will be withdrawn from the Lake Huron supply point at a rate consistent with the historical and projected use of the communities to be served by the raw water supply. It is anticipated the pump station at the intake will operate on a daily basis. The following table of **projected water usage and water demand projections** illustrates the initial, as well as 25-year projections.*

Flint Genesee & Lapeer Average Day Projected Demand



Demand Projections

Customer	Initial (2014)			Projected 25-Year (2039)		
	Min. Day Demand (MGD)	Avg. Day Demand (MGD)	Max. Day Demand (MGD)	Min. Day Demand (MGD)	Avg. Day Demand (MGD)	Max. Day Demand (MGD)
Genesee County	10.7	14.2	25.0	12.2	16.3	32.5
City of Flint	12.4	16.5	25.0	14.4	19.3	28.9
Lapeer County	1.5	2.5	3.8	5.2	9.0	14.9
3% WTP Process	0.7	1.0	1.6	1.0	1.3	2.3
Subtotal:	25.3	34.2	55.4	32.8	45.9	78.6
Sanilac County	0.03	0.05	0.1	0.04	0.1	0.2
Total:	25.3	34.3	55.5	32.8	46.0	78.7

(ix) Total amount of use. Expressed in millions of gallons per day or millions of liters per day / projected maximum use for any 90-day period. (Note: time period and units issue)

The ninety-day maximum day is estimated to be equivalent to two times the average day demand; therefore the average day demand in the maximum 90-day period is estimated to be 68.6 million gallons per day or 6,174 million gallons for a 90-day period.

(x) Return flow. Submit a description of the return flow program. This program description should include:

a) A description on how the water will be returned. To the extent the local entity that will be discharging the return flow is not the applicant for the project, agreements must be presented demonstrating the return flow will be guaranteed. (Note: justification is that entire service area is in the Huron Basin – explain agreements).

The water will be returned by the various publicly owned treatment works (POTW) of the respective communities receiving treated drinking water from the Lake Huron water supply. Copies of the NPDES permits of these various POTW are attached. (Exhibit 4) These permits illustrate both water quality and volumes of water that are discharged to the receiving streams that are tributaries to Lake Huron. No water from this water supply is expected to be delivered outside the watershed. A compilation of the volumes from the POTW illustrate a volume greater than the amount that is to be taken from Lake Huron is already being released to the tributaries to Lake Huron.

b) an estimate of total return flow by volume and as a percentage of water withdrawn.

The table provided below shows the annual discharge of the POTW along with the estimated withdrawal from Lake Huron. The return represents flow from Lake Huron and from both private and public well systems in homes and businesses throughout the projected water services area. Public water is supplied by not only Genesee County (originating from Detroit Water & Sewerage Department), but by communities with their own well systems. In essence, flow to the municipal wastewater

plants originated not only from the public water supply of Detroit, but from public and private water supplies operating on ground water systems. In Genesee County, approximately 60% of the businesses and residents are supplied public water from the County, while approximately 80% of the population is serviced by publicly owned wastewater facilities.

Withdrawal and Discharge

Estimated annual withdrawal in 2014 based upon average daily demand: 12,520 billion gallons

Annual discharge from POTW's of communities served by proposed system:

Genesee County	11,680	billion gallons
City of Flint	8,870	billion gallons
City of Flushing	1	billion gallons
City of Lapeer	1.8	billion gallons

Total	20,552	billion gallons
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Total discharge is 160% of estimated withdrawal

c) Location of return flow

Genesee County – Flint River

Latitude: 43 10' 29.26" N

Longitude: 82 30' 23.52" W

Flint WWTP – Flint River

Latitude: 43 02' 17.34" N

Longitude: 83 46' 10.13" W

Flushing WWTP – Flint River

Latitude: 43 04' 01.38" N

Longitude: 83 51' 48.27" W

Lapeer WWTP – Flint River

Latitude: 42 56' 21.68" N

Longitude: 82 41' 33.02" W

d) An estimate of consumptive use, including historic use information. These estimates may be presented in the form of project engineering design plans or utilizing United States Geological Survey (USGS) or other consumptive use

coefficients. To the extent use estimates are greater than 'generally accepted consumptive use coefficients, the application must include a detailed explanation and justification for projected additional consumptive use. (Note: estimate can be based on USGS info-cite source, justify if projected increase).

The water withdrawn shall be used for community water supplies that hold a permit under the Safe Drinking Water Act, 1976 PA 399. All water shall be returned to the source watershed – namely Lake Huron and interconnected waterways via the Flint River and treatment facilities after use less our 10% for consumptive use. The table above highlights that the discharge from the publicly owned treatment works on the Flint River will exceed the withdrawal from Lake Huron. The withdrawal of water, when examined in the light of the quality and quantity of water discharged from the publicly owned treatment works, and that the withdrawal is negligible, indicates there will be no negative impact from the withdrawal.

e) A description of the anticipated water quality of the return flow including a description of the proposed measurement methods (quality and quantity) and discharge location(s); and (Note: describe quality and quantity per NPDES or other permits)

Included with this document is a copy of the relevant portion of the NPDES permit issued to each of the discharging authorities described above. The volume of flow from each POTW is tabulated above. (Exhibit 4)

f) A certification that return flow shall either consist i) only of water withdrawn from the Great Lakes Basin, or ii) that a portion of the water returned is: (Note: see service area above)

- a. Is part of a water supply or wastewater treatment system that combines water from inside and outside of the Basin, and:
- b. Is treated to meet applicable water quality discharge standards and to prevent the introduction of invasive species into the Basin.

All water, no matter whether surface or groundwater, originates within the basin.

(xi) Statement of justification analysis of alternative sources. Include a narrative description of the need. This description should include an analysis of the efficiency

of current water withdrawals, including the application of environmentally sound and economically feasible water conservation measures.

Include an analysis of water supply alternatives available and considered to meet the new or increased need. This analysis shall address quantity and quality (including treatability) of alternative sources. The analysis shall describe the rationale for not using the other considered water supply alternatives.

Alternative water supplies considered include:

- *Surface water supply from the Flint River.
This alternative was rejected as studies have indicated the water available during the peak water demand periods are inadequate to meet the water supply requirements of the entire region and still provide adequate dilution to waste water plant discharges as to meet all requirements of the NPDES permit holders.*
- *A groundwater alternative was examined.
This alternative was rejected as the reliable supply of groundwater is either not available or so disbursed throughout the county as to make a regional water supply unfeasible due to the great number of wells that would be required and the interference a new groundwater based regional supply would cause to existing private and municipal water supplies.*
- *The Lake Huron water supply currently in place does not meet the requirements for reliability to the region. In the event of a failure on the single water supply pipeline that is servicing the region, several hundred thousand customers will be without a potable water supply. Such an interruption of service has already happened and resulted in closing of businesses, cancellation of surgical procedures, compromise of home dialysis, and issuance of boil water notices.*
- *The proposed withdrawal moves some of the volume withdrawn to a new point of withdrawal. As is currently the case, the water will be returned to the basin as wastewater discharge.*

(xii) Statement of environmentally sound and economically feasible water conservation measures and status of implementation. Provide a description of measures undertaken to ensure that both existing water uses and the proposed water use will result in efficient water use and reduce water loss or waste, and describe how such measures are:

- a. environmentally sound
- b. reflect best practices applicable to the water use sector
- c. are technically feasible and available

- d. are economically feasible and cost effective in comparison to other measures that are technically feasible and available and/or are best practices applicable to the water use sector, based on an analysis that considers direct and avoided economic and environmental costs
- e. details regarding particular facilities and processes involved, including environmental impact, age of equipment and facilities involved, processes employed, energy impacts and any other relevant factors.

The proposed water withdrawal will be used for community water supplies with a 100% return of all water after use minus the calculated consumptive use. While this proposed withdrawal is new from the perspective that it will be from a new facility located approximately six miles north of the current intake location, the water withdrawn from Lake Huron is intended to serve the population of the region that is already receiving water from Lake Huron. Currently, the Division obtains its water supply from the Detroit Water and Sewerage Department's transmission system. That system currently reports approximately 20% water loss. The Genesee County system, being relatively new, will have less than a 5% water loss including water treatment backwash. The Division complies with accepted practices for water conservation as recommended by the American Water Works Association. The Division participates in educational programs regarding the use of lawn sprinklers and other outside uses. The Division's policies regarding water re-use for commercial and industrial purposes encourage water conservation. The Division has established a flat rate water billing rate. There is no declining block rate structure for large water customers that would encourage water waste. All water services are metered. The Division restricts outdoor water use through its water conservation program.

(xii) See above.

(xiii) Assessment of impacts. Source and location of the Withdrawal and Return flow including:

- a. a description of baseline conditions regarding hydrologic flow, water quality and habitat; (Note: cite where mentioned in application)
- b. a projected withdrawal schedule including peak 30-day demand over the 90-day averaging period.
- c. anticipated changes in water quality and water dependent natural resources
- d. a description of all mitigation measures that will be implemented to prevent or eliminate significant adverse impacts

e. a statement may be included of how the proposal would relate to other existing withdrawals, diversions and consumptive uses for the purpose of enabling the parties to collectively evaluate cumulative impacts from this proposal. The applicant shall use data and analysis on cumulative impacts that are available from the parties.

As stated above, this proposed withdrawal is a relocation, but the service area will not be substantially changed. The quality of the water to be returned has been projected based upon NPDES discharge limitations. These discharges are existing discharges into the Lake Huron basin. As they are permitted discharges, the impact to the water quality is not expected to change. In effect the withdrawal does not change nor does the contribution back to the watershed, therefore no significant change is anticipated. No net change to the watershed is anticipated as a result of this proposed withdrawal.

(xiv) Map or air photo.

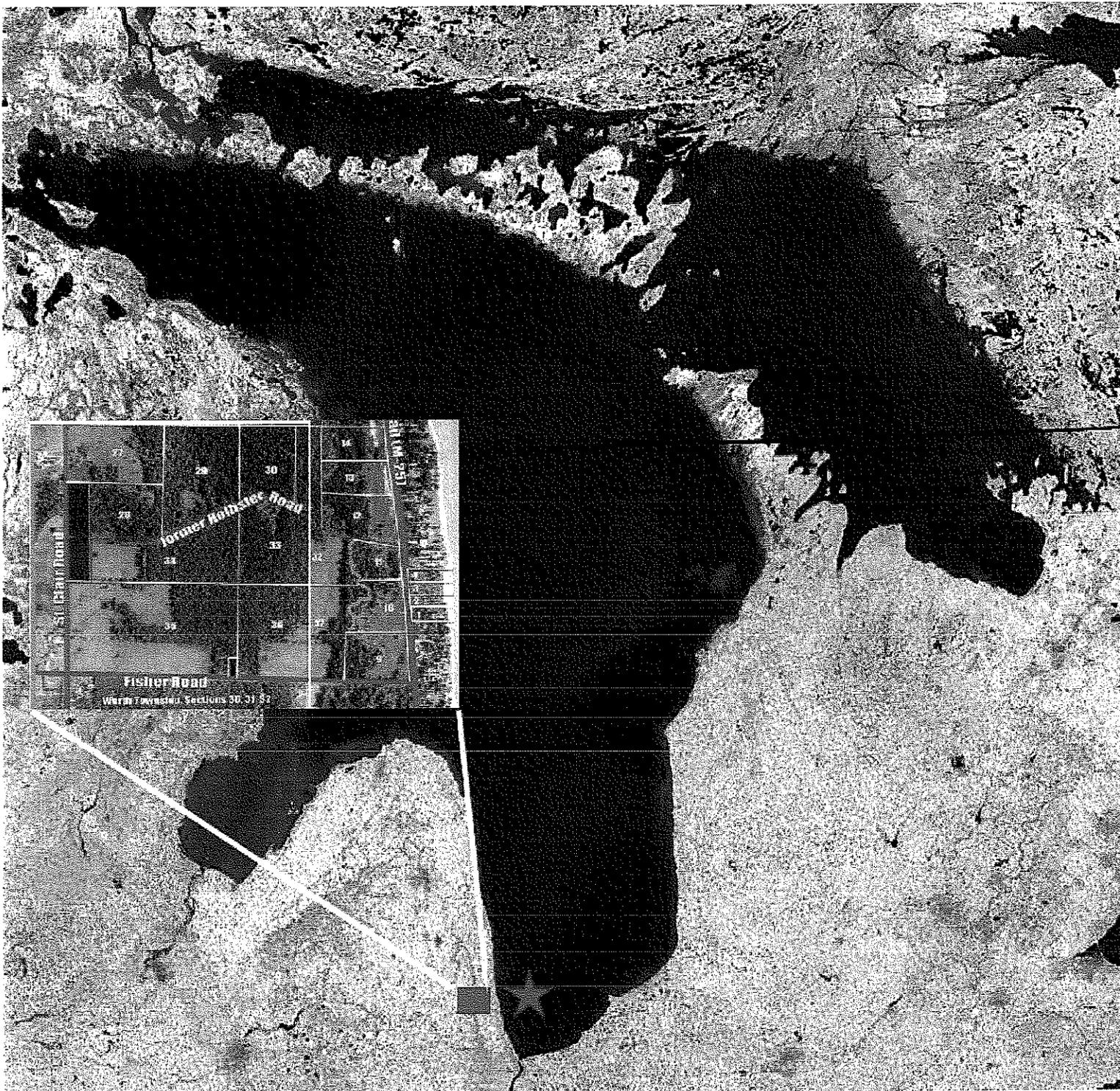
Photographs and graphic exhibits that depict the Great Lakes watershed and the proposed site of the intake and pump station are attached for review. (Exhibit 5)

(xv) Compliance with other laws. Certification and any backing documentation must be provided that the proposal has been found to be in compliance with all applicable municipal, state and federal laws as well as regional interstate and international agreements, including the Boundary Waters Treaty of 1909, or alternatively what laws have been complied with as well as approvals that have been applied for and are still pending. In all instances, information must include relevant approvals or pending approvals, the relevant agency from which the approval is sought, and the current status of the approval application if approval has not yet been granted.

On February 11, 2009, the Division Of Water & Waste Services made a request for approval to withdraw from Lake Huron up to 85 million gallons per day for the purpose of supplying water to several public community water supply systems. That request was in compliance with Public Act 451 of 1994 (MCL 324.32723), and was made in an effort to provide the MDEQ with adequate information to begin its evaluation of the request.

A report on the feasibility of a Lake Huron water supply for several mid-Michigan communities has been completed. That report includes a preliminary design and cost opinion for the requested 85 MGD withdrawal.

The Division will make a formal request for withdrawal to the Army Corps of Engineers when the intake design has reached an appropriate level of completion.

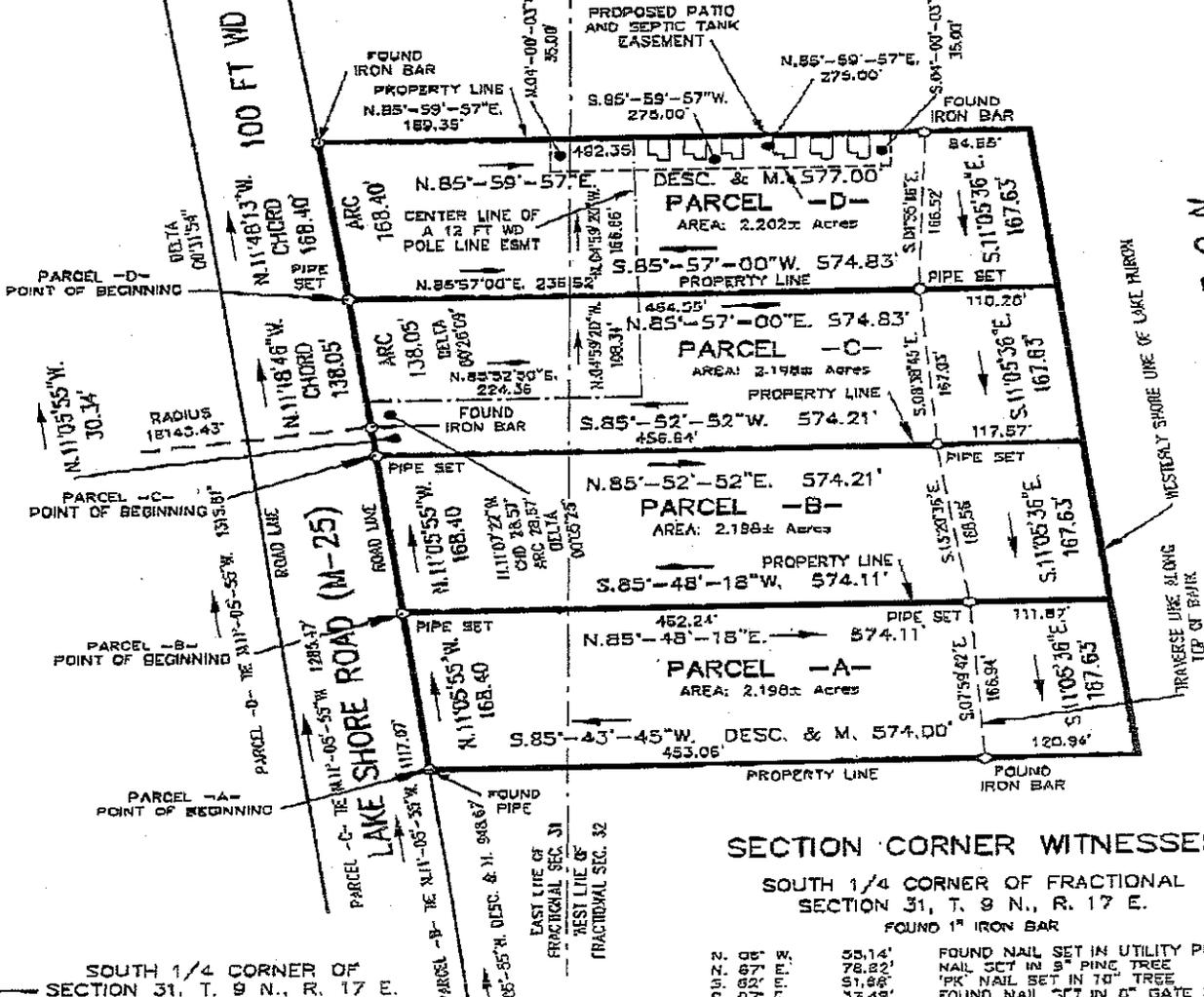


CERTIFICATE OF SURVEY



FRACTIONAL SECTION 31,
T. 9 N., R. 17 E.

FRACTIONAL SECTION 32,
T. 9 N., R. 17 E.



SECTION CORNER WITNESSES

SOUTH 1/4 CORNER OF FRACTIONAL SECTION 31, T. 9 N., R. 17 E.

FOUND 1" IRON BAR

- N. 05° 14' E. 55.14'
- N. 02° 18' E. 78.82'
- N. 02° 18' E. 91.88'
- S. 07° E. 13.49'
- FOUND NAIL SET IN UTILITY POLE
- NAIL SET IN 9" PINE TREE
- "PK" NAIL SET IN 10" TREE
- FOUND NAIL SET IN 6" GATE POST

SOUTH 1/4 CORNER OF SECTION 31, T. 9 N., R. 17 E.

N. 86° 28' 00" E.
DESC. & M. 2644.54'

SANILAC COUNTY
ST. CLAIR COUNTY

NOTE: THE BEARINGS SHOWN HEREON HAVE BEEN BASED ON THE BEARING OF N. 86° 28' 00" E. FOR THE SOUTH LINE OF FRACTIONAL SECTION 31, T. 9 N., R. 17 E., AS SHOWN ON PREVIOUS SURVEYS IN THIS AREA.

SURVEY NO. 19179-1

DAVID C. ADAMS & SON
PROFESSIONAL LAND SURVEYORS, INC.
28517 FIVE MILE ROAD
DETROIT, MICHIGAN 48238-3228
(313) 538-1222

IF THE SURVEYOR'S SIGNATURE AND SEAL ARE NOT IN A CONTRASTING COLOR, THE PLAN IS A COPY THAT SHOULD BE ASSUMED TO CONTAIN UNAUTHORIZED ALTERATIONS.



BASED ON MY KNOWLEDGE, INFORMATION AND BELIEF, I CERTIFY THAT AS A RESULT OF A SURVEY MADE ON THE GROUND TO THE NORMAL STANDARDS OF CARE OF PROFESSIONAL (LAND) SURVEYORS IN THE STATE OF MICHIGAN, THAT THE MAP DELINEATED HEREON CORRECTLY REPRESENTS SUCH SURVEY AND THAT RATIO OF CLOSURE OF THE UNADJUSTED FIELD OBSERVATIONS OF SUCH SURVEY WAS 1:10,000 AND THAT ALL APPLICABLE REQUIREMENTS OF P.A. 132 OF 1970, AS AMENDED BY P.A. 24 OF 1988, HAVE BEEN COMPLIED WITH.

SURVEYOR: ROBERT J. SMALLEY *Robert J. Smalley* 26467 July 9, 2002

SHEET 1 OF 4

Detroit Edison

SYSTEM PROJECTS & ENGINEERING

LOCATION
SURVEY
OF PART OF FRACTIONAL SECTIONS
31 AND 32, T. 9 N., R. 17 E.,
WORTH TOWNSHIP, SANILAC COUNTY, MICHIGAN.

LEGEND
R. = RECORDED I.P. = IRON PIPE
M. = MEASURED RR = RS-ROD
C. = CALCULATED MON. = MONUMENT

JOB NUMBER
200206118

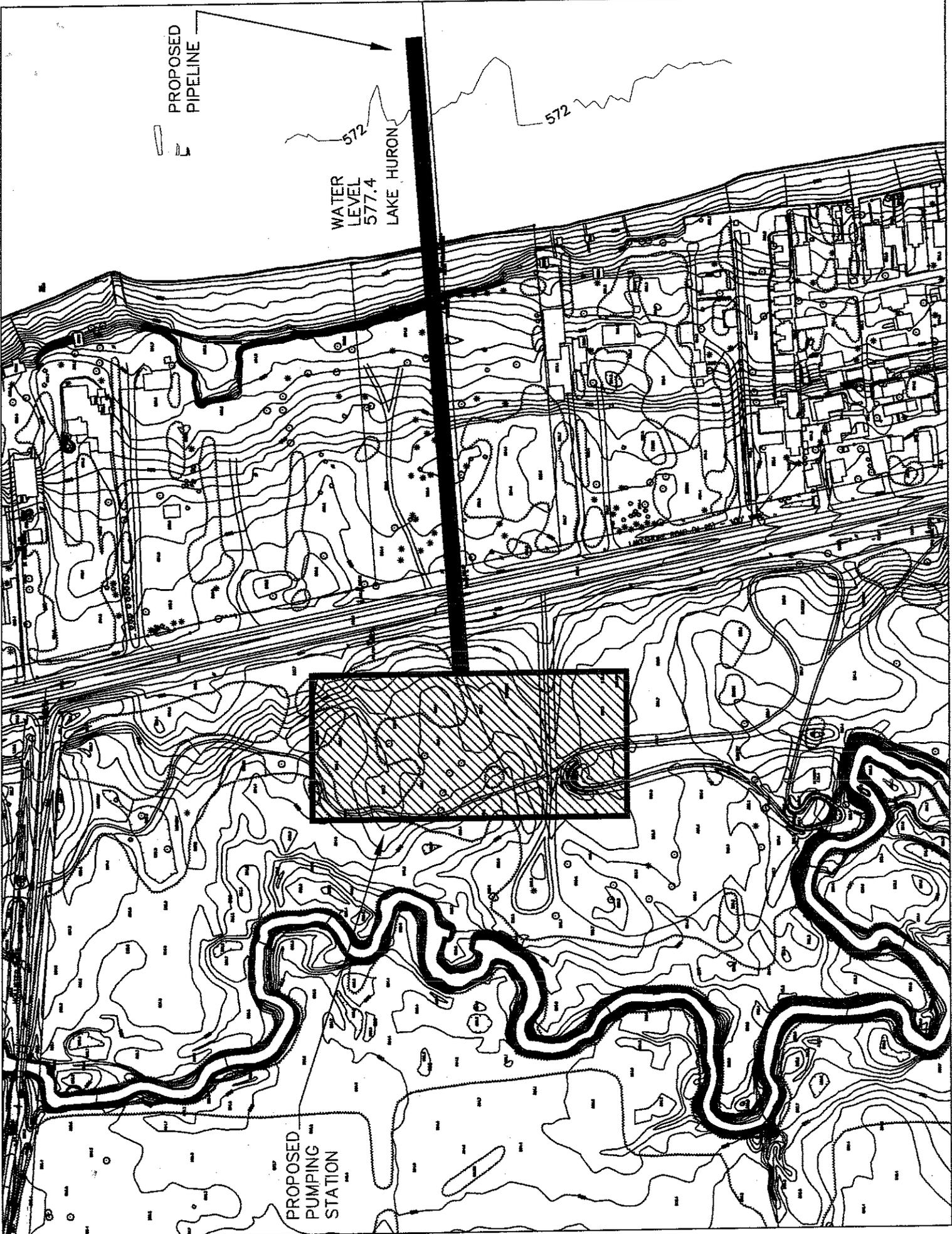
SCALE
1 INCH = 150 FEET

DRAWN BY
DCA&S

SURVEY ENGINEER
FLV

DATE OF SURVEY
7/8/02

DRAWING NO.
SE 1231-5



CERTIFICATE OF SURVEY

PARCEL -C- (Tract 3)

PART OF FRACTIONAL SECTIONS 31 AND 32, T. 9 N., R. 17 E., WORTH TOWNSHIP, SANILAC COUNTY, MICHIGAN.

DESCRIBED AS: BEGINNING AT A POINT ON THE EASTERLY LINE OF MICHIGAN TRUNKLINE HIGHWAY 25, "ALSO KNOWN AS LAKE SHORE ROAD OR M-25", (100 FT. WD.) DISTANT NORTH 88° 26' 06" EAST, 2644.54 FT. AS MEASURED ALONG THE SOUTH LINE OF FRACTIONAL SECTION 31 (FISHER ROAD) AND NORTH 11° 05' 55" WEST, 1285.47 FT. AS MEASURED ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD TO THE POINT OF BEGINNING:

THENCE NORTH 11° 05' 55" WEST, 30.34 FT., CONTINUING ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD TO A POINT OF CURVE IN SAID ROAD LINE:

THENCE CONTINUING ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD, ALONG THE ARC OF A CURVE, CONCAVE TO THE WEST, HAVING A RADIUS OF 18143.43 FT., A CENTRAL ANGLE OF 00° 26' 09", AN ARC DISTANCE OF 138.05 FEET (CHORD BEARS NORTH 11° 18' 46" WEST, 138.05 FT.);

THENCE NORTH 89° 57' 00" EAST, 874.83 FT. TO A POINT ON THE WESTERLY SHORELINE OF LAKE HURON:

THENCE SOUTH 11° 08' 36" EAST, 187.63 FT., ALONG SAID WESTERLY SHORELINE OF LAKE HURON:
THENCE SOUTH 85° 52' 52" WEST, 874.21 FT. TO THE POINT OF BEGINNING.

CONTAINING 2.196 ACRES, MORE OR LESS, OF LAND IN AREA.

INCLUSIVE OF ANY AND ALL RIPARIAN RIGHTS INCIDENT TO THIS PROPERTY AND LAKE HURON THAT MAY BE GRANTED UNDER THE LAWS OF THE STATE OF MICHIGAN.

RESERVING TO GRANTOR, ITS SUCCESSORS AND ASSIGNS, ALL SUBSURFACE OIL AND GAS AND OTHER MINERAL RIGHTS OVER ALL THE ABOVE-DESCRIBED LAND. GRANTOR OR ASSIGNS MAY NOT DRILL ANY WELLS, OR BUILD ANY STRUCTURES OR TANKS ON OR UNDER THE ABOVE-DESCRIBED LAND. GRANTOR OR ASSIGNS HAS THE RIGHT TO USE THE ABOVE-DESCRIBED LAND ONLY FOR SUBSURFACE OPERATIONS FOR MINERALS. GRANTOR OR ASSIGNS MUST COMPLY WITH ALL APPLICABLE GOVERNMENTAL LAWS AND RULES IN USING THE ABOVE DESCRIBED LAND.

RESERVING TO GRANTOR, ITS SUCCESSORS AND ASSIGNS, A 12 FOOT WIDE POLE LINE EASEMENT ACROSS THE ABOVE DESCRIBED PARCEL -C- DESCRIBED BY ITS CENTERLINE DESCRIBED AS BEGINNING AT A POINT ON THE EASTERLY LINE OF SAID LAKE SHORE ROAD OR M-25, SAID POINT BEING DISTANT NORTH 11° 05' 55" WEST, 30.34 FT. AND 28.57 FT. ALONG A CURVE CONCAVE TO THE WEST, HAVING A RADIUS OF 18143.43 FT., A CENTRAL ANGLE OF 00° 05' 25". (CHORD BEARS NORTH 11° 07' 22" WEST, 28.57 FT.) FROM THE SOUTHWEST CORNER OF THE ABOVE DESCRIBED PARCEL -C-. TO THE POINT OF BEGINNING OF THE EASEMENT HEREIN BEING DESCRIBED:

THENCE NORTH 85° 52' 50" EAST, 224.36 FT.;

THENCE NORTH 04° 59' 20" WEST, 108.34 FT. TO THE POINT OF ENDING ON THE NORTH LINE OF THE ABOVE DESCRIBED PARCEL -C-.

THE SIDE LINES OF SAID EASEMENT ARE TO BE LENGTHENED OR SHORTENED TO MEET AT ANGLE POINTS, AT THE EASTERLY LINE OF LAKE SHORE ROAD AND THE NORTH LINE OF PARCEL -C-.

SAID EASEMENT IS TO CONSTRUCT, RECONSTRUCT, OPERATE AND MAINTAIN OVERHEAD AND UNDERGROUND ELECTRIC LINES INCLUDING TOWERS, POLES, WIRES, MANHOLES, CONDUITS, CABLES AND EQUIPMENT. THESE FACILITIES MAY INCLUDE TELECOMMUNICATION MEDIUM, FOR USE OF EDISON OR EDISON'S ASSIGNEES. EDISON MAY TRIM OR CUT DOWN ANY TREES, BUSHES, OR BRANCHES IN THE EASEMENT THAT EDISON BELIEVES COULD INTERFERE WITH THE OPERATION AND MAINTENANCE OF ITS FACILITIES. NO BUILDINGS, STRUCTURES OR OTHER ENCROACHMENTS SHALL BE PLACED IN THE EASEMENT WITHOUT EDISON'S PRIOR WRITTEN CONSENT.

SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

SURVEY NO. 19178-1

DAVID C. ADAMS & SON
PROFESSIONAL LAND SURVEYORS, INC.
25517 FIVE MILE ROAD
DETROIT, MICHIGAN 48239-3228
(313) 535-1222



 SYSTEM PROJECTS & ENGINEERING	LOCATION SURVEY OF PART OF FRACTIONAL SECTIONS 31 AND 32, T. 9 N., R. 17 E., WORTH TOWNSHIP, SANILAC COUNTY, MICHIGAN.		SHEET 3 OF 4
	DRAWN BY DCA&S		SURVEY ENGINEER DATE OF SURVEY 7/8/02
JOB NUMBER 200206118		DRAWING NO. SE 1231-5	

CERTIFICATE OF SURVEY

PARCEL -D- (Tract 4)

PART OF FRACTIONAL SECTIONS 31 AND 32, T. 9 N., R. 17 E., WORTH TOWNSHIP, SANILAC COUNTY, MICHIGAN.

DESCRIBED AS: BEGINNING AT A POINT ON THE EASTERLY LINE OF MICHIGAN TRUNKLINE HIGHWAY 25, "ALSO KNOWN AS LAKE SHORE ROAD OR M-25", (100 FT. WD.) DISTANT NORTH $86^{\circ} 26' 06''$ EAST, 2644.54 FT. AS MEASURED ALONG THE SOUTH LINE OF FRACTIONAL SECTION 31 (FISHER ROAD) AND NORTH $11^{\circ} 05' 55''$ WEST, 1315.81 FT. AS MEASURED ALONG SAID EASTERLY LINE OF LAKE SHORE ROAD TO A POINT OF CURVE IN SAID ROAD LINE; THENCE CONTINUING ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD, ALONG THE ARC OF A CURVE, CONCAVE TO THE WEST, HAVING A RADIUS OF 18143.43 FT., A CENTRAL ANGLE OF $00^{\circ} 26' 09''$, AN ARC DISTANCE OF 138.05 FT. (CHORD BEARS NORTH $11^{\circ} 18' 46''$ WEST, 138.05 FT.) TO THE POINT OF BEGINNING;

THENCE CONTINUING ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD, ALONG THE ARC OF A CURVE, CONCAVE TO THE WEST, HAVING A RADIUS OF 18143.43 FT., A CENTRAL ANGLE OF $00^{\circ} 31' 54''$, AN ARC DISTANCE OF 168.40 FT (CHORD BEARS NORTH $11^{\circ} 48' 13''$ WEST, 168.40 FT.); THENCE NORTH $85^{\circ} 59' 57''$ EAST, 577.00 FT. TO A POINT ON THE WESTERLY SHORELINE OF LAKE HURON; THENCE SOUTH $11^{\circ} 05' 36''$ EAST, 167.63 FT.. ALONG SAID WESTERLY SHORELINE OF LAKE HURON; THENCE SOUTH $85^{\circ} 57' 00''$ WEST, 574.83 FT. TO THE POINT OF BEGINNING.

CONTAINING 2.202 ACRES, MORE OR LESS, OF LAND IN AREA.

INCLUSIVE OF ANY AND ALL RIPARIAN RIGHTS INCIDENT TO THIS PROPERTY AND LAKE HURON THAT MAY BE GRANTED UNDER THE LAWS OF THE STATE OF MICHIGAN.

THE ABOVE DESCRIBED PARCEL IS SUBJECT TO A PROPOSED EASEMENT FOR PATIOS AND SEPTIC TANK OVER THE ABOVE DESCRIBED PARCEL -D- AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF THE ABOVE DESCRIBED PARCEL -D- AND RUNNING THENCE ALONG THE EASTERLY LINE OF SAID LAKE SHORE ROAD, ALONG THE ARC OF A CURVE, CONCAVE TO THE WEST, HAVING A RADIUS OF 18143.43 FT., A CENTRAL ANGLE OF $00^{\circ} 31' 54''$, AN ARC DISTANCE OF 168.40 FT (CHORD BEARS NORTH $11^{\circ} 48' 13''$ WEST, 168.40 FT.); THENCE NORTH $85^{\circ} 59' 57''$ EAST, 189.35' ALONG THE NORTH LINE OF SAID PARCEL -D- TO THE POINT OF BEGINNING OF THE EASEMENT HEREIN BEING DESCRIBED;

THENCE NORTH $85^{\circ} 59' 57''$ EAST, 275.00', ALONG THE NORTH LINE OF SAID PARCEL -D-;
THENCE SOUTH $04^{\circ} 00' 03''$ EAST, 35.00';
THENCE SOUTH $85^{\circ} 59' 57''$ WEST, 275.00'.
THENCE NORTH $04^{\circ} 00' 03''$ WEST, 35.00' TO THE POINT OF BEGINNING.

RESERVING TO GRANTOR, ITS SUCCESSORS AND ASSIGNS, A 12 FOOT WIDE POLE LINE EASEMENT ACROSS THE ABOVE DESCRIBED PARCEL -D- DESCRIBED BY ITS CENTERLINE AS: BEGINNING AT A POINT ON THE SOUTHERLY LINE OF THE ABOVE DESCRIBED PARCEL -D-, SAID POINT BEING DISTANT NORTH $85^{\circ} 57' 00''$ EAST, 236.92 FT. FROM THE SOUTHWEST CORNER OF SAID PARCEL -D-;

THENCE NORTH $04^{\circ} 58' 20''$ WEST, 166.66 FT. TO THE POINT OF ENDING ON THE NORTH LINE OF THE ABOVE DESCRIBED PARCEL -D-.

THE SIDE LINES OF SAID EASEMENT ARE TO BE LENGTHENED OR SHORTENED TO MEET AT THE NORTH AND SOUTH LINE OF PARCEL -D-.

SAID EASEMENT IS TO CONSTRUCT, RECONSTRUCT, OPERATE AND MAINTAIN OVERHEAD AND UNDERGROUND ELECTRIC LINES INCLUDING TOWERS, POLES, WIRES, MANHOLES, CONDUITS, CABLES AND EQUIPMENT. THESE FACILITIES MAY INCLUDE TELECOMMUNICATION MEDIUM, FOR USE OF EDISON OR EDISON'S ASSIGNEES. EDISON MAY TRIM OR CUT DOWN ANY TREES, BUSHES, OR BRANCHES IN THE EASEMENT THAT EDISON BELIEVES COULD INTERFERE WITH THE OPERATION AND MAINTENANCE OF ITS FACILITIES. NO BUILDINGS, STRUCTURES OR OTHER ENCROACHMENTS SHALL BE PLACED IN THE EASEMENT WITHOUT EDISON'S PRIOR WRITTEN CONSENT.

SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

SURVEY NO. 19179-1

DAVID C. ADAMS & SON
PROFESSIONAL LAND SURVEYORS, INC.
25517 FIVE MILE ROAD
DETROIT, MICHIGAN 48239-3228
(313) 558-1222



**Detroit
Edison**

SYSTEM PROJECTS &
ENGINEERING

LOCATION

SURVEY
OF PART OF FRACTIONAL SECTIONS
31 AND 32, T. 9 N., R. 17 E.,
WORTH TOWNSHIP, SANILAC COUNTY, MICHIGAN.

SHEET 4 OF 4

JOB NUMBER

200206118

DRAWN BY

DCA&S

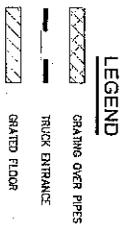
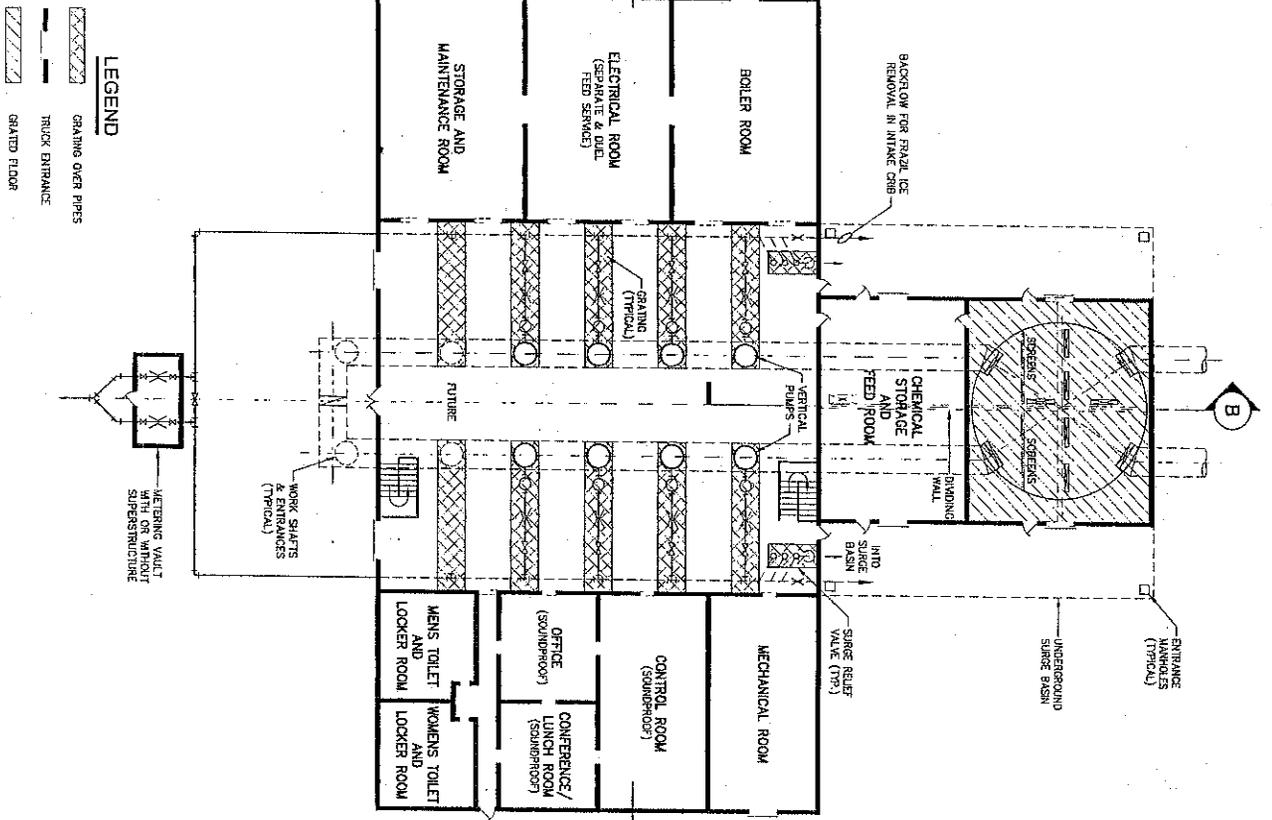
SURVEY ENGINEER

DATE OF SURVEY

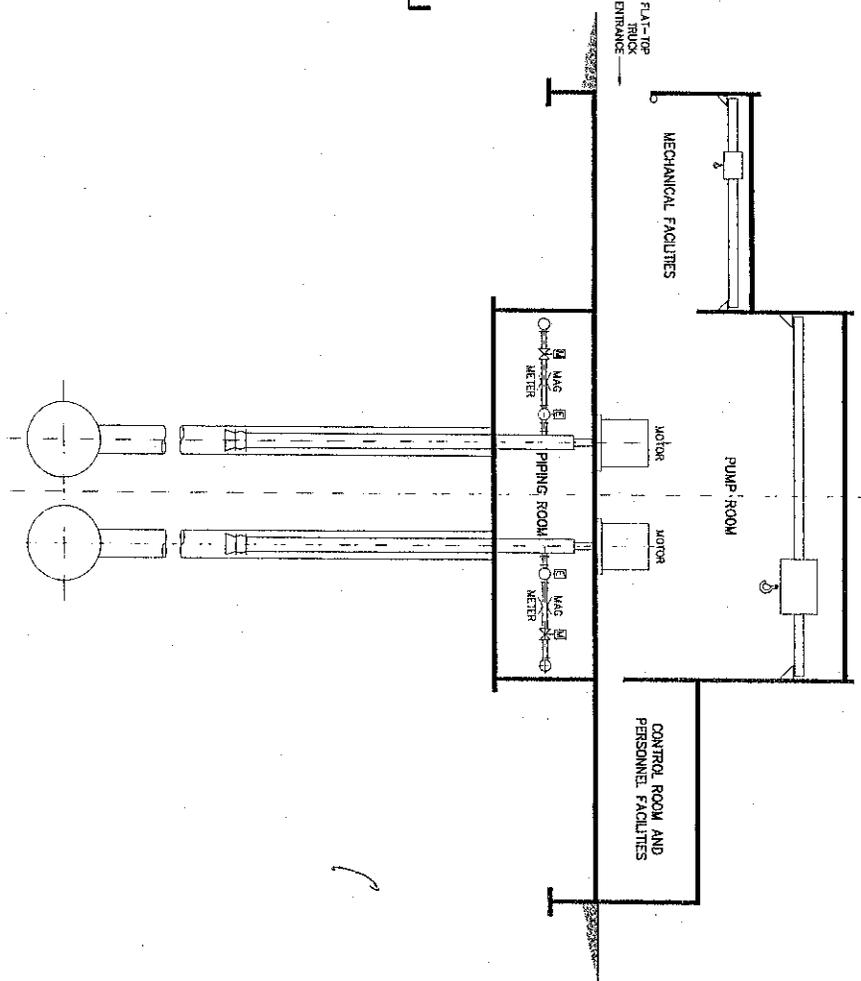
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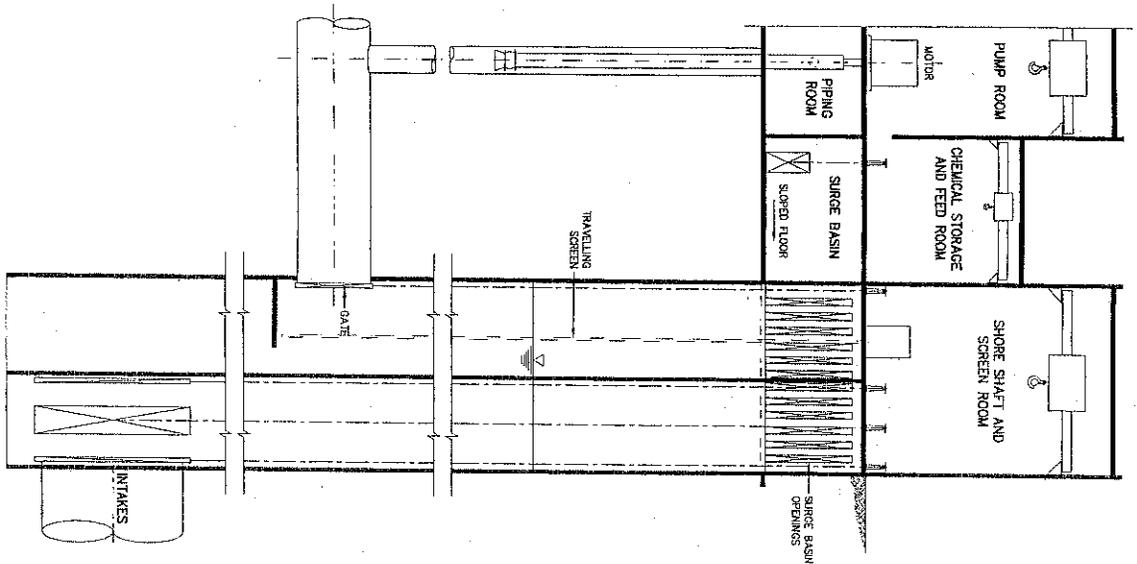
SE 1231-5



PLAN
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

Exhibit 4



STEVEN E. CHESTER
DIRECTOR

May 17, 2005

Ms. Donna Gronce, City Clerk
City of Lapeer
576 Liberty Park
Lapeer, Michigan 48446

Dear Ms. Gronce:

SUBJECT: National Pollutant Discharge Elimination System (NPDES); Permit No. MI0020460
Designated Name: Lapeer WWTP

Your National Pollutant Discharge Elimination System (NPDES) Permit has been processed in accordance with the appropriate state and federal regulations. It contains the requirements necessary for you to comply with state and federal water pollution control laws.

REVIEW THE PERMIT EFFLUENT LIMITS AND COMPLIANCE SCHEDULES CAREFULLY. These are subject to the criminal and civil enforcement provisions of both state and federal law. Permit violations are audited by the Department of Environmental Quality (DEQ) and the United States Environmental Protection Agency (USEPA), and may appear in a published quarterly noncompliance report made available to agencies and the public.

Your monitoring and reporting responsibilities must be complied with in accordance with this permit. If applicable, Discharge Monitoring Report forms will be transmitted to you in the near future. These reports are to be submitted monthly or as otherwise required by your NPDES permit.

Any reports, notifications, or questions regarding the attached permit or the NPDES program should be directed to the following address:

Mr. Tim Benton, District Supervisor
Lansing District Office, Water Bureau, DEQ
4th Floor North, Constitution Hall, 525 West Allegan
P.O. Box 30242
Lansing, Michigan 48909
Telephone: 517-335-4598, Fax: 517-241-3571

Sincerely,

William Creal, Chief
Permits Section
Water Bureau
517-241-1346

Attachment: Permit

- cc: USEPA-Region 5
- 208 Agency -- Genesee Planning Commission
- Mr. Dick Hinshon, Hinshon Environmental Consultants
- Mr. Charles Mann, Superintendent, Wastewater Treatment Plant, City of Lapeer
- Mr. Tim Benton, Lansing District Supervisor, Water Bureau
- Point Source Studies (Grand Rapids District Office), Water Bureau
- PCS Unit, Water Bureau
- Files

PERMIT NO. MI0020460

PART I

Section A. Limitations and Monitoring Requirements

2. Additional Monitoring Requirements

As a condition of this permit, the permittee shall monitor the discharges from monitoring point 001A for the constituents listed below. This monitoring is an application requirement of 40 CFR 122.21(i), effective December 2, 1999. Testing shall be conducted in August, 2006, May, 2007, March, 2008, and October, 2008. Grab samples shall be taken for total phenols, and parameters listed under Volatile Organic Compounds. For all other parameters, 24-hour composite samples shall be taken.

Test species for whole effluent toxicity monitoring shall include fathead minnow and either *Daphnia magna*, *Daphnia pulex* or *Ceriodaphnia dubia*. Testing and reporting procedures shall follow procedures contained in EPA/600/4-90/027F, "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms." When the effluent ammonia nitrogen (as N) concentration is greater than 5 mg/l, the pH of the toxicity test shall be maintained at the pH of the effluent at the time of sample collection. Toxicity test data acceptability is contingent upon the validation of the test method by the testing laboratory. Such validation shall be submitted to the Department upon request.

The results of such monitoring shall be submitted with the application for reissuance (see the cover page of this permit for the application due date). The permittee shall notify the Department within 14 days of completing the monitoring for each month specified above in accordance with Part II.C.5. Additional reporting requirements are specified in Part II.C.10. The permittee shall report to the Department any whole effluent toxicity test results greater than 1.0 TU_A or 1.0 TU_E within five (5) days of becoming aware of the result. If, upon review of the analysis, it is determined that additional requirements are needed to protect the receiving waters in accordance with applicable water quality standards, the permit may then be modified by the Department in accordance with applicable laws and rules.

Whole Effluent Toxicity ✓

acute toxicity
chronic toxicity

Hardness

calcium carbonate ✓

Metals (Total Recoverable) and Total Phenols (Quantification levels in parentheses)

antimony (1 µg/l) ✓	arsenic (1 µg/l) ✓	barium (5 µg/l) ✓
beryllium (1 µg/l) ✓	boron (20 µg/l) ✓	cadmium (0.2 µg/l) ✓
chromium (5 µg/l) ✓	copper (1 µg/l) ✓	lead (1 µg/l) ✓
nickel (5 µg/l) ✓	selenium (1 µg/l) ✓	silver (0.5 µg/l) ✓
zinc (5 µg/l) ✓		
total phenolic compounds		

Volatile Organic Compounds ✓

acrolein	acrylonitrile	benzene
bromoform	carbon tetrachloride	chlorobenzene
chlorodibromomethane	chloroethane	2-chloroethylvinyl ether
chloroform	dichlorobromomethane	1,1-dichloroethane
1,2-dichloroethane	trans-1,2-dichloroethylene	1,1-dichloroethylene
1,2-dichloropropane	1,3-dichloropropylene	ethylbenzene
methyl bromide	methyl chloride	methylene chloride
1,1,2,2-tetrachloroethane	tetrachloroethylene	toluene
1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethylene
vinyl chloride		

Acid-Extractable Compounds ✓

p-chloro-m-cresol	2-chlorophenol	2,4-dichlorophenol
2,4-dimethylphenol	4,6-dinitro-o-cresol	2,4-dinitrophenol
2-nitrophenol	4-nitrophenol	pentachlorophenol
phenol	2,4,6-trichlorophenol	

PERMIT NO. MI0020460

PART I

Section A. Limitations and Monitoring Requirements

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analyses	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
pH	7	---	---	---	6.5	---	9.0	S.U.	5X Weekly	Grab
Dissolved Oxygen	---	---	---	---	5.0	---	---	mg/l	5X Weekly	Grab
	---	---	---	---	3.0	---	---	mg/l	5X Weekly	Grab

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity: 2.3 MGD

- a. **Narrative Standard**
The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge which are or may become injurious to any designated use.
- b. **Sampling Locations**
Samples for CBOD₅, Total Suspended Solids, Ammonia Nitrogen, Total Thallium, Total Mercury, Available Cyanide and Total Phosphorus shall be taken prior to disinfection. Samples for Dissolved Oxygen, Fecal Coliform Bacteria, Total Residual Chlorine and pH shall be taken after disinfection. The Department may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent.
- c. **Total Residual Chlorine**
Compliance with the Total Residual Chlorine limit shall be determined on the basis of one or more grab samples. If more than one (1) sample per day is taken, the additional samples shall be collected in near equal intervals over at least eight (8) hours. The samples shall be analyzed immediately upon collection and the average reported as the daily concentration. EPA Method 330.1 or the Orion 97-70 electrode shall be used for analysis.
- d. **Percent Removal Requirements**
These requirements shall be calculated based on the monthly (30-day) effluent CBOD₅ and Total Suspended Solids concentrations and the monthly influent concentrations for approximately the same period.
- e. **Analytical Method and Quantification Level for Total Thallium**
The sampling procedures, preservation and handling, and analytical protocol for compliance monitoring for Total Thallium shall be in accordance with an EPA approved method. The quantification level for Total Thallium shall be 1.0 ug/l unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination. Upon approval of the Department, the permittee may use alternate analytical methods (for parameters with methods specified in 40 CFR 136, the alternate methods are restricted to those listed in 40 CFR 136).
- f. **Analytical Method and Quantification Level for Available Cyanide**
The sampling procedures, preservation and handling, and analytical protocol for compliance monitoring for Available Cyanide shall be in accordance with EPA Method OIA - 1677. The quantification level for Available Cyanide shall be 2.0 ug/l unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination. Upon approval of the Department, the permittee may use alternate analytical methods (for parameters with methods specified in 40 CFR 136, the alternate methods are restricted to those listed in 40 CFR 136).

PERMIT NO. MI0020460

Page 2 of 24

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Flint River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)										
May 1-Sep 30	130	190	---	lbs/day	7.0	---	10	mg/l	5X Weekly	24-Hr Composite
Oct 1-Nov 30	150	230	---	lbs/day	8.0	---	12	mg/l	5X Weekly	24-Hr Composite
Dec 1-Apr 30	480	770	---	lbs/day	25	40	---	mg/l	5X Weekly	24-Hr Composite
Total Suspended Solids										
May 1-Nov 30	380	580	---	lbs/day	20	30	---	mg/l	5X Weekly	24-Hr Composite
Dec 1-Apr 30	580	860	---	lbs/day	30	45	---	mg/l	5X Weekly	24-Hr Composite
Ammonia Nitrogen (as N)										
May 1-Sep 30	9.6	38	---	lbs/day	0.5	---	2.0	mg/l	5X Weekly	24-Hr Composite
Oct 1-Nov 30	---	58	---	lbs/day	---	---	3.0	mg/l	5X Weekly	24-Hr Composite
Total Phosphorus (as P)										
May 1-Sep 30	1.9	---	---	lbs/day	1.0	---	---	mg/l	5X Weekly	24-Hr Composite
Fecal Coliform Bacteria										
May 1-Sep 30	---	---	---	---	200	400	---	cts/100 ml	5X Weekly	Grab
Total Residual Chlorine										
May 1-Sep 30	---	---	---	---	---	---	0.038	mg/l	Daily	Grab
Total Thallium										
Until Sep 30, 2007	(report)	---	---	lbs/day	(report)	---	---	ug/l	2X Monthly	24-Hr Composite
Starting Oct 1, 2007	0.23	---	---	lb/day	12	---	---	ug/l	2X Monthly	24 Hr Composite
Available Cyanide										
Until Sep 30, 2007	(report)	---	---	lbs/day	(report)	---	---	ug/l	2X Monthly	Grab
Starting Oct 1, 2007	0.15	---	---	lb/day	7.8	---	---	ug/l	2X Monthly	Grab
Total Mercury										
Until Sep 30, 2007	(report)	---	---	lbs/day	(report)	---	---	ng/l	Quarterly	Grab
Starting Oct 1, 2007	0.00019	---	---	lb/day	10	---	---	ng/l	Monthly	Grab
<u>Minimum Monthly</u>										
CBOD ₅ Minimum % Removal										
Dec 1-Apr 30	---	---	---	---	85	---	---	%	Monthly	Calculation
Total Suspended Solids Minimum % Removal										
Dec 1-Apr 30	---	---	---	---	85	---	---	%	Monthly	Calculation

PERMIT NO. MI0020460

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18,

City of Lapeer
576 Liberty Park
Lapeer, Michigan 48446

is authorized to discharge from the City of Lapeer Wastewater Treatment Plant located at

1264 Industrial Drive
Lapeer, Michigan 48446

designated as Lapeer WWTP

to the receiving water named the Flint River in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

Unless specified otherwise, all contact with the Michigan Department of Environmental Quality (the "Department") required by this permit shall be made to the Lansing District Supervisor of the Water Bureau. The Lansing District Office is located at Constitution Hall, 525 W. Allegan, 4th Floor-North, P.O. Box 30242, Lansing, Michigan 48909, telephone: 517-335-4598, fax: 517-241-3571.

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1. Fees paid in accordance with the Michigan Act are not refundable.

In accordance with R323.2416 of the Michigan Administrative Code, the permittee shall make payment of an annual biosolids land application fee to the Department. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

Any person who is aggrieved by this permit may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may reject any petition filed more than 60 days after issuance as being untimely.

This permit is based on a complete application submitted on February 26, 2004.

This permit takes effect on October 1, 2005. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0020460, expiring October 1, 2004.

This permit and the authorization to discharge shall expire at midnight, October 1, 2009. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by April 4, 2009.

Issued May 16, 2005



William Creal, Chief
Permits Section
Water Bureau

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18,

City of Flushing
309 East Main Street
Flushing, Michigan 48433

is authorized to discharge from the Flushing Wastewater Treatment Plant located at

140 Industrial Drive
Flushing, Michigan 48433

designated as Flushing WWTP

to the receiving water named the Flint River in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

Unless specified otherwise, all contact with the Michigan Department of Environmental Quality (the "Department") required by this permit shall be made to the Lansing District Supervisor of the Water Bureau. The Lansing District Office is located at Constitution Hall, 525 W. Allegan, 4th Floor-North, P.O. Box 30242, Lansing, Michigan 48909, telephone: 517-335-4598, fax: 517-241-3571.

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1. Fees paid in accordance with the Michigan Act are not refundable.

In accordance with Section 324.3132 of the Michigan Act, the permittee shall make payment of an annual biosolids land application fee to the Department. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

Any person who is aggrieved by this permit may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may reject any petition filed more than 60 days after issuance as being untimely.

This permit is based on a complete application submitted on March 28, 2005.

This permit takes effect on November 1, 2005. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0020281, expiring October 1, 2004.

This permit and the authorization to discharge shall expire at midnight, October 1, 2009. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by April 4, 2009.

Issued August 26, 2005

Original Permit Signed by William Creal
William Creal, Chief
Permits Section
Water Bureau

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Flint River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)										
June - September	200	300	---	lbs/day	8.0	---	12	mg/l	5× Weekly	24-Hr Composite
October - March	480	730	---	lbs/day	19	---	29	mg/l	5× Weekly	24-Hr Composite
April - May	450	680	---	lbs/day	18	---	27	mg/l	5× Weekly	24-Hr Composite
Total Suspended Solids										
June - September	600	900	---	lbs/day	24	36	---	mg/l	5× Weekly	24-Hr Composite
October - May	750	1100	---	lbs/day	30	45	---	mg/l	5× Weekly	24-Hr Composite
Ammonia Nitrogen (as N)										
June - September	(report)	110	---	lbs/day	(report)	---	4.4	mg/l	5× Weekly	24-Hr Composite
October - November	(report)	240	---	lbs/day	(report)	---	9.7	mg/l	5× Weekly	24-Hr Composite
December - March	350	380	---	lbs/day	14	---	15	mg/l	5× Weekly	24-Hr Composite
April - May	160	230	---	lbs/day	6.4	---	9.2	mg/l	5× Weekly	24-Hr Composite
Total Phosphorus (as P)	25	---	---	lbs/day	1.0	---	---	mg/l	5× Weekly	24-Hr Composite
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	5× Weekly	Grab
Total Mercury										
Through October, 2007	(report)	---	---	lbs/day	(report)	---	---	ng/l	Quarterly	Grab
Beginning November, 2007	0.00025	---	---	lbs/day	10	---	---	ng/l	Monthly	Grab
Whole Effluent Toxicity										
Acute Toxicity										
Through October, 2008	---	---	---	---	---	---	(report)	TU _A	Quarterly	24-Hr Composite
Beginning November, 2008	---	---	---	---	---	---	1.0	TU _A	Monthly	24-Hr Composite
Chronic Toxicity										
Through October, 2008	---	---	---	---	(report)	---	---	TU _C	Quarterly	24-Hr Composite
Beginning November, 2008	---	---	---	---	8.0	---	---	TU _C	Monthly	24-Hr Composite
Minimum Monthly										
Total Suspended Solids, Minimum % Removal										
October - May	---	---	---	---	85	---	---	%	Monthly	Calculation

PART I

Section A. Limitations and Monitoring Requirements

Metals (Total Recoverable), Cyanide and Total Phenols (Quantification levels in parentheses)

antimony (1 µg/l)	arsenic (1 µg/l)	barium (5 µg/l)
beryllium (1 µg/l)	boron (20 µg/l)	cadmium (0.2 µg/l)
chromium (5 µg/l)	copper (1 µg/l)	lead (1 µg/l)
nickel (5 µg/l)	selenium (1 µg/l)	silver (0.5 µg/l)
thallium (1 µg/l)	zinc (5 µg/l)	
mercury (0.5 ng/l) using Method 1631 Revision E		
available cyanide (2 µg/l) using Method OIA - 1677		
total phenolic compounds		

Volatile Organic Compounds

acrolein	acrylonitrile	benzene
bromoform	carbon tetrachloride	chlorobenzene
chlorodibromomethane	chloroethane	2-chloroethylvinyl ether
chloroform	dichlorobromomethane	1,1-dichloroethane
1,2-dichloroethane	trans-1,2-dichloroethylene	1,1-dichloroethylene
1,2-dichloropropane	1,3-dichloropropylene	ethylbenzene
methyl bromide	methyl chloride	methylene chloride
1,1,2,2-tetrachloroethane	tetrachloroethylene	toluene
1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethylene
vinyl chloride		

Acid-Extractable Compounds

p-chloro-m-creso	2-chlorophenol	2,4-dichlorophenol
2,4-dimethylphenol	4,6-dinitro-o-cresol	2,4-dinitrophenol
2-nitrophenol	4-nitrophenol	pentachlorophenol
phenol	2,4,6-trichlorophenol	

Base/Neutral Compounds

acenaphthene	acenaphthylene	anthracene
benzidine	benzo(a)anthracene	benzo(a)pyrene
3,4-benzofluoranthene	benzo(ghi)perylene	benzo(k)fluoranthene
bis(2-chloroethoxy)methane	bis(2-chloroethyl)ether	bis(2-chloroisopropyl)ether
bis(2-ethylhexyl)phthalate	4-bromophenyl phenyl ether	butyl benzyl phthalate
2-chloronaphthalene	4-chlorophenyl phenyl ether	chrysene
di-n-butyl phthalate	di-n-octyl phthalate	dibenzo(a,h)anthracene
1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene
3,3'-dichlorobenzidine	diethyl phthalate	dimethyl phthalate
2,4-dinitrotoluene	2,6-dinitrotoluene	1,2-diphenylhydrazine
fluoranthene	fluorene	hexachlorobenzene
hexachlorobutadiene	hexachlorocyclo-pentadiene	hexachloroethane
indeno(1,2,3-cd)pyrene	isophorone	naphthalene
nitrobenzene	n-nitrosodi-n-propylamine	n-nitrosodimethylamine
n-nitrosodiphenylamine	phenanthrene	pyrene
1,2,4-trichlorobenzene		

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18,

City of Flint
1101 South Saginaw Street
Flint, Michigan 48502

is authorized to discharge from the Flint Water Pollution Control Facilities located at

G-4652 Beecher Road
Flint, Michigan 48532

designated as the Flint WWTP

to the receiving water named the Flint River, in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

Unless specified otherwise, all contact with the Michigan Department of Environmental Quality (the "Department") required by this permit shall be made to the Lansing District Supervisor of the Water Bureau. The Lansing District Office is located at Constitution Hall, 525 W. Allegan, 4th Floor-North, P.O. Box 30242, Lansing, Michigan 48909, telephone: 517-335-4598, fax: 517-241-3571.

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1. Fees paid in accordance with the Michigan Act are not refundable.

In accordance with Section 324.3118 of the Michigan Act, the permittee shall make payment of an annual storm water fee to the Department for each January 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by March 15 for notices mailed by February 1. The fee is due no later than 45 days after receiving the notice for notices mailed after February 1. Fees paid in accordance with the Michigan Act are not refundable.

Any person who is aggrieved by this permit may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may reject any petition filed more than 60 days after issuance as being untimely.

This permit is based on a complete application submitted on May 26, 2005.

This permit takes effect on the date of modification. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0022926, expiring October 1, 1993, and Certificate of Coverage MIS510234 issued January 6, 2005, which is hereby revoked upon the effective date of this permit.

This permit and the authorization to discharge shall expire at midnight, October 1, 2009. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by April 4, 2009.

Issued September 29, 2005. Based on settlement of a contested case on November 16, 2006, this permit was modified on _____.

William Creal, Chief
Permits Section
Water Bureau

PART I

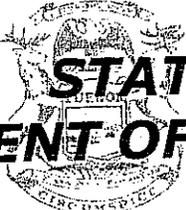
Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Flint River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type	
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units			
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow	
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)											
4/1-4/30	6,672	10,000	---	lbs/day	16	---	24	mg/l	Daily	24-Hr Composite	
5/1-10/31	2,920	3,750	---	lbs/day	7	---	9	mg/l	Daily	24-Hr Composite	
11/1-11/30	4,590	6,672	---	lbs/day	11	---	16	mg/l	Daily	24-Hr Composite	
12/1-3/31	5,420	8,340	---	lbs/day	13	---	20	mg/l	Daily	24-Hr Composite	
Total Suspended Solids											
5/1-10/31	8,340	12,500	---	lbs/day	20	30	---	mg/l	Daily	24-Hr Composite	
11/1-4/30	12,500	18,800	---	lbs/day	30	45	---	mg/l	Daily	24-Hr Composite	
Ammonia Nitrogen (as N)											
4/1-4/30	2,920	4,170	---	lbs/day	7.0	---	10.0	mg/l	Daily	24-Hr Composite	
5/1-10/31	667	1,460	---	lbs/day	1.6	---	3.5	mg/l	Daily	24-Hr Composite	
11/1-11/30	2,080	2,920	---	lbs/day	5.0	---	7.0	mg/l	Daily	24-Hr Composite	
12/1-3/31	2,500	3,128	---	lbs/day	6.0	---	7.5	mg/l	Daily	24-Hr Composite	
Total Phosphorus (as P)	417	---	---	lbs/day	1.0	---	---	mg/l	Daily	24-Hr Composite	
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	Daily	Grab	
Total Residual Chlorine	---	---	---	---	---	---	0.038	mg/l	Daily	Grab	
Total Mercury											
Through 12/31/2008	---	---	---	lbs/day	(report)	---	---	ng/l	Quarterly	Grab	
Beginning 1/1/2009	0.0042	---	---	lbs/day	10	---	---	ng/l	Quarterly	Grab	
Acute Toxicity											
Through 12/31/2008	---	---	---	---	---	---	(report)	TU _A	Quarterly	24-Hr Composite	
Beginning 1/1/2009	---	---	---	---	---	---	1.0	TU _A	Quarterly	24-Hr Composite	
Chronic Toxicity											
Through 12/31/2008	---	---	---	---	(report)	---	---	TU _C	Quarterly	24-Hr Composite	
Beginning 1/1/2009	---	---	---	---	1.5	---	---	TU _C	Quarterly	24-Hr Composite	
					<u>Minimum Daily</u>				<u>Maximum Daily</u>		
pH	---	---	---	---	6.5	---	9.0	S.U.	Daily	Grab	

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity: A rated design capacity of 50 MGD and the 1988 Water Resources Commission directive to use a 95 percent exceedance (Flint River drought) flow of 85 cfs (Holloway Reservoir Management Plan) for limit calculations.

 **STATE OF MICHIGAN**
DEPARTMENT OF ENVIRONMENTAL QUALITY

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18,

Genesee County Drain Commissioner's Office
G-4610 Beecher Road
Flint, Michigan 48532

is authorized to discharge from the **Genesee County District #7 Wastewater Stabilization Lagoon** located at

14300 Bird Road
Byron, Michigan 48418

designated as **Genesee Co #7-Argentine WWSL**

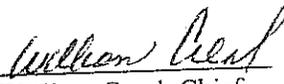
to the receiving water named the Shiawassee River in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit is based on a complete application submitted on September 5, 2006.

This permit takes effect on October 1, 2007. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0055026, expiring October 1, 2006.

This permit and the authorization to discharge shall expire at midnight, **October 1, 2011.** In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by **April 4, 2011.**

Issued July 17, 2007


William Creal, Chief
Permits Section
Water Bureau

PERMIT FEE REQUIREMENTS

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1.

In accordance with Section 324.3132 of the Michigan Act, the permittee shall make payment of an annual biosolids land application fee to the Department if the permittee land applies biosolids. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

CONTACT INFORMATION

Unless specified otherwise, all contact with the Michigan Department of Environmental Quality (the "Department") required by this permit shall be made to the Lansing District Supervisor of the Water Bureau. The Lansing District Office is located at Constitution Hall, 525 W. Allegan, 4th Floor-North, P.O. Box 30242, Lansing, Michigan 48909, telephone: 517-335-4598, fax: 517-241-3571.

CONTESTED CASE INFORMATION

Any person who is aggrieved by this permit may file a sworn petition with the State Office of Administrative Hearings and Rules of the Michigan Department of Labor and Economic Growth, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Labor and Economic Growth may reject any petition filed more than 60 days after issuance as being untimely.

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to Shiawassee River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading			Units	Maximum Limits for Quality or Concentration			Units	Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily		Monthly	7-Day	Daily			
Flow (see b. below)	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand (BOD ₅)		---	---	---	25	40	---	mg/l	see c. below	Composite
Total Suspended Solids										
Mar 1- Apr 30	---	---	---	---	70	100	---	mg/l	see c. below	Composite
Sep 1- Dec 31	---	---	---	---	40	45	---	mg/l	see c. below	Composite
Ammonia Nitrogen (as N)		---	---	---	(report)	---	---	mg/l	see c. below	Composite
Total Phosphorus (as P)										
Mar 1-Apr 30	---	---	---	---	1.0	---	---	mg/l	see c. below	Composite
Sep 1-Sep 30	---	---	---	---	0.50	---	---	mg/l	see c. below	Composite
Oct 1-Dec 31	---	---	---	---	1.0	---	---	mg/l	see c. below	Composite
Total Residual Chlorine	---	---	---	---	---	---	0.038	mg/l	see c. below	Grab
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	see c. below	Grab
					<u>Minimum Daily</u>		<u>Maximum Daily</u>			
pH	---	---	---	---	6.5	---	10	S.U.	see c. below	Grab
Dissolved Oxygen	---	---	---	---	5.0	---	---	mg/l	Daily	Grab

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity itself: 101.18 MGY.

- a. Narrative Standard
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.
- b. Discharge Periods
Effluent shall be discharged during high flow conditions in the spring and fall of each year. There shall be no discharge May through August and January through February. In addition, there shall be no discharge during periods of significant ice cover on the receiving stream or the lagoon, unless authorized by the Department.
- c. Discharge Management
The discharge is to be managed consistent with the following requirements.
 - 1) Cell Isolation - The permittee shall isolate a cell from cells receiving untreated sanitary wastewater at least two weeks in advance of a proposed discharge. There shall be no discharge from un-isolated cells.



STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

RECEIVED
JUN 20 2006

June 16, 2006

Mr. John O'Brien, P.E., Director
Division of Water and Waste Services
Genesee County Drain Commissioner
G-4610 Beecher Road
Flint, Michigan 48532

Dear Mr. O'Brien:

SUBJECT: National Pollutant Discharge Elimination System (NPDES); Permit No. MI0022977
Designated Name: Genesee Co-Ragnone WWTP

Your National Pollutant Discharge Elimination System (NPDES) Permit has been processed in accordance with the appropriate state and federal regulations. It contains the requirements necessary for you to comply with state and federal water pollution control laws. This permit is consistent with the Final Decision and Order dated June 12, 2006, issued by the Office of Administrative Hearings.

REVIEW THE PERMIT EFFLUENT LIMITS AND COMPLIANCE SCHEDULES CAREFULLY. These are subject to the criminal and civil enforcement provisions of both state and federal law. Permit violations are audited by the Department of Environmental Quality (DEQ) and the United States Environmental Protection Agency (USEPA), and may appear in a published quarterly noncompliance report made available to agencies and the public.

Your monitoring and reporting responsibilities must be complied with in accordance with this permit. If applicable, Discharge Monitoring Report forms will be transmitted to you in the near future. These reports are to be submitted monthly or as otherwise required by your NPDES permit.

Any reports, notifications, or questions regarding the attached permit or the NPDES program should be directed to the following address:

Mr. Tim Benton, District Supervisor
Lansing District Office, Water Bureau, DEQ
Constitution Hall, 4th Floor North, 525 West Allegan
P.O. Box 30242
Lansing, Michigan 48909
Telephone: 517-335-4598, Fax: 517-241-3571

Sincerely,

William Creal, Chief
Permits Section
Water Bureau
517-241-1346

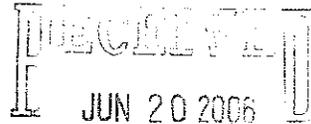
Attachment: Permit

cc: USEPA-Region 5
208 Agency – Genesee Planning Commission
Mr. Joseph M. Goergen, Plant Manager, Ragnone Wastewater Treatment Plant
Mr. Tim Benton, Lansing District Supervisor, Water Bureau (electronic); Superseded COC No. MIS710027
Ms. Kelly Ploehn, Permits Section, Water Bureau; Superseded COC No. MIS710027
Ms. Heather Krieger, Enforcement Unit, Water Bureau
PCS Unit, Water Bureau; Superseded COC No. MIS710027
Files

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18,

Genesee County Drain Commissioner
G-4610 Beecher Road
Flint, Michigan 48532



is authorized to discharge from the Anthony Ragnone Treatment Plant located at

9290 Farrand Road
Montrose, Michigan 48457

designated as **Genesee Co-Ragnone WWTP**

to the receiving water named the Flint River, in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

Unless specified otherwise, all contact with the Michigan Department of Environmental Quality (the "Department") required by this permit shall be made to the Lansing District Supervisor of the Water Bureau. The Lansing District Office is located at Constitution Hall, 525 W. Allegan, 4th Floor-North, P.O. Box 30242, Lansing, Michigan 48909, telephone: 517-335-4598, fax: 517-241-3571.

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1. Fees paid in accordance with the Michigan Act are not refundable.

In accordance with Section 324.3118 of the Michigan Act, the permittee shall make payment of an annual storm water fee to the Department for each January 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by March 15 for notices mailed by February 1. The fee is due no later than 45 days after receiving the notice for notices mailed after February 1. Fees paid in accordance with the Michigan Act are not refundable.

In accordance with Section 324.3132 of the Michigan Act, the permittee shall make payment of an annual biosolids land application fee to the Department. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

Any person who is aggrieved by this permit may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may reject any petition filed more than 60 days after issuance as being untimely.

This permit is based on a complete application submitted on February 2, 2005.

This permit takes effect on July 1, 2006. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0022977, expiring October 1, 2004, and Certificate of Coverage MIS710027, which is hereby revoked upon the effective date of this permit.

This permit and the authorization to discharge shall expire at midnight, October 1, 2009. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by April 4, 2009.

Issued September 27, 2005. Based on a negotiated settlement, of a petition for a contested case hearing submitted on November 4, 2005, the permit was revised on June 13, 2006.



William Creal, Chief
Permits Section
Water Bureau

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001B

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001B through Outfall 001 via monitoring point 001A. Outfall 001 discharges to the Flint River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	Monthly (report)	7-Day	Daily (report)	Units	Monthly	7-Day	Daily	Units		
Flow		---		MGD	---	---	---	---	Daily	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)										
4/1 - 4/30	---	8006	---	lbs/day	---	---	24	mg/l	Daily	24-Hr Composite
5/1 - 10/31	---	3240	---	lbs/day	---	---	15	mg/l	Daily	24-Hr Composite
11/1 - 11/30	---	4337	---	lbs/day	---	---	16	mg/l	Daily	24-Hr Composite
12/1 - 3/31	---	6672	---	lbs/day	---	---	20	mg/l	Daily	24-Hr Composite
Total Suspended Solids										
5/1 - 11/30	6480	9720	---	lbs/day	30	45	---	mg/l	Daily	24-Hr Composite
12/1 - 4/30	10008	15012	---	lbs/day	30	45	---	mg/l	Daily	24-Hr Composite
Ammonia Nitrogen (as N)										
4/1 - 4/30	---	---	---	lbs/day	7	---	10	mg/l	Daily	24-Hr Composite
5/1 - 10/31	---	---	---	lbs/day	2.6	---	4.6	mg/l	Daily	24-Hr Composite
11/1 - 11/30	---	---	---	lbs/day	5	---	7	mg/l	Daily	24-Hr Composite
12/1 - 3/31	---	---	---	lbs/day	6	---	7.5	mg/l	Daily	24-Hr Composite
Total Phosphorus (as P)	216	---	---	lbs/day	1.0	---	---	mg/l	Daily	24-Hr Composite
Available Cyanide										
until 9/30/2008	(report)	---	---	lbs/day	(report)	---	---	ug/l	Weekly	Grab
beginning 10/1/2008	2.0	9.5	---	lbs/day	9.4	---	44	ug/l	Weekly	Grab
Total Mercury										
until 9/30/2007	(report)	---	---	lbs/day	(report)	---	---	ng/l	Monthly	Grab
beginning 10/1/2007	0.0022	---	---	lbs/day	10	---	---	ng/l	Monthly	Grab

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity: 25.9 MGD, except for the load limitations for CBOD₅ and Ammonia Nitrogen during the fall, winter and spring discharge periods. In order to allow the maximum volume of wastewater through biological treatment during wet weather, the CBOD₅ and Ammonia Nitrogen loading limits are based on 32.5 MGD from 11/1 through 11/30, and 40 MGD from 12/1 through 4/30. In accordance with Part I.A.3. the permittee shall utilize to the maximum extent possible the hydraulic and process capabilities of the biological treatment system

a. Sampling Locations

Samples for CBOD₅, Total Suspended Solids, Ammonia Nitrogen, Total Phosphorus, and Total Mercury, shall be taken prior to disinfection. The Department may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent. Available Cyanide shall be sampled at a location acceptable to the permittee and the Department.

PART I

Section A. Limitations and Monitoring Requirements

- b. Analytical Method(s) and Quantification Level(s) for Available Cyanide
The sampling procedures, preservation and handling, and analytical protocol for compliance monitoring for Available Cyanide, is USEPA Method OIA-1677. The quantification level for Available Cyanide shall be 2 ug/l unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination. Upon approval of the Department, the permittee may use alternate analytical methods (for parameters with methods specified in 40 CFR 136, the alternate methods are restricted to those listed in 40 CFR 136).
- c. Monitoring Frequency Reduction for Available Cyanide
After the submittal of twelve months of data, the permittee may request, in writing, Department approval of a reduction in monitoring frequency for Available Cyanide. This request shall contain an explanation as to why the reduced monitoring is appropriate. Upon receipt of written approval and consistent with such approval, the permittee may reduce the monitoring frequency indicated in Part I.A.1 of this permit. The monitoring frequency for Available Cyanide, shall not be reduced to less than monthly. The Department may revoke the approval for reduced monitoring at any time upon notification to the permittee.
- d. Final Effluent Limitation for Total Mercury
The final limit for total mercury is the Level Currently Achievable (LCA) based on a multiple discharger variance from the water quality-based effluent limit of 1.3 ng/l, pursuant to Rule 323.1103(9) of the Water Quality Standards. Compliance with the LCA shall be determined as a 12-month running average. The 12-month running average shall be determined by adding the present monthly average result to the preceding 11 monthly average results then dividing the sum by 12. For facilities with quarterly monitoring requirements for total mercury, quarterly monitoring shall be equivalent to 3 months of monitoring in calculating the 12-month running average. Facilities that monitor more frequently than monthly for total mercury must determine the monthly average result, which is the sum of the results of all data obtained in a given month divided by the total number of samples taken, in order to calculate the 12-month running average. If the 12-month running average for any month is less than the LCA, the permittee will be considered to be in compliance for total mercury for that month, provided the permittee is also in full compliance with the Pollutant Minimization Program for Total Mercury, set forth in Part I.A.5.
- The permittee may choose to demonstrate that an alternate site-specific LCA is appropriate and request a permit modification. Such request and supporting documentation shall be submitted in writing to the Department. Supporting documentation shall include a minimum of 12 samples taken over a 12 month period in accordance with EPA Method 1631. Upon approval, this permit may be modified in accordance with applicable laws and rules to incorporate the alternate site-specific LCA as the effluent limitation for total mercury.
- After a minimum of 12 monthly data points have been collected, the permittee may request a reduction in the monitoring frequency if the data indicate that the 12-month running average mercury concentration is less than 5 ng/l. This request shall contain an explanation as to why the reduced monitoring is appropriate and shall be submitted to the Department. Upon receipt of written approval and consistent with such approval, the permittee may reduce the monitoring frequency for total mercury indicated in Part I.A.1 of this permit. The Department may revoke the approval for reduced monitoring at any time upon notification to the permittee.
- e. Total Mercury Testing Requirements
The analytical protocol for total mercury shall be in accordance with EPA Method 1631, Revision E, "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry". The quantification level for total mercury shall be 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination.

The use of clean technique sampling procedures is strongly recommended. Guidance for clean technique sampling is contained in: EPA Method 1669, *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels (Sampling Guidance)*, EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to the Department upon request.

PART I

Section A. Limitations and Monitoring Requirements

2. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Flint River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Flow	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	---	---	---	lbs/day	25	40	---	mg/l	Daily	24-Hr Composite during wet weather discharge only
Total Suspended Solids	---	---	---	lbs/day	30	45	---	mg/l	Daily	24-Hr Composite during wet weather discharge only
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	Daily	Grab
Total Residual Chlorine	---	---	---	---	---	---	0.038	mg/l	Daily	Grab
					Minimum Monthly					
CBOD ₅ Minimum % Removal	---	---	---	---	85	---	---	%	Monthly	Calculation
Total Suspended Solids Minimum % Removal	---	---	---	---	85	---	---	%	Monthly	Calculation
					Minimum Daily		Maximum Daily			
pH	---	---	---	---	6.5	---	9.0	S.U.	Daily	Grab
Dissolved Oxygen	---	---	---	---	5.0	---	---	mg/l	Daily	Grab

- a. Narrative Standard
The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge.
- b. Sampling Locations
Samples for CBOD₅, Total Suspended Solids, Fecal Coliform Bacteria, Total Residual Chlorine, pH, and Dissolved Oxygen shall be taken after disinfection. The Department may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent.
- c. Total Residual Chlorine
Compliance with the Total Residual Chlorine limit shall be determined on the basis of one or more grab samples. If more than one (1) sample per day is taken, the additional samples shall be collected in near equal intervals over at least eight (8) hours. The samples shall be analyzed immediately upon collection and the average reported as the daily concentration. EPA Method 330.1 or the Orion 97-70 electrode shall be used for analysis.

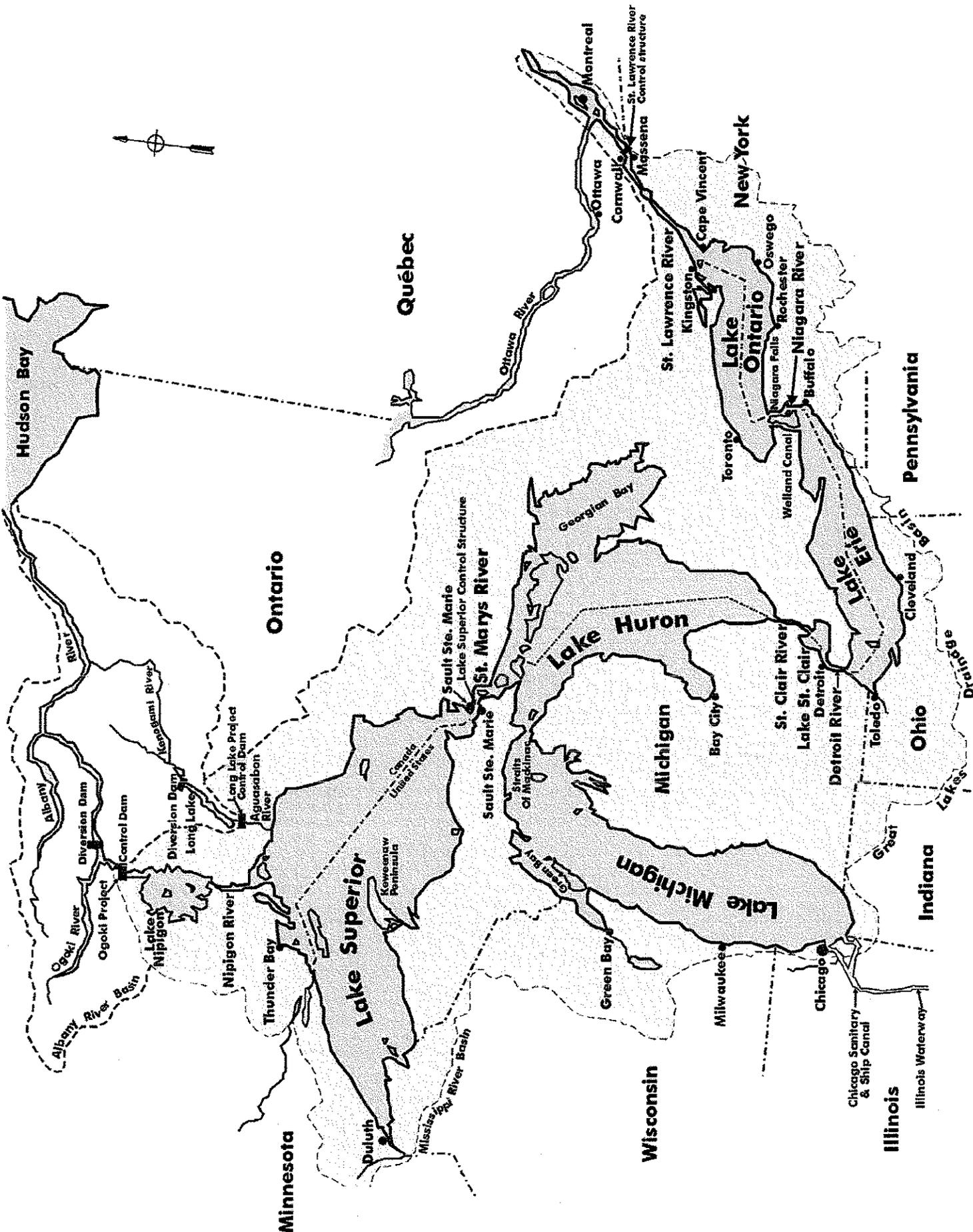


Exhibit 5