

January 7, 2010

**Great Lakes-St. Lawrence River Water Resources Regional Body
Great Lakes-St. Lawrence River Basin Water Resources Council
JOINT DECLARATION OF FINDING**

Water Management Program Review
Water Conservation and Efficiency Program Review
State of Illinois

PURPOSE

Pursuant to Section 3.4 of the Great Lakes-St. Lawrence River Basin Water Resources Compact (“Compact”), each Party State must submit a report to the Great Lakes-St. Lawrence River Water Resources Regional Body (Regional Body) and the Great Lakes—St. Lawrence River Basin Water Resources Council (Compact Council) on actions taken by that State to meet the provisions of the Agreement and Compact. Following the review of such reports, the Compact Council, in cooperation with the Provinces, shall determine if that State’s program meets or exceeds the provisions of the Compact; does not meet the provisions of the Compact; or, would meet the provisions of the Compact if certain modifications were made and what options may exist to assist the jurisdiction in meeting the provisions of the Compact.

Pursuant to Article 300 of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (“Agreement”), each Party State and Province must submit a report to the Great Lakes-St. Lawrence River Water Resources Regional Body (Regional Body) on actions taken by the State or Province on actions taken by that State or Province to meet the provisions of the Agreement. Following the review of such reports, the Regional Body shall determine if that State or Province’s program meets or exceeds the provisions of the Agreement; does not meet the provisions of the Agreement; or, would meet the provisions of the Agreement if certain modifications were made and what options may exist to assist the jurisdiction in meeting the provisions of the Agreement. However, and as noted below, Article 300 of the Agreement has not come into force as of this date, so all such submissions to date and subsequent Declarations of Findings issued pursuant to this Article are recognized as voluntary, and shall not be implied to indicate that Article 300 of the Agreement has come into force.

STIPULATIONS

Entry into Force of the Agreement and Compact

1. The Agreement was signed by the Great Lakes Governors and Premiers on December 13, 2005. Pursuant to Article 709 of the Agreement, the terms of the Agreement do not come into force unless and until all Parties to the Agreement notify all other Parties that measures have been enacted into law, except for the following terms that came into force on December 13, 2005:
 - a. Preamble
 - b. Chapter 1
 - c. Article 202
 - d. Article 208

January 7, 2010

- e. Article 302
- f. Article 303
- g. Article 304
- h. Chapter 4
- i. Chapter 6
- j. Chapter 7

To date, no such notification has been given, and the remaining terms of the Agreement have not come into force, except as described in Regional Body Resolution #8 (Attachment "A").

2. The effective date of the Compact is December 8, 2008. Therefore, pursuant to IL PA 95-238 (2007), the Compact and all terms contained therein became enforceable State law in the State of Illinois on **December 8, 2008**.

Relevant Actions Taken by the Regional Body and Compact Council

1. Pursuant to Article 304, Paragraph 1 of the Agreement, the Regional Body must identify Basin-wide Water conservation and efficiency objectives to assist the Parties in developing their Water conservation and efficiency programs by **December 13, 2007**. The Regional Body adopted Basin-wide Water conservation and efficiency objectives in fulfillment of this provision on **December 13, 2007**.
2. Pursuant to Section 4.2. of the Compact, the Compact Council must adopt Basin-wide conservation and efficiency objectives. The Compact Council adopted Basin-wide conservation and efficiency objectives on **December 8, 2008**.

Provisions of the Agreement or Compact that must be met by the State of Illinois to date

1. Pursuant to Section 4.12.2 of the Compact, the Baseline for determining a New or Increased Diversion, Consumptive Use or Withdrawal is set as of **December 8, 2008**. However, pursuant to Section 4.14.4 of the Compact, this provision of the Compact does not apply to the State of Illinois. The corresponding provision in the Agreement (Article 207, Paragraph 1) has not yet come into force.
2. Pursuant to Section 4.8 of the Compact, all New or Increased Diversions are prohibited, with exceptions as described in Section 4.9, and exemptions as described in Section 4.13, as of **December 8, 2008**. However, pursuant to Section 4.14.4 of the Compact, this provision does not apply to the State of Illinois. The corresponding provisions of the Agreement (Article 200, Article 201, and Article 208) have not yet come into force.
3. Pursuant to Section 4.12.2. of the Compact, each State must submit a list of Baseline Diversions, Consumptive Uses and Withdrawals to the Regional Body and Compact Council by **December 8, 2009**. However, pursuant to Section 4.14.4 of the Compact, this provision does not apply to the State of Illinois. The corresponding provision of the Agreement (Article 207, Paragraph 1) has not yet come into force.

January 7, 2010

4. Pursuant to Section 3.4.1 of the Compact, each State must submit a report to the Regional Body and the Compact Council detailing its Water management and conservation and efficiency programs pursuant to the Compact by **December 8, 2009**. The corresponding provision of the Agreement (Article 300) has not yet come into force.

Provisions of the Agreement and Compact that must be met by the State of Illinois by a future date

5. Pursuant to Section 4.2.2 of the Compact, consistent with the Basin-wide goals and objectives adopted by the Regional Body and the Compact Council, each State must establish Water conservation and efficiency goals and objectives by **December 8, 2010**. The corresponding provision of the Agreement (Article 304, Paragraph 2) will come into force at a date currently uncertain.
6. Pursuant to Sections 4.2.2, 4.2.4 and 4.2.5 of the Compact, each State must establish a Water Conservation and Efficiency program for all water users that is consistent with the Basin-wide goals and objectives as well as State goals and objectives by **December 8, 2010**. The corresponding provision of the Agreement (Article 304, Paragraphs 2, 4 and 5) will come into force at a date currently uncertain.
7. Pursuant to Section 4.1 of the Compact, each State must develop and maintain a Water resources inventory for the collection, interpretation, storage, retrieval exchange, and dissemination of information concerning the Water resources of the State, including, but not limited to, information on the location, type, quantity, and use of those resources and the location, type, and quantity of Withdrawals, Diversions and Consumptive Uses **by December 8, 2013**. The corresponding provision of the Agreement (Article 301) will come into force at a date currently uncertain.
8. Pursuant to Section 4.10.1 of the Compact, each State must create a program for the management and regulation of New or Increased Withdrawals and Consumptive Uses by adopting and implementing measures consistent with the decision-making standard of the Compact (see Section 4.11) **by December 8, 2013**. However, pursuant to Section 4.14.4 of the Compact, this provision does not apply to the State of Illinois. The corresponding provision of the Agreement (Article 206, Paragraph 1) will come into force at a date currently uncertain.
9. Pursuant to Section 4.10.2 of the Compact, each State must set threshold levels that comply with Section 4.10.1 of the Compact **by December 8, 2018**. Any State that fails to do so shall apply a threshold for management and regulation of all New or Increased Withdrawals of 100,000 gallons per day or greater average in any 90 day period. However, pursuant to Section 4.14.4 of the Compact, this provision does not apply to the State of Illinois. The corresponding provision of the Agreement (Article 206, Paragraph 2) will come into force at a date currently uncertain.

FINDING ON STATE OF ILLINOIS' WATER MANAGEMENT AND CONSERVATION AND EFFICIENCY PROGRAMS

The Regional Body and the Compact Council have received the State of Illinois' report on its Water management and conservation and efficiency programs, which are attached hereto as Exhibits "B" and "C", respectively. Upon review of said submission, as well as other actions taken by the State of Illinois as described above, the terms of the Agreement and Compact, the Regional Body and Compact Council find the following:

Provisions of the Agreement or Compact that must be met by the State of Illinois to date

1. The Regional Body and Compact Council find that, pursuant to Section 4.14.4 of the Compact, Section 4.12.2 of the Compact does not apply to the State of Illinois.
2. The Regional Body and Compact Council find that, pursuant to Section 4.14.4 of the Compact, Sections 4.8 and 4.9 of the Compact do not apply to the State of Illinois.
3. The Regional Body and Compact Council find that, pursuant to Section 4.14.4 of the Compact, Section 4.12.2 of the Compact does not apply to the State of Illinois.
4. The Regional Body and Compact Council find that, pursuant to Section 3.4.1 of the Compact, the State of Illinois submitted a report on its water management and conservation and efficiency programs, which are attached hereto as Exhibits "B" and "C", respectively, to the Regional Body and Compact Council **on December 2, 2009**.

Provisions of the Agreement and Compact that must be met by the State of Illinois by a future date

5. The Regional Body and the Compact Council find that neither the Compact nor the Agreement requires the adoption or implementation of water conservation and efficiency goals and objectives at this time.
6. The Regional Body and the Compact Council find that neither the Compact nor the Agreement requires adoption or implementation of a water conservation and efficiency program at this time.
7. The Regional Body and the Compact Council find that neither the Compact nor the Agreement requires the adoption or implementation of a water resources inventory program at this time.
8. The Regional Body and Compact Council find that, pursuant to Section 4.14.4 of the Compact, Section 4.10.1 of the Compact does not apply to the State of Illinois.
9. The Regional Body and Compact Council find that, pursuant to Section 4.14.4 of the Compact, Section 4.10.2 of the Compact does not apply to the State of Illinois.

January 7, 2010

THEREFORE, the Regional Body and the Compact Council, after reviewing the Water Management Program report from the State of Illinois, finds that such program meets or exceeds the current requirements of the Agreement and Compact.

FURTHERMORE, the Regional Body and the Compact Council, after reviewing the Water Conservation and Efficiency Program report submitted by the State of Illinois, finds that such program meets or exceeds the current requirements of the Agreement and Compact.

Issued by the Great Lakes-St. Lawrence River Water Resources Regional Body and the Great Lakes—St. Lawrence River Basin Water Resources Council on January 7, 2010.

ATTACHMENT “A”

**GREAT LAKES—ST. LAWRENCE RIVER WATER RESOURCES REGIONAL
BODY**

**RESOLUTION #8—ENTRY INTO FORCE OF CHAPTER 5 OF THE
AGREEMENT (REGIONAL REVIEW)**

WHEREAS, on December 13, 2005, the Governors of the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin, the Commonwealth of Pennsylvania, and the Premiers of Ontario and Québec signed the *Great Lakes—St. Lawrence River Basin Sustainable Water Resources Agreement* (“Agreement”); and,

WHEREAS, Chapter 7 of the Agreement came into force on December 13, 2005, pursuant to Article 709 paragraph 1j of the Agreement; and,

WHEREAS, pursuant to Article 709, Paragraph 2j of the Agreement, Chapter 5 of the Agreement will come into force “60 days after the last Party [State or Province] has notified the others that it has completed the Measures necessary to implement” specific provisions of the Agreement as described in Article 709, Paragraph 2 of the Agreement; and,

WHEREAS, the Parties to the Agreement have neither completed all the Measures as described in Article 709, Paragraph 2, nor have they notified the other Parties that they have completed such Measures; and,

WHEREAS, the Great Lakes—St. Lawrence River Basin Water Resources Compact (Compact) became effective on December 8, 2008; and,

WHEREAS, the Compact requires Regional Review to be performed from time to time to properly implement the terms of the Compact; and,

WHEREAS, Article 705 of the Agreement states that “Each Party shall, from the date of execution of this Agreement, exercise its best efforts to refrain from taking any action that would defeat the objectives of this Agreement;” and,

WHEREAS, the inability to engage in Regional Review would hinder the ability of the States to implement the Compact, which would in turn defeat the objectives of the Agreement.

NOW THEREFORE BE IT RESOLVED that the members of the Regional Body declare that Chapter 5 of the Agreement shall come into force immediately as of December 8, 2008, with regard to any requirements for Regional Review that may arise in respect of proposals from the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin, and the Commonwealth of Pennsylvania as they implement the Compact.

BE IT FURTHER RESOLVED that in accordance with Paragraph 5 of Article 709 of the Agreement, the terms, agreements and review processes contained in the Great Lakes Charter of 1985 (Charter) shall remain in full force and effect, except for those instances where Regional Review may take place in respect of diversion proposals from the States as they implement the Compact. In such instances, Regional Review shall replace prior notice and consultation requirements and activities in the Charter. The Regional Body shall be used for all prior notice and consultation activities under the Charter where they continue to apply.

BE IT FINALLY RESOLVED that Chapter 5 of the Agreement shall come into force with regard to any requirements for Regional Review that may arise in respect of proposals from the Provinces of Ontario and Quebec once each province has notified the other Parties that they have completed the measures needed to implement the prohibition of diversions and the management and regulation of exceptions. Once notice has been provided, Regional Review shall replace prior notice and consultation requirements under the Charter for diversion proposals in that Province.

***Adopted by the Great Lakes-St. Lawrence River Water Resources Regional Body on
December 8, 2008.***

ATTACHMENT “B”



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

December 2, 2009

Mr. David Naftzger
Executive Director
Great Lakes-St. Lawrence River Basin
Water Resources Council
Secretary, Great Lakes-St. Lawrence River
Water Resources Regional Body
c/o Council of Great Lakes Governors
35 E. Wacker Drive, Suite 1850
Chicago, IL 60601

RE: Water Management Program Report and Water Conservation and Efficiency
Program Report Submitted on behalf of Illinois

Dear Mr. Naftzger:

On behalf of the State of Illinois, please find enclosed a Water Management Program Report, and a Water Conservation and Efficiency Program Report being sent pursuant to and in satisfaction of the obligations included in Section 3.4 of the Great Lakes-St. Lawrence River Basin Water Resources Compact.

If you have any questions, please do not hesitate to contact Daniel Injerd at 312/793-3123.

Sincerely,

Gary R. Clark
Director
Office of Water Resources
Alternate of Governor Quinn, Member, Great Lakes-St. Lawrence River Basin Water Resources Council

Daniel Injerd
Chief, Lake Michigan Management Section
Office of Water Resources

GRC:DI:cp
Enclosures

cc: Peter Johnson, Program Director, Council of Great Lakes Governors

Naftzger-12-3.doc

**Water Management Program Review
Illinois' First Report to the Compact Council and Regional Body**

December 8, 2009

Lead Agencies and Contact Persons:

Illinois Department of Natural Resources, Office of Water Resources
Lake Michigan Management Section
Daniel Injerd, Chief
dan.injerd@illinois.gov

Illinois State Water Survey
Illinois Water Inventory Program
Tim Bryant, Coordinator
tbryant@illinois.edu

Laws and Regulations:

A U.S. Supreme Court Decree [Wisconsin v. Illinois, 388 U.S. 426 (1967), as modified, 449 U.S. 48 (1980)] limits Illinois' diversion of Lake Michigan water to an annual average of 3200 cubic feet per second (cfs) or 2.1 billion gallons per day. The law regulating this diversion is the "LEVEL OF LAKE MICHIGAN ACT" (615 ILCS 50). The Department of Natural Resources, Office of Water Resources (IDNR/OWR) implements this law using its Part 3730 Rules "ALLOCATION OF WATER FROM LAKE MICHIGAN". These rules can be found at www.dnr.state.il.us/owr/resman/3730RULE.htm.

The Illinois State Water Survey (ISWS) operates a voluntary surface and groundwater use reporting program. In late 2009, Governor Quinn signed an amendment to the "WATER USE ACT" of 1983. This amendment makes the reporting of all surface and groundwater withdrawals equal to or greater than 100,000 gallons per day mandatory as of January 1, 2010.

Water Management Program Summary:

The current Lake Michigan drainage basin in Illinois is very small, on the order of 75 square miles, and the predominant water supply is Lake Michigan. Groundwater use, from either the deep aquifer or shallow aquifer system, is very limited within the Lake Michigan drainage basin. Since July 1, 1977, no regional organization, municipality, political subdivision, agency or instrumentality, or any other organization, association or individual desiring to use water from Lake Michigan shall divert or use any such water unless it has previously obtained from the IDNR/OWR a valid allocation permit. As of January 1, 2010, all high capacity (100,000 gallons/day or greater) surface and groundwater intakes will be required to report their water use annually to the ISWS.

Sectors:

- 1) Public Water Supply: all public water supplies which are using Lake Michigan as their water supply are required to have a Lake Michigan water allocation permit. There are 196 current Lake Michigan water allocation permits issued. Public

- water supplies using 100,000 gallons/day of surface or groundwater are required to report their annual water use to the ISWS.
- 2) Self-Supply Commercial and Industrial: requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. Currently there are 6 permits issued. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 3) Self-Supply Irrigation: requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. There are no Lake Michigan water allocation permits issued for this water use sector. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 4) Self-Supply Livestock: requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. There are no Lake Michigan water allocation permits issued for this water use sector. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 5) Self-Supply Industrial: requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. There is currently 1 permit issued for this category. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 6) Self-Supply Thermoelectric Power Production (once through cooling): requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. There are no Lake Michigan water allocation permits issued for this water use sector. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 7) Self-Supply Thermoelectric Power Production (recirculated cooling): requires a Lake Michigan water allocation permit if they are diverting Lake Michigan water. There are no Lake Michigan water allocation permits issued for this water use sector. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 8) Off-Stream Hydroelectric Power Production: not eligible to receive a Lake Michigan water allocation permit. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 9) In-Stream Hydroelectric Power Production: not eligible to receive a Lake Michigan water allocation permit. If they are using 100,000 gallons/day of water from a surface water or groundwater source, they would be required to report annually to the ISWS.
 - 10) Other: the Metropolitan Water Reclamation District of Greater Chicago has a Lake Michigan water allocation to divert Lake Michigan water in order to maintain navigation and water quality standards in the Sanitary and Ship Canal.

Allocation Process:

Illinois' allocation process consists of the following key elements:

- Development of Rules and Regulations that cover both procedural and substantive issues, and which create a level playing field for all applicants. Our goal is to clearly specify the criteria to be used in making allocations so that applicants know what they need to do to justify their request.

- Evaluate available water supply sources. Northeastern Illinois has three primary water supply sources – Lake Michigan, deep aquifer groundwater and shallow aquifer groundwater (and very limited other surface water supply). Illinois requires all applicants to undertake an economic analysis to compare other water supply options to a Lake Michigan water supply.
- Evaluate water demands throughout the entire forecast period. This is accomplished by developing a regression equation for each of our over 200 allocation holders. This equation relates historical water use to three primary variables – population, household size and employment. Each applicant is also required to develop their own long-term water demand forecast.
- Hold formal allocation hearings for all applicants. This process is a quasi-judicial process, and a formal record is established for all applicants. The IDNR/OWR's decision is based on the record.
- Allocation permits are based on an annual average use for a given year, along with conditions/requirements that promote efficient use of the Lake Michigan water allocated.
- This process includes provisions for adjustments in water allocations. For most public water supplies, the primary data used to develop long-term demand forecasts carries a high degree of uncertainty. The allocation program needs to be flexible to accommodate shifts in water demand as time goes on and conditions change.
- All applicants must submit annual water use audit reports each year to monitor compliance with allocation limits and track compliance with water conservation requirements.

Lake Michigan water allocation applicants are divided into the following categories:

- **Category IA** – Applicants whose primary water needs are residential, commercial or industrial and whose future or continued use of Lake Michigan water is the most economical source of supply
- **Category IB** – Applicants whose primary water demands are for the minimum flows necessary to meet navigation requirements and minimum discretionary dilution flows necessary to maintain the Sanitary and Ship Canal in a reasonably satisfactory sanitary condition.
- **Category IIA** – Applicants whose water demands are for the minimum discretionary dilution flows necessary to meet water quality standards in the Sanitary and Ship Canal.
- **Category IIB** – Applicants whose primary water demands are residential, commercial and industrial and whose use of Lake Michigan water would reduce regional use of the deep aquifer.
- **Category III** – Applicants whose water demands do not fall into Categories IA, IB, IIA, or IIB.

In determining priorities within Categories IA and IB, the IDNR/OWR considers the following items:

- Adequacy of supply from sources other than Lake Michigan.
- Economics of alternative supplies.
- A limitation of 320 cubic feet of water per second for discretionary dilution for water quality purposes in the Sanitary and Ship Canal.

- The need to maintain the Sanitary and Ship Canal in a reasonably satisfactory sanitary condition.
- For new users or applicants who have requested an increase over the allocation of Lake Michigan water which these applicants had on July 1, 1980, priority will be given to allocations for domestic purposes.
- The need to meet navigation requirements in the Sanitary and Ship Canal.
- The requirement that the Department shall not allocate less than 320 cubic feet per second for discretionary dilution for water quality purposes in the Sanitary and Ship Canal before October 1, 2000, unless a modification is ordered based on the criteria stated in Section 3730.310(b)(4).

In determining priorities within Categories IIA and IIB, the Department will consider the following items:

- A limitation of 320 cubic feet per second for discretionary dilution for water quality purposes in the Sanitary and Ship Canal.
- The requirement that the Department shall not allocate less than 320 cubic feet per second for discretionary dilution for water quality purposes in the Sanitary and Ship Canal before October 1, 2000, unless a modification is ordered based on the criteria stated in Section 3730.310(b)(4).
- The need to meet water quality standards in the Sanitary and Ship Canal.
- For new users or applicants who have requested an increase over the allocation of Lake Michigan water these applicants had on July 1, 1980, allocations of Lake Michigan water will be made with the goal of reducing the withdrawals from the Cambrian-Ordovician Aquifer.

The IDNR/OWR will normally make allocations to meet the full water needs of any category as determined by the Department before any water is allocated to applicants in categories of a lower priority.

In determining the amount of water available for allocations to Categories I, II and III, the Department will consider the amount of water that must be reserved for storm water runoff, and a reserve for future increases in demands and storm water runoff.

Reporting and Database:

All Lake Michigan water allocation permittees are required to submit to the IDNR/OWR annual reports (LMO-2 Report) which summarize their annual water use. All permittees with an intake structure on Lake Michigan or who are the first Illinois user of water diverted from Lake Michigan outside Illinois must report their water use both annually and monthly (LMO-3 Report) to the IDNR/OWR. The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) submits monthly (LMO-6) reports for the amount of Lake Michigan water they divert for the purpose of maintaining the Sanitary and Ship Canal. The IDNR/OWR maintains a database which stores this information going back to 1989 and has hard copies going back to the 1970s. The IDNR/OWR produces an annual report which summarizes all its permittees LMO-2 reports. This is distributed to all Lake Michigan water allocation holders with an annual newsletter. All pumpage numbers provided on the LMO-2 and LMO-3 reports are metered numbers. The MWRDGC diverts water into the Sanitary and Ship Canal using sluice gates and by

opening the Chicago River Controlling Works and the O'Brien Locks. Therefore, the numbers they report on their LMO-6 reports are not metered but calculated.

For many years, the ISWS has maintained a voluntary reporting program for surface and ground water use. Beginning in January 1, 2010, that program becomes mandatory for all surface and groundwater withdrawals averaging 100,000 gallons/day or greater. The ISWS has its information on a database.

Initiatives:

Over the years, the ISWS has been an active participant in various National Water Use Program studies done by the United States Geological Survey and are now working on the Illinois portion of the 2005 report. The ISWS and the IDNR/OWR have also been involved with the Chicago Metropolitan Agency for Planning in their ongoing work on the "Northeastern Illinois Regional Water Supply Plan".

System Name and Number:

Please note that any purchased amount needs to be reported in line 1 under Total Finished Purchased Gallons. This amount if needed to understand the total water use at your facility.

If your facility does not have meterd to calculate total water wirhdrawals directly from the individual wells or surface water intakes, a reasonable estimate for each source or set of sources is acceptable. Our staff can also provide a per-person per-day water use coefficient for your facility based on per-person water use for water systems in your county.

1. Total Finished Self-Supplied Gallons for 2009 : *

Total Finished Purchased Gallons for 2009 : *

Grand Total Finished Gallons for 2009:

2. Supplier(s) of Purchased Water:

3. Population directly served (retail) within your city limits:

Population directly served (retail) outside your city limits:

4. Number of residential service connections for your utility:

Number of residential gallons billed/metered:

5. Number of commercial (non-manufacturing) service connections for your utility:

Number of commercial gallons billed/metered: **

6. Number of industrial (manufacturing) service connections for your utility:

Number of industrial gallons billed/metered:

7. Do you sell bulk water to another public water system? Yes No

Systems and gallons sold to each system (use additional pages if necessary):

System 1: Amount Sold:

System 2: Amount Sold:

System 3: Amount Sold:

System 4: Amount Sold:

8. Unaccounted-for-Flow (Total finished self-supplied/purchased water minus billed amounts):***

* Subtracting the amount of process water consumed at the water treatment plant (such as for back-flushing) from your total raw water will provide the amount of finished water.

** Include public uses of water (municipal, schools, library, etc.) in commercial gallons billed/metered under line 5.

*** Subtracting the total amount of water sold to residents, commercial accounts, industrial accounts, and bulk water accounts from your total finished water will provide your unaccounted-for-flow.

Well Treatment, Water Levels, Conservation, and Discharge

During the last year, have any of your wells had treatment or rehabilitation work? (Examples would include surging, jetting, acidizing, shock chlorination, etc.)

Yes No If yes, please list which well numbers and the type of treatment(s) in the following table.

Well No.	Treatment(s)

If your wells were tested during the calendar year, please provide the following water level information.

Well No.	Airline length (ft.)*	Water Levels						
		Water level date	Nonpumping			Pumping		
			Hours off	Gauge reading (ft.)**	Hours on	Gauge reading (ft.)**	Depth to Water.	Pumping Rate (gpm)

*Same as pump setting

**If gauge reading is in pounds per square inch (psi), indicate that in the column. If the gauge is direct reading, indicate feet (ft).

During the last year, were water conservation practices requested or imposed? Yes No

If Yes: Because of limited treatment capacity? Yes No Because of limited water availability? Yes No

Other:

Type of restriction:

Dates:

Are there plans to increase treatment or supply capacity? Yes No

Plans:

Do you discharge water? Yes No

If Yes: To a municipal wastewater treatment system? Name of system:

To a stream or other surface water body? Your NPDES permit #:

To a septic system?

Other:

Water Use Breakdown and Disposal

Please note that any purchased amount needs to be reported in the column Total Gallons Purchased, below. This amount is needed to indicate the water use for your location and your future needs.

If your facility is not equipped with meters to calculate total water pumpage, an estimated figure or other helpful information (such as staff population and visitors, acreage flooded, or time used at estimated pumping rate) is acceptable to help us calculate water usage at your facility.

1. Total Pumpage: 2009

Total Gallons Purchased Total Gallons Wells/Intakes

A. Processing/Washing:

Discharge:

Consumption:

B. Cooling & Condensing:

Type of Cooling System:

Once-through:

Recirculating:

Other (specify):

Discharge:

Consumption:

C. Boiler Feed:

D. Employee/Sanitary:

E. Hydroelectric Flows:

F. Other (Irrigation, Ash Sluice, Blowdown, etc.):

2. Supplier of Purchased Gallons:

3. Average number of employees, patrons, etc. daily:

4. Total annual power generation during 2009:

Net:

Gross:

Units of measurement:

kW-h:

MW-h:

GW-h:

Other (specify):

Well Treatment, Water Levels, Conservation, and Discharge

During the last year, have any of your wells had treatment or rehabilitation work? (Examples would include surging, jetting, acidizing, shock chlorination, etc.)

Yes No If yes, please list which well numbers and the type of treatment(s) in the following table.

Well No.	Treatment(s)

If your wells were tested during the calendar year, please provide the following water level information.

Well No.	Airline Length (feet)*	Test Date	Nonpumping (Static) Level			Pumping (Dynamic) Level			
			Hours Off	Gauge Reading**	Depth to Water (feet)	Hours On	Gauge Reading**	Depth to Water (feet)	Pumping Rate (gpm)

*Same as pump setting

**If gauge reading is in pounds per square inch (psi), indicate that in the column. If the gauge is direct reading, indicate feet (ft).

During the last year, were water conservation practices requested or imposed? Yes No

If Yes: Because of limited treatment capacity Because of limited water availability

Other:

Type of restriction:

Dates:

Success or estimated amount of savings:

Are there plans to increase treatment or supply capacity? No Yes Plans:

Do you discharge water? Yes No

If Yes: To a municipal wastewater treatment system Name of system:

To a stream or other surface water body Your NPDES permit #:

To a septic system

Other:



ILLINOIS
DEPARTMENT OF
NATURAL RESOURCES
Office of Water Resources

36 S. Wabash Ave., Rm. 1415, Chicago, IL 60603

APPLICATION FOR PERMIT TO WITHDRAW LAKE MICHIGAN WATER

An application for permit to withdraw Lake Michigan Water requires that the applicant express all amounts, usage, demands, etc in units of million gallons per day (MGD) for each accounting year beginning October 1 and ending September 30. The applicant should not include any water that is sold or transferred to any other distribution system unless expressly indicated otherwise in this application. In support of the application, the applicant must complete and answer the following questions, and provide the information that is requested in each of the sections contained in this application. After completing this form, please return it to the Illinois Department of Natural Resources, Office of Water Resources, 36 S. Wabash Avenue, Room 1415, Chicago, IL 60603.

SECTION I - GENERAL INFORMATION

Name, address and phone number of applicant:

Name, address and phone number of the contact person for the applicant:

Authorized Official

Name: _____

Title: _____

Date _____

Subscribed and sworn to before me this _____

day of _____, 20____.

SECTION V - BREAKDOWN OF LATEST ANNUAL WATER USES

WATER YEAR _____.

Enter the amount of water pumped and utilized for each item shown below. All amounts entered in this section must be in units of million gallons per day (MGD) rounded off to 3 decimal places to the right of the decimal. Conversion calculations are provided for your use in Section VIII to convert other commonly used units to MGD.

A. Pumpage Data

Water bought or received from the following distribution systems:

_____, _____,
 _____, _____.

- 1. Lake Michigan Pumpage MGD
- 2. Shallow Aquifer Pumpage MGD
- 3. Deep Aquifer Pumpage MGD
- 4. Total Pumpage (Add lines 1, 2 & 3) MGD
- 5. Water Treatment Use MGD
- 6. Gross Annual Pumpage (subtract line 5 from line 4) MGD

Water sold or provided to any other distribution systems (enter the name of each system and the amount sold or provided to that system on lines 7 through 12). If additional lines are required, attach an additional sheet listing each system and amount.

- 7. _____ MGD
- 8. _____ MGD
- 9. _____ MGD
- 10. _____ MGD
- 11. _____ MGD
- 12. _____ MGD
- 13. Total (add lines 7 through 12 and any additional amounts). MGD
- 14. Net Annual Pumpage (subtract line 13 from line 6) MGD

B. Metered Uses (Water Uses Within Permittee's Distribution System)

- 15. Residential MGD
- 16. Commercial and Manufacturing MGD
- 17. Municipal MGD
- 18. Construction MGD
- 19. Total Metered Uses (add lines 15 through 18) MGD
- 20. Percentage of Metered Use to Net Annual Pumpage
 (divide line 19 by line 14 and multiply by 100) %

C. Unmetered Hydrant Uses (Water Uses Within Permittee's Distribution System)

- 21. Firefighting and Training MGD
- 22. Water Main Flushing MGD
- 23. Sewer Cleaning MGD
- 24. Street Cleaning MGD
- 25. Construction MGD
- 26. Other (attach explanation) MGD
- 27. Total Unmetered Hydrant Use (add lines 21 through 26) MGD
- 28. Percentage of Unmetered Hydrant Use to Net Annual Pumpage
 (divide line 27 by line 14 and multiply by 100) %
- 29. Department Requirement for Hydrant use 10 %
- 30. Excessive hydrant use (subtract line 29 from line 28).
 If the percentage is greater than 0.0, attach explanation %
 (consult Rule 730.307 (e))

D. Unavoidable Leakage and Unaccounted For Flow

- 31. Maximum Unavoidable Leakage (Do worksheet in Section VII; enter amount from line 11 of the worksheet) MGD
- 32. Percentage of Maximum Unavoidable Leakage to Net Annual Pumpage (divide line 31 by line 14 and multiply by 100) %
- 33. Total Accounted for Flow (add lines 19, 27 and 31) MGD
- 34. Percentage of Total Accounted for Flow to Net Annual Pumpage (divide line 33 by line 14 and multiply by 100) %
- 35. Total Unaccounted for Flow (subtract amount on line 33 from line 14) MGD
- 36. Percentage of Total Unaccounted for Flow to Net Annual Pumpage
 (divide line 35 by line 14 and multiply by 100) %

SECTION VI - ADDITIONAL INFORMATION

A. Indicate Well Data and Production for the latest 12 month period as shown below

<u>Well No. & Location</u>	<u>Depth of Well</u>	<u>Capacity gallons/minute</u>	<u>Total Water Production</u>	<u>Quality-What wells violate State standards? If yes, include a current water quality analysis report.</u>
------------------------------------	--------------------------	------------------------------------	-----------------------------------	---

- B. Do any of the wells interfere with each other during simultaneous pumping? If yes, please describe type/basis of interference.
- C. What problems do you anticipate with your well supply between now and 2020?
- D. If an allocation of Lake Michigan water is granted, what is the earliest date that Lake Michigan water could be used? _____
- E. Specify present and/or proposed point(s) of withdrawal from Lake Michigan.
- F. Provide a map of your water service area. Include any projected service areas (annexations), well locations, and Lake Michigan water supply locations.
- G. Specify the location of discharge after the water is used (sewage treatment plant effluent), and describe the route the discharge will follow to reach an identifiable stream:
- H. Is the discharge after use being treated in any manner? (Describe):
- I. Include with this application a copy of any approved water conservation ordinance.
- J. Provide additional data and/or information you may have to further justify your water allocation on a separate sheet.

SECTION VII - MAXIMUM UNAVOIDABLE LEAKAGE WORKSHEET

Complete the following calculations to determine your maximum unavoidable leakage. Enter the appropriate amounts in the spaces provided.

A. Cast Iron Pipes With Lead Joints

	Age of Pipe	Miles of Pipe	Leakage Rate*	Maximum Unavoidable Leakage**
1.	60 yrs. or greater _____	_____	x 3000 g/d/mi = _____	_____ g/d
2.	40-60 yrs. _____	_____	x 2500 g/d/mi = _____	_____ g/d
3.	20-40 yrs. _____	_____	x 2000 g/d/mi = _____	_____ g/d
4.	20 yrs. or less _____	_____	x 1500 g/d/mi = _____	_____ g/d

B. All Other Types of Pipes and Joints

	Age of Pipe	Miles of Pipe	Leakage Rate*	Maximum Unavoidable Leakage**
5.	60 yrs. or greater _____	_____	x 2500 g/d/mi = _____	_____ g/d
6.	40-60 yrs. _____	_____	x 2000 g/d/mi = _____	_____ g/d
7.	20-40 yrs. _____	_____	x 1500 g/d/mi = _____	_____ g/d
8.	20 yrs. or less _____	_____	x 1000 g/d/mi = _____	_____ g/d
9.	Total Miles of Pipe (add lines 1 through 8 under "Miles of Pipe")			_____ miles
10.	Total Maximum Unavoidable Leakage (sum amounts on lines 1 through 8 under "Maximum Unavoidable Leakage")			_____ g/d
11.	Total Maximum Unavoidable Leakage MGD (divide line 10 by 1,000,000			_____ MGD
	(Enter this amount on line 31 of "Section V - Water Use Audit")			

* Leakage Rate expressed in gallons per day per mile (g/d/mi)
 ** Maximum Unavoidable Leakage expressed in gallons per day (g/d)

Section IV - Conversion Table

Below are conversion calculations to convert the most commonly used units to units of million gallons per day (MGD).

To convert cubic feet per year (cf) to (MGD) use:

$$cf \times 7.48 \div 1,000,000 \div 365 = MGD$$

To convert gallons per year (g) to (MGD) use:

$$g \div 1,000,000 \div 365 = MGD$$

To convert gallons per day g/d to (MGD) use:

$$g/d \div 1,000,000 = MGD$$

To convert million gallons per year (mg) to (MGD) use:

$$mg \div 365 = MGD$$

SECTION VIII CONVERSION TABLE

Below are conversion calculations to convert the most commonly used units to units of million gallons per day (MGD).

To convert cubic feet per year (cf) to (MGD) use:

$$\text{cf} \times 7.48 - 1,000,000 - 365 = \text{MGD}$$

To convert gallons per year (g) to (MGD) use:

$$\text{g} - 1,000,000 - 365 = \text{MGD}$$

To convert gallons per day (g/d) to (MGD) use:

$$\text{g/d} - 1,000,000 = \text{MGD}$$

To convert million gallons per year (mg) to (MGD) use:

$$\text{mg} - 365 = \text{MGD}$$

13451

ATTACHMENT “C”



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

December 2, 2009

Mr. David Naftzger
Executive Director
Great Lakes-St. Lawrence River Basin
Water Resources Council
Secretary, Great Lakes-St. Lawrence River
Water Resources Regional Body
c/o Council of Great Lakes Governors
35 E. Wacker Drive, Suite 1850
Chicago, IL 60601

RE: Water Management Program Report and Water Conservation and Efficiency
Program Report Submitted on behalf of Illinois

Dear Mr. Naftzger:

On behalf of the State of Illinois, please find enclosed a Water Management Program Report, and a Water Conservation and Efficiency Program Report being sent pursuant to and in satisfaction of the obligations included in Section 3.4 of the Great Lakes-St. Lawrence River Basin Water Resources Compact.

If you have any questions, please do not hesitate to contact Daniel Injerd at 312/793-3123.

Sincerely,

Gary R. Clark
Director
Office of Water Resources
Alternate of Governor Quinn, Member, Great Lakes-St. Lawrence River Basin Water Resources Council

Daniel Injerd
Chief, Lake Michigan Management Section
Office of Water Resources

GRC:DI:cp
Enclosures

cc: Peter Johnson, Program Director, Council of Great Lakes Governors

Naftzger-12-3.doc

Water Conservation and Efficiency Program Review

Illinois' First Report to the Compact Council and Regional Body

December 8, 2009

Lead agency and contact person: Illinois Department of Natural Resources
Office of Water Resources
Daniel Injerd, Chief, Lake Michigan Management Section

Status of Illinois' water conservation and efficiency program

A U.S. Supreme Court Decree limits Illinois' diversion of Lake Michigan water to an annual average of 3200 cubic feet per second (cfs), approximately 2.1 billion gallons/day. The Decree and Illinois state law specifically require that:

All feasible means reasonably available to the State and its municipalities, political subdivisions, agencies and instrumentalities shall be employed to conserve and manage the water resources of the region and the use of water therein in accordance with the best modern scientific knowledge and engineering practice. (615 ILCS 50)

This is the operative judicial and statutory language that directs the Illinois Department of Natural Resources (Department) to develop and implement a water conservation program covering all diverters of Lake Michigan water.

The Department's water conservation and efficiency program has several primary objectives:

- Promote the efficient use and conservation of Lake Michigan water by the end user (homeowner, business/industry).
- Establish standards for good water system management and leakage control by the owner/operator of a public water supply system.
- Ensure that Lake Michigan water diverted directly into the Chicago Waterway system for various purposes is kept to a minimum.

Illinois' primary tool to implement these objectives is to spell out certain water conservation requirements that all domestic users of Lake Michigan water must comply with as a condition of receiving a Lake Michigan water allocation permit. Section 3730.307 of the Department's Rules and Regulations for the Allocation of Water from Lake Michigan (17 IL Adm. Code Ch I. Sec. 3730) requires the following:

Section 3730.307 Conservation Practices and Other Permit Conditions

- a) The Department shall condition allocations within a user category upon required conservation practices for each user category as specified in subsections (b) and (c). Failure by any permittee to meet the conservation requirements applicable to it within a reasonable period of time will, upon notice, hearing and determination of such failure, constitute a violation of a Department order.

- b) As a condition of receiving an allocation of Lake Michigan water, all permittees will agree to submit to the Department proposals designed to reduce or eliminate wasteful water use and to reduce unaccounted-for flows to 8% or less, based on net annual pumpage, and procedures used to determine efficiency of water metering or accounting in the permittee's system.
- c) The Department shall require evidence of adoptions by the permittee of the following conservation practices as applicable to the particular user:
- 1) Leakage monitoring and correction for storage, transmission and distribution systems.
 - 2) Metering of all new construction.
 - 3) Metering of existing nonmetered services as part of any major remodeling.
 - 4) The adoption of ordinances which require installation of the following water efficient plumbing fixtures based on a pressure at the fixture of 40 to 50 psi in all new construction and in all repair or replacement of fixtures or trim:

Fixtures	Maximum Flow ¹
Water Closets, tank type	1.6 gal per flush
Water Closets, flushometer type	1.6 gal per flush
Urinals, tank type	1.0 gal per flush
Urinals, flushometer type	1.0 gal per flush
Shower Heads	2.5 GPM
Lavatory, sink faucets	2.5 GPM
 - 5) The adoption of ordinances which require the installation of closed system air conditioning in all new construction and in all remodeling.
 - 6) The adoption of ordinances which require that all lavatories for public use in new construction or remodeling be equipped with metering or self closing faucets.
 - 7) The adoption of ordinances which require that all newly constructed or remodeled car wash installations be equipped with a water recycling system.
 - 8) The adoption of ordinances which restrict non-essential outside water uses to prevent excessive, wasteful use. As a minimum, these restrictions shall provide that unrestricted lawn sprinkling will not be allowed from May 15 - September 15 of each year.
 - 9) Development and implementation of public programs to encourage reduced water use.
 - 10) Installation of facilities and implementation of programs to reduce to a reasonable minimum, and to accurately account for, water used for navigational, lockage, and leakage purposes; and pollution treatment, control or abatement purposes.
- d) Within 90 days of receipt of an allocation permit, each permittee which uses any water from deep aquifer pumpage shall submit a phased program designed to end this practice, other than for emergency or standby use, within five years of the receipt of Lake Michigan water.
- e) As a condition of receiving an allocation of Lake Michigan water, all permittees will limit hydrant uses to 1% or less of net annual pumpage in each annual accounting period. The Department may grant an exception to this requirement if it can be shown by the user that this requirement can't be met. In determining the merits of a request for an exception, the Department considers such factors as engineering studies of hydrant uses and unusual circumstances during an annual accounting period.

¹ Proposed revision to IDNR Part 3730 Rules to conform to flow limits specified in Section 123 of the Energy Policy Act of 1993.

- f) The Department recommends that all permittees adopt water rate structures based on metered water use and that water rate structures be developed which will discourage excessive water use.

These conservation requirements have been in effect since 1977. It is very difficult to accurately determine the impact of water conservation requirements on household water use. However, we have noted a general decrease in per capita consumption, especially over the last 10 years. Since the Compact came into force, the Department has completed a comprehensive Lake Michigan water allocation review, and has issued new Lake Michigan water allocation permits that incorporate these lower per capita use rates into the long term (out to the year 2030) allocations. Regionally, a small reduction in water use translates into a large volume of water, given that the Lake Michigan water service population in Illinois is around 7 million people.

Improving the management and accountability of a municipal water system offers the greatest potential for a significant reduction in water consumption. Consequently, the Department has developed standards (see Part b above) relating to leakage and unaccounted-for-flow (UFF), and has made future allocations of Lake Michigan water based on compliance with these requirements.

Historically, UFF has been an overlooked problem, although in recent years it has been getting more attention as the cost of water production and treatment have increased and new water supply sources have become more difficult to locate. In 1995, the average residential water rate in the Lake Michigan water service area was \$2.99/1000 gallons. By 2000, it had increased to \$3.23/1000 gallons, and by 2005 to \$3.65/1000 gallons. Water rates in excess of \$6.00/1000 gallons are becoming more common.

A successful regulatory program should apply to all permittees on a uniform and consistent basis. In the development of the Department's standards on UFF, we had to recognize the unique social, economic and demographic character of each community, such as the City of Chicago with a population of 3 million to small service areas with less than 1,000 people; from industrial to bedroom communities; from highly affluent to poverty level communities; from communities with water systems approaching 100 years old to communities with water systems less than 10 years old; from active growth communities to communities that are losing population; and with communities that have a high per capita water consumption to those with a very low per capita consumption. Given these variables, the Department concluded that the standard definition for UFF, the difference between total water production and billed water, would not be appropriate to use in the development of our regulatory standard.

Recognizing that all water systems, no matter how well constructed or maintained have a certain amount of unavoidable leakage, the Department developed a definition of unavoidable leakage that was based on the number of miles of water main, the type of pipe, the type of joints and the age of the water system. In this way, a community is not penalized because of the age of their water distribution system or for the construction materials that were used. Unavoidable leakage, as originally defined, also relates to that amount of leakage that cannot be reasonably controlled and which may cost more to locate and repair than to permit to exist.

The Department's standards for UFF and unavoidable leakage are based upon the percentage of water that enters the distribution system and does not include water wholesaled to any other water system. This amount is termed Δ net annual pumpage Δ . Based upon studies done by experts in this area and upon standards established by the AWWA for allowable leakage in new

systems, in 1980 the Department set the following standards (Section 3730.102) for unavoidable leakage:

For cast iron pipe with lead joints

<u>Age of water main</u>	<u>Maximum unavoidable leakage</u>
Greater than 60 years	3000 gal/day/mile of main
40 to 60 years	2500 gal/day/mile of main
20 to 40 years	2000 gal/day/mile of main
Less than 20 years	1500 gal/day/mile of main

For all types of pipes and joints

<u>Age of water main</u>	<u>Maximum unavoidable leakage</u>
Greater than 60 years	2500 gal/day/mile of main
40 to 60 years	2000 gal/day/mile of main
20 to 40 years	1500 gal/day/mile of main
Less than 20 years	1000 gal/day/mile of main

For older communities in northeastern Illinois, unavoidable leakage averages about 5-7% of net annual pumpage, while in newer communities it typically averages 3-5%.

UFF water, as defined by the Department (Section 3730.102), is that amount which cannot be accounted for after the amounts used for residential, commercial, industrial, municipal, non-metered hydrant use (this should not exceed 1% of net annual pumpage) and unavoidable leakage are compared to net annual pumpage. UFF should be close to zero. However, to provide some flexibility in water system operation and management, and also recognizing such losses as meter under-registration and water main breaks, the Department allows an UFF of up to 8%.

To ensure consistent reporting of water use data by our Lake Michigan water allocation users, the Department requires the annual submittal of water use data on a form known as the >Annual Water Use Audit Form= (copy attached). This form has been required since the late 1970s, so there is a long term data base that enables the Department to monitor the impact of this conservation requirement. In 1979, the first year for which the Department compiled statistics on UFF for 182 water systems in northeastern Illinois, the average UFF was 10.4%. Over the last five years, the average UFF has been around 4%.

There is a significant regional impact with a reduction of UFF. In 2000, total water consumption by Lake Michigan communities was 1,117 million gallons per day. Assuming that half of the reported UFF is due to underground leakage, the reduction in UFF from 10.4% to 4.0% has saved 36 million gallons per day, enough water to supply an additional 250,000 people.

Although the Department=s standards have served as a strong incentive for communities to begin the necessary leakage control studies and water audits to improve their accountability, they have also yielded very favorable cost returns. Water that is lost from the distribution system because of leakage is revenue lost, even though the cost is there to produce the water. This has the effect of increasing water rates to the consumer. For example, a 3 million gallon per day system with a 20% UFF will cut consumption by 360,000 gallons per day if they reduce

their UFF down to the required 8%. At a purchase price of \$1.75/1000 gallons, this represents an annual savings of \$230,000 per year. This savings alone should be more than adequate to finance a leak detection and repair program.

In 2007, 27 permittees reported UFF exceeding 8%, with some as high as 30%. All of these communities were ordered to present a specific plan of action and a timetable to reduce UFF to below the Department standard of 8%. All of them submitted a compliance program and are currently undertaking measures such as water audits, leak detection surveys, meter change outs and testing and in some cases major water main replacement programs.

During this past year, the Department initiated contact with all of our domestic Lake Michigan water allocation permittees to request a copy of their outside water use ordinance. These ordinances are being reviewed as part of an effort to evaluate where our conservation requirements might be improved.

As part of our ongoing Lake Michigan water allocation program, every year Department staff prepares and distributes a Lake Michigan water allocation newsletter. This newsletter includes a table that reports on our permittees' compliance with our UFF standards, and reminds them of our objective to promote the efficient use and conservation of our limited supply of Lake Michigan water.

An additional activity has been the Department's support of an 11 county Northeastern Illinois Regional water supply planning effort. This study is in its third and final year, and the final report, expected early in 2010, is expected to strongly recommend that water suppliers/users in the 11 county region, which includes the Lake Michigan water service area, consider implementing a number of water conservation initiatives. These measures go beyond the typical list of conservation measures, and include such issues as water reuse, stormwater management, etc.

Conclusion

Illinois has had a Lake Michigan water conservation program for over 30 years. We believe that our program is consistent with and fully supports the Great Lakes-St. Lawrence River Basin Water Conservation and Efficiency Objectives. The unique nature of Illinois' Lake Michigan water use and diversion as allowed under a U.S. Supreme Court Decree has resulted in a water conservation and efficiency program that is implemented primarily as a regulatory program, with additional measures, such as conservation pricing, conservation education and information sharing implemented through a non-regulatory effort.

Attachment – LMO -2 form



Illinois Department of Natural Resources

One Natural Resources Way, Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

Office of Water Resources, 36 S. Wabash Ave., Rm. 1415, Chicago, IL 60603
Ofc: 312/793-3123 Fax: 312/793-5968

November 17, 2009

Dear Permittee:

Enclosed are the "Annual Water Use Audit Form, LMO-2" for the 2009 Water Year, covering the period from October 1, 2008 through September 30, 2009, and the Illinois State Water Survey water use report. **Please complete and return the LMO-2 form to the Department by January 4, 2010.** The Illinois State Water Survey water use report should be mailed back directly to the State Water Survey in the enclosed return envelope.

Along with the LMO-2 form, you should include a summary of any water conservation initiatives you have implemented in the last year. This could include water main replacement, meter change outs/calibration, and leak detection surveys.

The data on the LMO-2 forms constitutes a major portion of the data required to measure and account for Illinois' diversion of Lake Michigan water. Therefore, please carefully check the amounts and percentages that you report for accuracy.

Remember, if your unaccounted-for-flow is greater than 8%, your system is in violation of the Department's Rules, and efforts to reduce unaccounted-for-flow to 8% or less should be initiated.

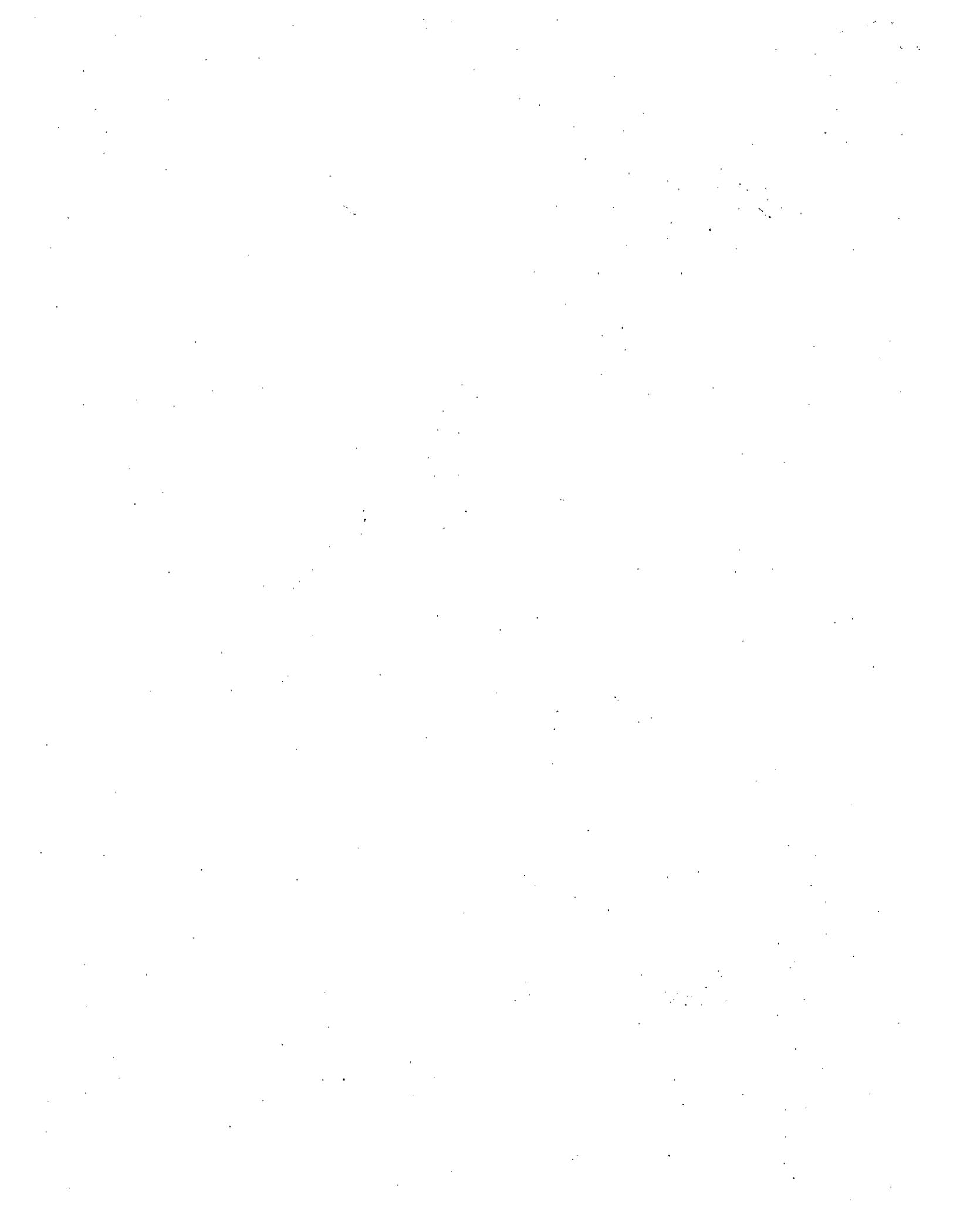
If you have any questions as you complete the Water Year 2009 LMO-2, feel free to contact Jim Casey at (312) 793-5947.

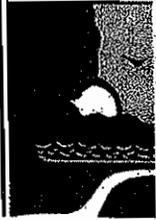
Sincerely,

Daniel Injerd, Chief
Lake Michigan Management Section

DI:JC:cp
Enclosures

H:\OwrChi\JCCardella\LMO-2Form\transmtl-lmo2-2009-2010.wpd





Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

Office of Water Resources, 36 S. Wabash Ave., Rm. 1415, Chicago, IL 60603
Ofc: 312/793-3123 Fax: 312/793-5968

2009 Annual Water Use Audit Form (LMO-2)

This form must be completed by all Category IA and IIB Permittees for each annual water use accounting year running from October 1st through September 30th. This form must be submitted the Department by January 4, 2010.

Section I - General Information

Name, address and phone number of Permittee:

County _____

Name, address and phone number of the contact person for the Permittee:

e-mail address _____

Authorized Official _____

Title _____

Date _____

Please provide the following leak survey information and population estimates for the last year.

Results and recommendations of leak surveys conducted on the water distribution system including progress made in leak repair. (attach to back of form)

Population _____ **Number of existing households** _____

The Illinois Department of Natural Resources is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Chapter 19, Section 120.2 of the Illinois Revised Statutes. Disclosure of this information is required. Failure to provide any information will result in this form not being processed. This form has been approved by the Forms Management Center, Central Management Services.

Section II - Water Use Audit

Enter the amount of water pumped and utilized for each item shown below. All amounts entered in this section must be in units of million gallons per day (MGD) rounded off to 3 decimal places to the right of the decimal. Conversion calculations are provided for your use in Section IV to convert other commonly used units to MGD.

A. Pumpage Data

Water bought or received from the following distribution systems:

- 1. Lake Michigan Pumpage MGD
- 2. Shallow Aquifer Pumpage MGD
- 3. Deep Aquifer Pumpage MGD
- 4. Total Pumpage (Add lines 1, 2 & 3) MGD
- 5. Water Treatment Use MGD
- 6. Gross Annual Pumpage (subtract line 5 from line 4) MGD

Water sold or provided to any other distribution systems (enter the name of each system and the amount sold or provided to that system on lines 7 through 12). If additional lines are required, attach an additional sheet listing each system and amount.

- 7. _____ MGD
- 8. _____ MGD
- 9. _____ MGD
- 10. _____ MGD
- 11. _____ MGD
- 12. _____ MGD
- 13. Total (add lines 7-12 and any additional amounts) MGD
- 14. Net Annual Pumpage (subtract line 13 from line 6) MGD

B. Uses. Metered Unmetered..... Total

- 15. Residential MGD
- 16. Commercial and Manufacturing MGD
- 17. Municipal MGD
- 18. Construction MGD
- 19. Total Uses (add Total lines 15 through 18) MGD
- 20. Percentage of Total Use to Net Annual Pumpage
(divide line 19 by line 14 and multiply by 100) %

C. Hydrant Uses

- 21. Firefighting and Training MGD
- 22. Water Main Flushing MGD
- 23. Sewer Cleaning MGD
- 24. Street Cleaning MGD
- 25. Construction MGD
- 26. Other (attach explanation) MGD
- 27. Total Hydrant Use (add lines 21 through 26) MGD

Section II - Water Use Audit (continued)

28. Percentage of Hydrant Use to Net Annual Pumpage
(divide line 27 by line 14 and multiply by 100) %
29. Department Requirement for Hydrant Use 1.0 %
30. Excessive hydrant use (subtract line 29 from line 28). If the percentage is
greater than 0.0, attach explanation. [see Rule 730.307(e)] %
- D. Unavoidable Leakage and Unaccounted for Flow**
31. Maximum Unavoidable Leakage (Do worksheet in Section III;
enter amount from line 10 of the worksheet) MGD
32. Percentage of Maximum Unavoidable Leakage to Net Annual Pumpage
(divide line 31 by line 14 and multiply by 100) %
33. Total Accounted for Flow (add lines 19, 27 and 31) MGD
34. Percentage of Total Accounted for Flow to Net Annual Pumpage
(divide line 33 by line 14 and multiply by 100) %
35. Total Unaccounted for Flow (subtract amount on line 33 from line 14) MGD
36. Percentage of Total Unaccounted for Flow to Net Annual Pumpage
(divide line 35 by line 14 and multiply by 100) %

Please Check Your Calculations

The sum of lines 33 and 35 should equal line 14. If they do not equal, recheck your calculations.
The sum of lines 34 and 36 should equal approximately 100%. If not, check your calculations.

Section III - Maximum Unavoidable Leakage Worksheet

Complete the following calculations to determine your maximum unavoidable leakage. Enter the appropriate amounts in the spaces provided.

A. Cast Iron Pipes With Lead Joints

Age of Pipe	Miles of Pipe	Leakage Rate*...Unavoidable Leakage**
1. 60 yrs. or greater	_____	x 3000 g/d/mi = _____ g/d
2. 40-60 yrs.	_____	x 2500 g/d/mi = _____ g/d
3. 20-40 yrs.	_____	x 2000 g/d/mi = _____ g/d
4. 20 yrs. or less	_____	x 1500 g/d/mi = _____ g/d

B. All Other Types of Pipes and Joints

5. 60 yrs. or greater	_____	x 2500 g/d/mi = _____ g/d
6. 40-60 yrs.	_____	x 2000 g/d/mi = _____ g/d
7. 20-40 yrs.	_____	x 1500 g/d/mi = _____ g/d
8. 20 yrs. or less	_____	x 1000 g/d/mi = _____ g/d
9. Total Miles	_____	Total Leakage _____ g/d
10. Total Maximum Unavoidable Leakage, in MGD (divide total leakage on line 9 by 1,000,000)	_____	MGD

(Enter this amount on line 31 of "Section II - Water Use Audit")

* Leakage Rate expressed in gallons per day per mile (g/d/mi)

** Maximum Unavoidable Leakage expressed in gallons per day (g/d)

Section IV - Conversion Table

Below are conversion calculations to convert the most commonly used units to units of million gallons per day (MGD).

To convert cubic feet per year (cf) to (MGD) use:

$$\text{cf} \times 7.48 \div 1,000,000 \div 365 = \text{MGD}$$

To convert gallons per year (g) to (MGD) use:

$$\text{g} \div 1,000,000 \div 365 = \text{MGD}$$

To convert gallons per day (g/d) to (MGD) use:

$$\text{g/d} \div 1,000,000 = \text{MGD}$$

To convert million gallons per year (mg) to (MGD) use:

$$\text{mg} \div 365 = \text{MGD}$$

H:\OwrChi\JCCardella\LMO-2Form\2009-2010-LMO2form.wpd