

ANNUAL REPORT
of the
*GREAT LAKES REGIONAL WATER USE
DATABASE REPOSITORY*

REPRESENTING 2000 WATER USE DATA IN GALLONS

Prepared by

The Great Lakes Commission

August 04

ACKNOWLEDGEMENTS

The author of this report is Marilyn Ratliff, Great Lakes Commission Database Administrator. Thomas R. Crane, Program Manager of Resource Management, provided oversight and thanks go to Dr. Michael J. Donahue, Great Lakes Commission President/CEO, for his overall guidance.

The Great Lakes Commission wishes to thank the members of the Water Withdrawal and Use Technical Subcommittee formed under the *Water Resources Management Decision Support System for the Great Lakes* project for their involvement and participation in the preparation of this report.

FOREWARD

The Great Lakes Regional Water Use Database partially fulfills the recommendation in the Great Lakes Charter of 1985 that calls for a uniform, consistent base of data of Great Lakes water withdrawals, diversions and consumptive uses. Water use data are submitted to the repository on an annual basis and reports are provided to assist the jurisdictions in Great Lakes-St. Lawrence River water resources planning and management. As specified by the Water Resources Management Committee in its 1987 report, *Managing the Waters of the Great Lakes Basin*, the database catalogs withdrawals by water use category, sub-basin, and jurisdiction.

The operation and use of this database represents one of several ongoing activities on behalf of the Great Lakes states and provinces to fulfill obligations of the Charter and Charter Annex of 2001. Continued state and provincial involvement in refining and expanding the database is necessary to ensure that the database can support other ongoing Charter initiatives, such as improving consumptive use information, conducting trend analysis, developing uniform and consistent demand forecasting applications and promoting regional water conservation programs.

The database became operational in the summer of 1988 following a multi-year cooperative effort. Design and development involved input from many state, provincial, and federal agencies, with the U.S. Geological Survey providing much of the leadership.

The customized program was developed in 1987 by Acres International on the MS/DOS platform using a modified version of DbaseIII. With the rapid advancement of computer hardware and software and the evolving needs of the Great Lakes state and provincial water resources management programs, the old system soon became outdated. In July 1998, the Great Lakes Commission and Eastern Michigan University's Institute for Geospatial Research and Education (formerly the Center for Environmental Information Technology and Application) began work on the revised database. The new system was developed using Visual Basic for Applications, based on Microsoft Access®, and contains all of the functions of the old system (including data entry, a data check facility and report generation), in addition to new features such as a flexible data interface and automatic data checking.

TABLE OF CONTENTS

<i>ACKNOWLEDGEMENTS</i>	2
<i>FOREWARD</i>	3
<i>TABLE OF CONTENTS</i>	4
<i>TABLE OF FIGURES</i>	5
I. GREAT LAKES BASIN OVERVIEW	6
<i>Introduction</i>	6
<i>Topics of Interest</i>	8
<i>Diversions</i>	8
<i>Consumptive Use</i>	8
<i>Definitions and Abbreviations</i>	10
<i>General Definitions and Abbreviations</i>	10
<i>Water Use Category Definitions</i>	11
<i>Contacts</i>	12
II. GREAT LAKES BASIN SUMMARY TABLES	13
III. JURISDICTION TABLES AND ANALYSES	17
<i>Illinois</i>	18
<i>Indiana</i>	22
<i>Michigan</i>	26
<i>Minnesota</i>	32
<i>New York</i>	36
<i>Ohio</i>	40
<i>Ontario</i>	44
<i>Pennsylvania</i>	51
<i>Quebec</i>	55
<i>Wisconsin</i>	61
IV. BASIN TABLES	65
<i>Lake Erie</i>	66
<i>Lake Huron</i>	71
<i>Lake Michigan</i>	74
<i>Lake Ontario</i>	79
<i>Lake Superior</i>	82
<i>St. Lawrence River</i>	87
V. WATER USE CATEGORY TABLES	90
<i>Public Supply-Domestic & Industrial</i>	91
<i>Self Supply-Domestic</i>	93
<i>Self Supply – Irrigation</i>	95
<i>Self Supply-Livestock</i>	97
<i>Self Supply-Industrial</i>	99
<i>Self Supply-Thermoelectric Power, Fossil Fuel</i>	101
<i>Self Supply-Thermoelectric Power, Nuclear Power</i>	103
<i>Self Supply Hydroelectric Power</i>	105
<i>Self Supply-Other</i>	107

TABLE OF FIGURES

<i>Figure 1-2000 Great Lakes Basin Withdrawals.....</i>	<i>6</i>
<i>Figure 2-Withdrawals By Jurisdiction Including Hydroelectric Power</i>	<i>7</i>
<i>Figure 3-Withdrawals By Jurisdiction Not Including Hydroelectric Power.....</i>	<i>7</i>
<i>Figure 4-Consumptive Use Coefficients.....</i>	<i>9</i>
<i>Figure 5-Illinois Water Use.....</i>	<i>15</i>
<i>Figure 6-Indiana Water Use.....</i>	<i>16</i>
<i>Figure 7-Michigan Water Use.....</i>	<i>17</i>
<i>Figure 8-Minnesota Water Use</i>	<i>18</i>
<i>Figure 9-New York Water Use</i>	<i>19</i>
<i>Figure 10-Ohio Water Use</i>	<i>20</i>
<i>Figure 11-Ontario Water Use</i>	<i>21</i>
<i>Figure 12-Pennsylvania Water Use.....</i>	<i>23</i>
<i>Figure 13-Quebec Water Use.....</i>	<i>24</i>
<i>Figure 14-Wisconsin Water Use.....</i>	<i>27</i>

I. GREAT LAKES BASIN OVERVIEW

Introduction

All data are submitted in one of two unit measures--millions of U.S. gallons per day (mgd) or millions of liters per day (mld)—and values are initially set to zero. Numeric values are required for all categories of use. A value of zero indicates either zero water use or water use which does not meet the Charter trigger level for water use reporting of 100,000 gallons per day (380,000 liters per day) average over a 30-day period.

The quality of data for each entry is rated as a 1, 2 or 3 indicating the level of accuracy as 1) measured 2) partially measured or 3) estimated; and a 1 or 2 indicating the level of aggregation as 1) originating from site-specific sources or 2) from higher level aggregate sources such as county or census databases. Both measures of quality are based on percentages of total volume.

For this report, self-supply – hydroelectric (water used in the generation of electricity at plants where turbine generators are driven by falling water) is treated as a withdrawal, even though all water for this purpose is considered to be returned to the basin. As the following chart illustrates, this is the largest single category of withdrawal and represents 95% of the total amount of water “withdrawn” in 2000.

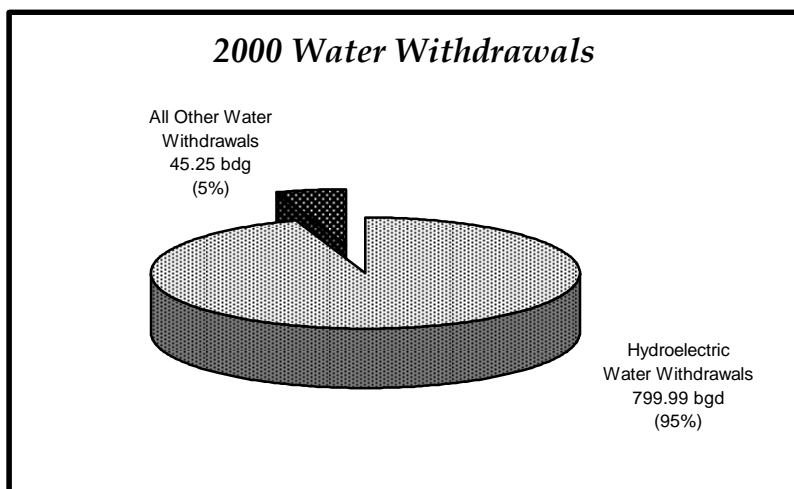


Figure 1

Each of the ten jurisdictions' water uses is represented in the following charts. The first chart includes self-supply – hydroelectric use. In total, water withdrawals for the year 2000 were approximately 845 billion gallons per day, or about 3,199 billion liters per day.

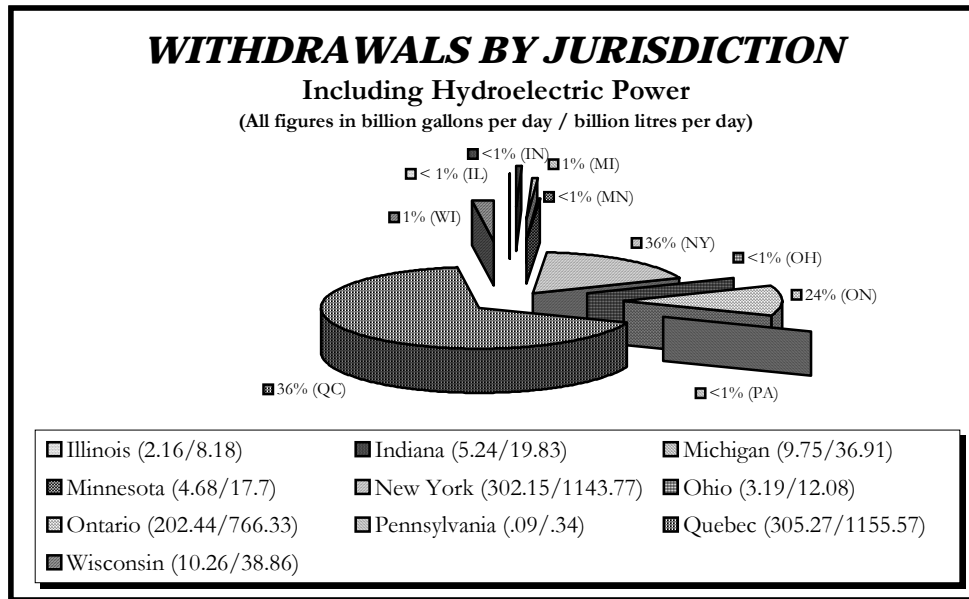


Figure 2

This second chart more accurately reflects the true water use within the basin, as it excludes self-supply – hydroelectric use. Water withdrawals for the eight remaining off-stream categories totaled 45 billion gallons per day, or 171 billion liters per day, reflecting a decrease of 3 bgd (10 bld). Piecharts showing individual jurisdictional water use, starting with Illinois on page 15, are in million liters per day and do not include hydroelectric use.

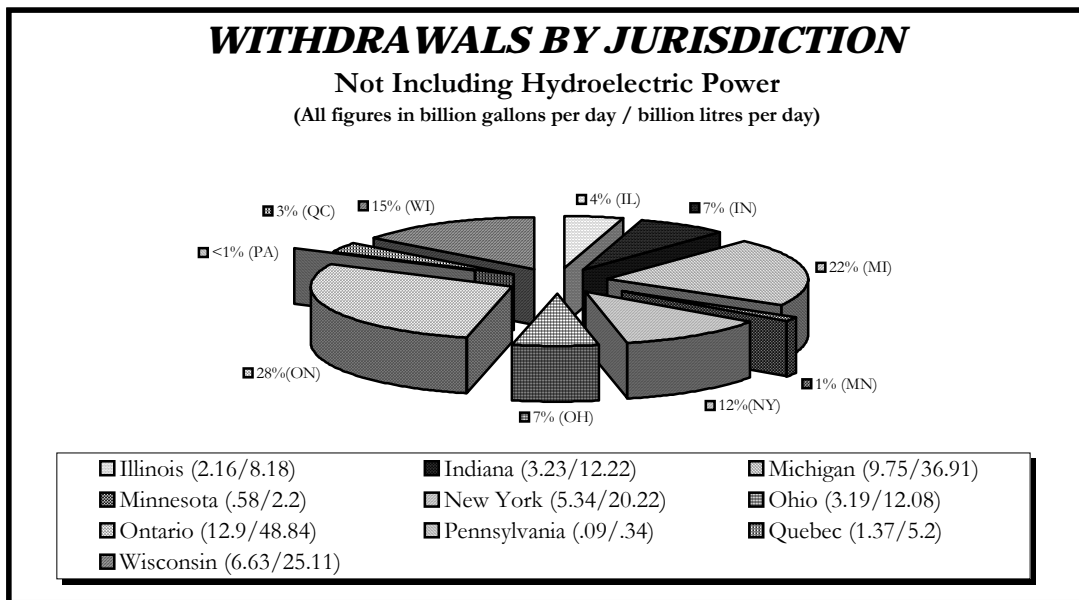


Figure 3

Topics of Interest

Diversions

Two types of diversions are reported by the water use database: interbasin (transfers that take place between the Great Lakes basin and another watershed) and intrabasin (transfers that take place between one of the Great Lakes basins and another); both types can be either incoming or outgoing.

Of the two types, interbasin diversions (transfers that take place between the Great Lakes basin and another watershed) have traditionally been of greater interest. Outgoing interbasin diversions--those **without** a minus sign--indicate water leaving the Great Lakes basin; incoming interbasin diversions--indicated **with** a minus sign--indicate water entering the Great Lakes basin.

For a summary of all diversions and removals, please see *Great Lakes Diversions and Other Removals* by Frank Quinn and Jeff Edstrom, **Canadian Water Resources Journal**, 2000, vol. 25, #2. Copies of this article can be obtained through the CWRJ website at [www.cwra.org/Publications, or](http://www.cwra.org/Publications,or) by calling (519)622-4764.

Consumptive Use

Collecting and reporting defensible data for consumptive uses of Great Lakes water continues to be a major challenge for the Great Lakes jurisdictions. The states and provinces currently use a variety of methods to obtain consumptive use figures, including measurement and estimation at the facility level. However, the most common practice is to calculate consumptive use for each water use category by multiplying the withdrawal amount by an agreed-upon percentage (consumptive use coefficient). Figure 4 on page 6 shows the consumptive use coefficients that were used for this report. For consumptive use values by jurisdiction, basin or water use category, please refer to the tables in chapters II through V. Total consumptive use in the basin for 2000 was calculated to be 1.86 bgd (7.02 bld).

For a scholarly overview, please see the **Annotated Bibliography of Consumptive Use in the Great Lakes Region and Basin** (www.glc.org/wateruse/wrmdss/finalreport/pdf/CU_biblio.pdf) and **Measuring and Estimating Consumptive Use of Great Lakes Water** (www.glc.org/wateruse/wrmdss/finalreport/pdf/CU_briefing.pdf).

<i>Water Use Category</i>	ILLINOIS	INDIANA	MICHIGAN	MINNESOTA	NEW YORK	OHIO	ONTARIO	PENNSYLVANIA	QUEBEC	WISCONSIN
Public Supply	10-15%	15%	10-15%	10-15%	10%	10-15%	15%	10%	10-15%	10-15%
Self-Supply Domestic	10-15%	15%	10-15%	10-15%	10%	10-15%	15%	10%	10-15%	10-15%
Self-Supply Irrigation	90%	90%	90%	90%	90%	90%	78%	90%	90%	70%
Self-Supply Livestock	80%	80%	80%	80%	90%	80%	80%	80%	80%	90%
Self-Supply Industrial	Varies by plant & SIC code	6%	10-15%	Varies by plant & SIC code	25%	10%; salt mining is 90%	Varies by plant & SIC code	Varies by plant & SIC code	10% for pulp & paper industry	10.2% for manufacturing & mining
Self-Supply Thermoelectric (Fossil Fuel)	Individually estimated based on the quantity of make-up water	2%	1-2% for plants using once-through cooling; individual analysis for wet cooling towers	2%	2%	Individually estimated based on the quantity of make-up water	.9% based on reports of increased local lake evaporation due to discharge of heated water to lakes	NA (Pennsylvania has no facilities in the basin)	10%; estimates obtained from USGS report	.5-1%
Self-Supply Thermoelectric (Nuclear)	Individually estimated based on the quantity of make-up water	NA (Indiana has no facilities in the basin)	1-2% for plants using once-through cooling; individual analysis for wet cooling towers	NA (Minnesota has no facilities in the basin)	5%	14% based on reports of increased local lake evaporation due to discharge of heated water to lakes	.9% based on reports of increased local lake evaporation due to discharge of heated water to lakes	NA (Pennsylvania has no facilities in the basin)	NA (Quebec has no facilities in the basin)	.5-1%
Hydroelectric	Coefficient for all states and provinces is 0%									
Self-Supply Other	Varies based on use	12%	Varies based on use	Varies based on use	Varies based on use	Varies based on use	Varies based on use	Varies based on use	Varies based on use	Varies based on use

Figure 4

Definitions and Abbreviations

General Definitions and Abbreviations

- ▶ **bgd**: billion gallons per day
- ▶ **bld**: billion liters per day
- ▶ **consumptive use**: that portion of water withdrawn or withheld from the Great Lakes basin and assumed to be lost or otherwise not returned to the Great Lakes basin due to evapotranspiration, incorporation into products, or other processes
- ▶ **Great Lakes surface water (GLSW)**: the Great Lakes, their connecting channels (the St. Clair River, the Detroit River, the Niagara River and the St. Marys River), and the St. Lawrence River
- ▶ **groundwater (GW)**: all subsurface water
- ▶ **interbasin diversion**: the amount of water transferred from the Great Lakes basin into another watershed
- ▶ **intra-basin diversion**: the amount of water transferred from the watershed of one of the Great Lakes into another
- ▶ **level of accuracy**: the quality of data based on percentage of total volume and rated as 1) measured; 2) partially measured or: 3) estimated,
- ▶ **level of aggregation**: the quality of data based on percentage of total volume and rated as 1) originating from site-specific sources or 2) originating from higher level aggregate sources, such as county or census databases
- ▶ **mgd**: million gallons per day
- ▶ **mld**: million liters per day
- ▶ **other surface water (OSW)**: tributary streams, lakes, ponds, and reservoirs within the Great Lakes basin
- ▶ **principal facility**: facilities withdrawing in excess of the Great Lakes Charter uniform trigger level of 100,000 U.S. gallons/day (380,000 liters/day) average over a 30-day period. A principal facility is determined by the total withdrawal (or consumption) of all sources combined (Great Lakes surface water, other surface water, and groundwater) rather than a single source. The combined withdrawals (or consumption) of separate wells or operations undertaken by the same facility or company will be evaluated separately for the purpose of determining principal facility status unless those operations are covered under the same registration (or permit) or are physically contiguous. Principal facilities are a subset of all facilities in the database.
- ▶ **tgd**: trillion gallons per day
- ▶ **tld**: trillion liters per day
- ▶ **withdrawal amount**: water removed or taken from surface or groundwater (including hydroelectric use)

Water Use Category Definitions

1. **Public Water Supply:** Water withdrawn for all uses by public and private water suppliers and delivered to users that do not supply their own water. (Water suppliers provide water for a variety of uses such as residential, commercial, industrial, and public water use.)
2. **Self-Supply Domestic: (residential, commercial, institutional):** Water used for normal household purposes. Also referred to as residential water use, this category includes water used for drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns. Commercial uses include water used by motels, hotels, restaurants, office buildings and institutions, both civilian and military. This category also includes water for mobile homes, hospitals, schools, fire fighting, air conditioning and other similar uses not covered under a public supply. In addition, this category includes amusement and recreational water uses such as snowmaking and water slides. The coefficient for domestic per capita water use is 75 gallons a day (U.S.) unless otherwise indicated by the reporting state or province.
3. **Self-Supply Irrigation:** Water artificially applied on lands to assist in the growing of crops and pastures or in the maintenance of recreational lands, such as parks and golf courses.
4. **Self-Supply Livestock:** Water used by horses, cattle, sheep, goats, hogs, poultry, and other commercially important animals. Water used in fish hatchery operations are also included under this category.
5. **Self-Supply Industrial (manufacturing and mining):** Industrial water includes water used in the manufacture of metals, chemicals, paper, and allied products. Mining water use includes water used in the extraction or washing of minerals; for example solids, such as coal and ores, and liquids such as crude petroleum and natural gas. Water used in quarrying and milling is also included in the industrial category. Brine extraction from oil and gas operations is not included. Withdrawals and consumptive uses for industrial and mining purposes (including dewatering operations) recorded under another category (e.g., public supply) will not be recorded here. Water used in a closed cycle (recirculation) will not be reported as a withdrawal. Other situations should be evaluated on a case-by-case basis.
6. **Self-Supply Thermoelectric Power (fossil fuel plants):** Water used by plants fueled by fossil fuels such as coal, oil or natural gas. Withdrawals and consumptive uses already recorded under another category (e.g., public supply) will not be reported here.
7. **Self-Supply Thermoelectric Power (nuclear plants):** Water used by plants fueled by nuclear generation. Withdrawals and consumptive uses already recorded under another category (e.g., public supply) will not be reported here.
8. **Self-Supply Hydroelectric Power:** Water used to drive turbines that generate electric power. This category includes both “instream use” where water is used on a once-through basis and “offstream use” where water is recycled through pumped-storage systems. Neither use is considered a consumptive use.
9. **Self-Supply - Other:** Water used for purposes not reported in categories one through nine. Examples include, but are not limited to, withdrawals for fish/wildlife, environmental, recreation, navigation, and water quality purposes. Specifically, water used to maintain levels for navigation, for recreation, for fish and wildlife habitat creation and enhancement (excluding fish hatchery operations included under Category 5), for flow augmentation (or diversion), for sanitation, pollution confinement, and other water quality purposes and agricultural activities (services) other than those directly related to irrigation such as field drainage are included. Water used in temporary or immediate emergency situations (e.g., fighting forest or peat fires) is also reported here.

Contacts

Illinois

Jim Casey, Civil Engineer
Div. Of Water Res. Mgmt.
Illinois DNR
Office of Water Resources
100 W. Randolph St., #5-500A
Chicago, IL 60601-3218
PH: 312/793-3123
FAX: 312/793-5968
jcasey@dnrmail.state.il.us

Indiana

Ralph Spaeth
Division of Water
Indiana DNR
402 W. Washington
Indianapolis, IN 46241
PH: 317/234-1101
rspaeth@dnr.state.in.us

Michigan

Ron Van Til, Water Use Analyst
Michigan DEQ
Groundwater Supply Section
P.O. Box 30630
3423 N. Martin L. King Blvd.
Lansing, MI 48909-8130
PH: 517/241-1414
FAX: 517/335-9434
vantilr@state.mi.us

Minnesota

Sean Hunt, Hydrologist
Division of Waters
Minnesota DNR
500 Lafayette Rd., Third floor
St. Paul, MN 55155-4032
PH: 651/296-0509
FAX: 651-296-0445
sean.hunt@dnr.state.mn.us

New York

Mike Holt, Environ. Engineer
Bureau of Water Permits
New York State DEC
625 Broadway
Albany, NY 12233-3505
PH: 518/402-8099
FAX: 518/402-9029
mdholt@gw.dec.state.ny.us

Ohio

Leonard Black
Division of Water
Ohio DNR
1939 Fountain Square, Bldg. E-3
Columbus, OH 43224
PH: 614/265-6758
FAX: 614/447-9503
leonard.black@dnr.state.oh.us

Ontario

Danielle Dumoulin
Watershed Science Center
Ontario MNR
Water Resources Section
P.O. Box 7000
300 Water St.
Peterborough, ON K9J 8M5
PH: 705/755-5973
FAX: 705/755-1267
danielle.dumoulin@mnr.gov.on.ca

Pennsylvania

Tom Denslinger, Chief
Resource Management Section
Bureau of Watershed Conservation
Pennsylvania DEP
P.O. Box 8555
Harrisburg, PA 17105-8555
PH: 717/772-5679
FAX: 717/787-9549
tdenslinge@state.pa.us

Quebec

Lucien Bouchard, Director
Des politiques du secteur
municipal
Ministere de l-environnement
675 Boulevard Rene-Levesque Est
8th Floor, Box 99
Quebec, QC G1R 5V7
PH: 418/521-3829
FAX: 418/529-1035
lucie.bouchard@menv.gouv.qc.ca

Wisconsin

Linda Talbot
Great Lakes Coordinator
Bureau of Watershed Mgmt.
Wisconsin DNR
P.O. Box 7921
Madison, WI 53707
PH: 608/266-8148
FAX: 608/267-2800
talbol@dnr.state.wi.us

Great Lakes Commission

Marilyn Ratliff
Database Administrator
Great Lakes Commission
2805 S. Industrial Hwy. #100
Ann Arbor, MI 48104-6791
PH: 734/971-9135
FAX: 734/971-9150
mratliff@glc.org

II. GREAT LAKES BASIN SUMMARY TABLES

Water Use by Jurisdiction
Water Use by Basin
Water Use by Category

SUMMARY REPORT - GREAT LAKES BASIN

Units: Mgal(US)/d

Year Of Data: 2000

Water-Use by Jurisdiction - All Facilities

Jurisdiction	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Illinois	2155.55	0.00	4.38	2159.93	0.00	1407.53	17.02
Indiana	2649.96	2453.80	135.77	5239.53	0.00	-2.24	196.16
Michigan	8808.26	455.36	487.45	9751.07	0.00	0.00	495.73
Minnesota	313.56	4357.88	4.96	4676.39	0.00	0.00	45.06
New York	121595.26	180419.11	138.94	302153.31	711.00	41.62	340.56
Ohio	2755.95	280.81	155.59	3192.35	0.00	-9.59	186.48
Ontario	143002.93	59956.58	279.43	203238.94	61.97	-4007.75	279.92
Pennsylvania	81.65	2.90	4.49	89.04	0.00	-0.86	13.94
Quebec	171588.19	133580.18	99.91	305268.28	0.00	0.00	157.86
Wisconsin	6133.01	3901.61	230.08	10264.70	0.00	0.93	213.43
Total:	459084.31	385408.23	1541.00	846033.54	772.97	-2570.36	1946.16

Water-Use by Jurisdiction - Principal Facilities

Jurisdiction	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Illinois	2155.55	0.00	4.38	2159.93	0.00	1407.53	17.02
Indiana	2649.96	2453.31	103.44	5206.71	0.00	0.00	188.60
Michigan	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minnesota	312.83	4357.30	4.15	4674.27	0.00	0.00	44.77
New York	121168.39	533.27	11.65	121713.31	711.00	41.62	230.53
Ohio	2755.51	276.06	79.93	3111.50	0.00	0.29	162.73
Ontario	493.17	376.22	87.00	956.38	61.97	0.00	113.52
Pennsylvania	81.65	2.78	1.64	86.07	0.00	0.00	13.60
Quebec	171587.93	133575.95	48.61	305212.48	0.00	0.00	131.58
Wisconsin	6116.74	3896.18	125.30	10138.22	0.00	0.32	154.12
Total:	307321.72	145471.06	466.09	453258.87	772.97	1449.76	1056.47

SUMMARY REPORT - GREAT LAKES BASIN

Units: Mgal(US)/d

Year Of Data: 2000

Water-Use by Basin - All Facilities

Basin	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Lake Superior	1116.68	42737.36	29.29	43883.33	0.00	-4007.75	74.77
Lake Michigan	13343.40	6501.77	700.96	20546.13	0.00	1406.22	661.30
Lake Huron	26026.26	13722.00	88.98	39837.24	47.97	0.00	134.26
Lake Erie	50454.83	474.12	386.51	51315.47	5105.39	-10.45	526.44
Lake Ontario	43394.05	89484.80	194.53	133073.38	-4380.39	41.62	353.21
St. Lawrence River	324749.09	232488.18	140.72	557377.98	0.00	0.00	196.18
Total:	459084.31	385408.23	1541.00	846033.54	772.97	-2570.36	1946.16

Water-Use by Basin - Principal Facilities

Basin	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Lake Superior	359.48	4579.69	6.69	4945.86	0.00	0.00	52.31
Lake Michigan	10905.67	6098.52	217.69	17221.88	0.00	1407.85	350.82
Lake Huron	42.02	71.20	16.40	129.63	47.97	0.00	12.25
Lake Erie	44626.38	350.64	152.01	45129.02	5105.39	0.29	280.57
Lake Ontario	2955.29	706.49	19.74	3681.52	-4380.39	41.62	212.92
St. Lawrence River	248432.89	133664.52	53.54	382150.95	0.00	0.00	147.60
Total:	307321.72	145471.06	466.09	453258.87	772.97	1449.76	1056.47

SUMMARY REPORT - GREAT LAKES BASIN

Units: Mgal(US)/d

Year Of Data: 2000

Water-Use by Category - All Facilities

Category	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Public Supply	4311.72	1177.12	572.02	6060.85	0.00	1103.54	630.85
Domestic Supply	36.91	51.20	375.61	463.72	0.00	0.00	58.99
Irrigation	6.17	128.51	241.98	376.65	0.00	0.00	264.15
Livestock	10.90	14.83	101.01	126.73	0.00	0.00	69.88
Industrial	3433.65	1112.64	246.61	4792.90	0.00	2.94	442.57
Fossil Fuel Power	17186.87	862.33	3.29	18052.49	0.00	0.00	223.34
Nuclear Power	14907.96	0.00	0.13	14908.09	0.00	0.00	223.42
Hydroelectric Power	418169.73	381817.60	0.00	799987.32	0.00	-4007.75	0.00
Other	1020.42	244.01	0.36	1264.79	772.97	330.90	32.97
Total:	459084.31	385408.23	1541.00	846033.54	772.97	-2570.36	1946.16

Water-Use by Category - Principal Facilities

Category	Withdrawals				Diversions		Consumptive Use
	GLSW	OSW	GW	TOTAL	Intrabasin	Interbasin	
Public Supply	3050.38	865.95	261.09	4177.42	0.00	1106.03	403.33
Domestic Supply	0.91	51.16	58.92	110.99	0.00	0.00	12.24
Irrigation	0.00	17.47	30.67	48.14	0.00	0.00	37.30
Livestock	0.71	2.15	1.94	4.80	0.00	0.00	3.92
Industrial	2059.33	992.34	112.93	3164.59	0.00	2.94	313.71
Fossil Fuel Power	9562.13	611.84	0.39	10174.36	0.00	0.00	146.60
Nuclear Power	3469.23	0.00	0.00	3469.23	0.00	0.00	107.34
Hydroelectric Power	288159.25	142686.23	0.00	430845.48	0.00	0.00	0.00
Other	1019.78	243.93	0.15	1263.86	772.97	340.78	32.02
Total:	307321.72	145471.06	466.09	453258.87	772.97	1449.76	1056.47