WATER USE IN WISCONSIN, 1995

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Introduction

As part of the National Water-Use Information Program, the U.S. Geological Survey (USGS) stores water-use data in standardized format for different categories of water use. The data base (Site Specific Water Use Data System) is updated annually or as more current water-use information becomes available. Information about amounts of water withdrawn, sources of water, how the water was used, and how much water was returned is available to those involved in establishing water-resource policy and to those managing water resources.

In 1978, the USGS entered into a cooperative program with the Wisconsin Department of Natural Resources (WDNR) to inventory water use in Wisconsin. Since that time, three reports summarizing water use have been published (Lawrence and Ellefson, 1982; Ellefson and others, 1987; Ellefson and others, 1993). Ellefson and others (1993) present 1990 water-use data in a map and graph format. Because water use changes with time, an update report is periodically required. This report presents 1995 data in the same format as the 1993 report.

Data Collection

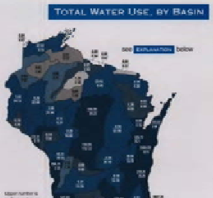
Water-use data in Wisconsin are generally reported by major users to State agencies as part of State permit requirements. The WDNR collects water-use data for public, industrial, irrigation, sewage treatment, and the amount of water used for power generation. The Wisconsin Public Service Commission collects information on how the public-supply water is used. Data in this report were obtained from these agencies. Estimates were made by the USGS based on population and average consumptive-use rates for water-use categories for which data were not reported.

Sources of Water

Wisconsin has an abundant supply of water. Surface water is found in 33,000 mi (miles) of streams and 15,000 lakes (U.S. Geological Survey, 1985). About two quadrillion (2×10^{15}) gallons, or about one-third the volume of Lake Superior, is stored in the State as ground water.

Communities located on the shores of the Great Lakes and Lake Winnebago generally use surface water for their water supply. Communities located inland use ground water. Three principal aquifers—the sand and gravel, Silurian dolomite, and sandstone aquifers—provide most of the ground water used in the State.

Total Water Use, by Basin

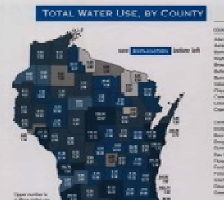


WATER USE BY RIVER BASIN, 1995
in million gallons per day (Mgal/d)

BASIN NAME	HYDROLOGIC UNIT CODE	DOMESTIC	AGRICULTURE	IRRIGATION	INDUSTRIAL	COMMERCIAL	THERMO-ELECTRIC	PUBLIC USE AND LOSSES	TOTAL
St. Louis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Beartrap-Nemadji	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bad-Montreal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Black-Presque Isle	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ontonagon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Manitowoc-Sheboygan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Door-Kewaunee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Duck-Pensaukee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oconto	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Peshtigo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brule	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Menominee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper Fox	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wolf	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lake Winnebago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lower Fox	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pike-Root	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Milwaukee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper St. Croix	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Namekagon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lower St. Croix	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rush-Vermillion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buffalo-Whitewater	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trempealeau	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
La Crosse-Pine	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Black	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper Chippewa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Flambeau	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
South Fork Flambeau	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Jump	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lower Chippewa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Eau Claire	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Red Cedar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Coon-Yellow	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grant-Little Maquoketa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Apple-Plum	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper Wisconsin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lake Dubay	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Castle Rock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Baraboo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lower Wisconsin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kickapoo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper Rock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Crawfish	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pecatonica	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sugar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lower Rock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kishwaukee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Des Plaines	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Upper Fox	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTALS		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The largest total water use occurred in the Manitowoc-Sheboygan basin (04030101). Excluding thermoelectric power water use, the largest amount of water was used in the Castle Rock basin (07070003), where withdrawals for industry and irrigation combined were 260 Mgal/d.

Total Water Use, by County



WATER USE BY COUNTY, 1995
in million gallons per day (Mgal/d)

COUNTY	DOMESTIC	AGRICULTURE	IRRIGATION	INDUSTRIAL	COMMERCIAL	THERMO-ELECTRIC	PUBLIC USE AND LOSSES	TOTAL
Adams	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ashland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Barron	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bayfield	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brown	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buffalo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Burnett	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Calumet	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Chippewa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Clark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Columbia	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Crawford	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dodge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Door	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Douglas	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dunn	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Eau Claire	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Florence	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fond du Lac	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Forest	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Grant	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Green	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Green Lake	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Iowa	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Iron	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Jackson	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Jefferson	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Juneau	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kenosha	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kewaunee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
La Crosse	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lafayette	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Langlade	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lincoln	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Manitowoc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Marathon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Marinette	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Marquette	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Menominee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Milwaukee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Monroe	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oconto	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oneida	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Outagamie	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ozaukee	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pepin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pierce	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Polk	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Portage	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Price	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Racine	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Richland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rusk	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Croix	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sauk	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sawyer	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Shawano	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sheboygan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Taylor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trempealeau	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Vernon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Vilas	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Walworth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Washburn	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Washington	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Waukesha	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Waupaca	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Waushara	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Winnebago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wood	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTALS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

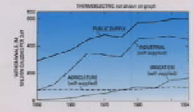
Excluding thermoelectric power water use, the largest amounts of water were used in Brown, Milwaukee, and Wood Counties. This use was attributed to large industrial users and major population centers.

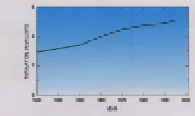
Trends in Water Use

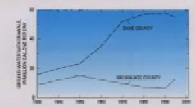
Water use in Wisconsin has increased steadily overall for most categories of use from 1950 through 1995, on the basis of data from the five-year reports published by the U.S. Geological Survey. Water used for thermoelectric power production shows the fastest rate of increase (81 percent). During this period, the population of the State increased by 26 percent. Industrial self-supplied surface-water use also has increased at a steady rate overall as more industrial development has occurred along the Wisconsin, Fox, and Chippewa Rivers. Irrigation water use increased by 44 percent from 1980 through 1995, as irrigated acreage increased.

In Dane County, which depends on ground water for its sole source, the overall increase in rates of withdrawal is much greater than that of population growth.

Milwaukee County uses Lake Michigan as its principal source of water. The decrease of ground-water pumpage from 1950 through 1995 in Milwaukee County is attributed to higher water cost for some publicly supplied ground water and the increased use of surface water from Lake Michigan.

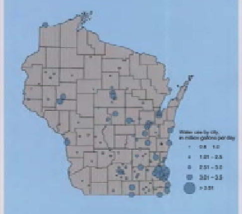


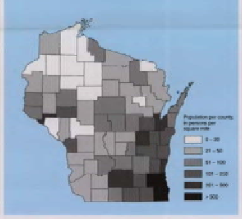




Water Use and Population

Areas of the state that use large amounts of water are coincident with population centers.





Explanation

Water use, in millions of gallons per day

- Less than 0.1
- 0.1 - 1.0
- 1.0 - 2.0
- 2.0 - 3.0
- 3.0 - 10.0
- 10.0 - 100.0
- Greater than 100
- • Well location

SCALE 1:5,000,000

Base from U.S. Geological Survey digital line graphs, 1:2,000,000

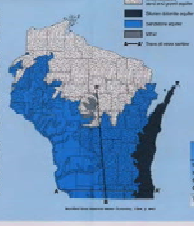
Total Water Use, By Aquifer

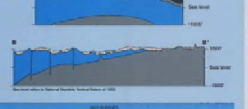
The sand and gravel aquifer is not continuous but is composed of numerous layers, lenses, terraces, and valley fillings of permeable sand and gravel. The sand and gravel aquifer overlies much of the State. Well yields from this aquifer are variable and depend on both the permeability and thickness of the sand and gravel.

The Silurian dolomite aquifer is present only along Wisconsin's eastern shore. This aquifer is the uppermost rock unit in this area. Yields from this aquifer depend on the number of fractures and solution openings intersected by wells. The aquifer is underlain entirely by a sandstone aquifer.

The sandstone aquifer is present in the southern two-thirds of the State and is largely sandstone but includes beds of dolomite and siltstone. From north-central Wisconsin, the sandstone aquifer thickens to the east, south, and west. Where the aquifer is thick, it can yield large quantities of water. The sandstone aquifer is underlain by Precambrian rocks.

Other aquifers that do not produce as much water as the aquifers described above are present in Wisconsin. The most important of these is the Precambrian aquifer, which includes all rocks of Precambrian age that underlie Wisconsin. These rocks are crystalline and yield small quantities of water through fractures. This aquifer is used mostly for domestic purposes where the other aquifers are absent. A series of very thick Precambrian sandstones can yield large quantities of water in northwestern Wisconsin.





AQUIFER	AGRICULTURE AND IRRIGATION	SELF-SUPPLIED DOMESTIC AND COMMERCIAL	SELF-SUPPLIED INDUSTRIAL	PUBLIC SUPPLY	TOTAL
Sand and gravel	149	40.1	21.9	119	330
Silurian dolomite	9.64	13	8.9	15.7	47.28
Sand stone	77.1	61.4	50.5	176	365
Other	4.82	3.54	0.01	3.2	11.67
Total	240.56	118.04	81.36	314	753.96

Water use, by Category

Public Supply

Public supply refers to water withdrawn by public or private suppliers and delivered to domestic, commercial, and industrial users who do not supply all of their own water.

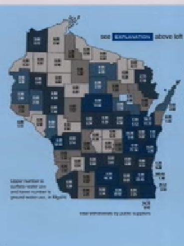
The "public use and losses" category refers to uses not specifically categorized, such as water use in some public parks, schools, and buildings, water used for fire control and water-main flushing, and water lost from broken water mains and from transfer and distribution systems.

Public suppliers served about 3.56 million people or 70 percent of the State's population in 1995.

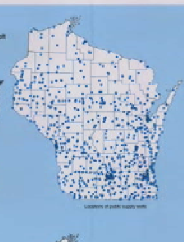
A total of 600 Mgal/d (million gallons per day) was withdrawn by Public Suppliers.

Milwaukee County is the State's largest user of public-supply surface water (170 Mgal/d).

Dane County is the State's largest user of public-supply ground water (47 Mgal/d).



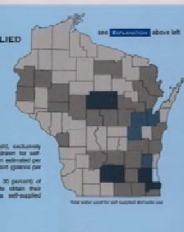
Total withdrawals by public suppliers


Locations of public supply wells

Self-Supplied Domestic

An estimated 30 Mgal/d, exclusively ground water, was withdrawn for self-supplied domestic use: an estimated per capita use of about 60 gpcd (gallons per day).

About 1.54 million (or 30 percent) of the people in the State obtain their domestic water from a self-supplied source.



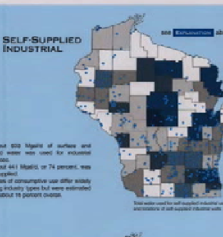
Total water used for self-supplied domestic use

Self-Supplied Industrial

About 600 Mgal/d of surface and ground water was used for industrial purposes.

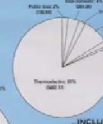
About 441 Mgal/d, or 74 percent, was self-supplied.

Rates of consumptive use differ widely among industry types but were estimated to be about 16 percent overall.

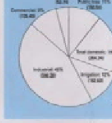


Total water used for self-supplied industrial use and locations of self-supplied industrial wells

Water use by Category...



...INCLUDING THERMOELECTRIC POWER USE



...EXCLUDING THERMOELECTRIC POWER USE

Power Generation

A total of 5,826 Mgal/d of surface water was withdrawn for thermoelectric-power production. This was almost 3.6 times the amount of water withdrawn for all other uses combined.

About one percent of water used for thermoelectric power generation was consumed.

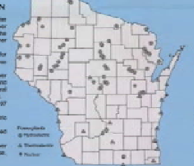
Most water used for thermoelectric power generation is for once-through cooling and the remainder is returned to the natural system, making it available for other uses.

Thermoelectric powerplants generate 97 percent of the State's electricity.

Wisconsin has 20 thermoelectric powerplants, two of these are nuclear.

About 50,825 Mgal/d of water was used by hydroelectric powerplants.

Water used for hydroelectric power generation is considered an instream use, hence no water is actually consumed.



Powerplants generating more than 10,000 megawatt hours

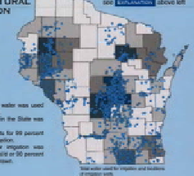
Agricultural Irrigation

About 169 Mgal/d of water was used for irrigation during 1995.

All irrigation reported in the State was spray type.

Ground water accounts for 99 percent of the water used for irrigation.

Consumptive use for irrigation was estimated to be 151 Mgal/d or 90 percent of the total amount withdrawn.



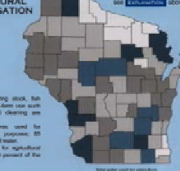
Total water used for irrigation and locations of irrigation wells

Agricultural Non-Irrigation

Water used for watering stock, fish hatcheries, and other on-farm use such as dairy sanitation and cleaning are included in this category.

About 60 Mgal/d was used for agricultural non-irrigation purposes; 85 percent of this was ground water.

The consumptive use for agricultural non-irrigation use was 89 percent of the total or about 53 Mgal/d.



Total water used for agriculture

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