



# WATER FACT SHEET

U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

## ESTIMATED WATER USE IN OHIO, 1990 Public-Supply Data

### Introduction

Our Nation's social and economic development has depended on and will continue to depend on the availability of usable water. In 1950, the U.S. Geological Survey (USGS) began publishing water-use data on a national level every 5 years to assist in the wise management of our Nation's water resources. The USGS currently collects water-use data for the following categories: public supply, domestic, commercial, industrial, thermoelectric power, mining, livestock, animal specialties, irrigation, hydroelectric power, sewage treatment, and reservoir evaporation.

In 1977, Congress authorized the National Water-Use Information Program. The program encourages the USGS and a State-level agency in each of the 50 States to cooperate in the collection and dissemination of water-use data. In Ohio, the USGS and the Ohio Department of Natural Resources, Division of Water (ODNR-DW), are cooperators in this effort.

In 1990, ODNR-DW implemented the Water Withdrawal Facility Registration Program for Ohio, which requires those water consumers who have the capacity to withdraw 100,000 gallons of water daily to register with the ODNR-DW. Consumers whose daily capacity is less than 100,000 gallons are not required to register. The information collected from the registrants is maintained in computerized data bases at the ODNR-DW and the Ohio District Office of the USGS.

This Fact Sheet, which summarizes Ohio's 1990 public-supply water-use data, is one of a series that supplements, by category, the national USGS publication on water use in 1990.

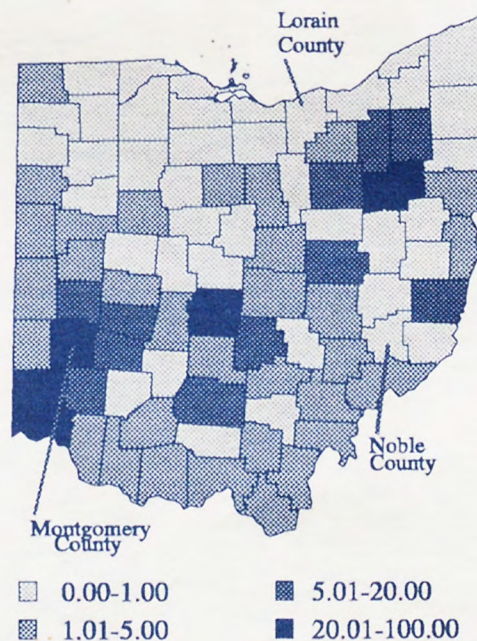
### Public Supply

The public-supply category includes those registrants (both public and private) that withdraw and provide water to the public, domestic, commercial, industrial, and thermoelectric power population in Ohio. Approximately 450 public-supply facilities registered with ODNR-DW in 1990. These facilities withdrew water at an estimated rate of 1,300 Mgal/d (million gallons per day) in 1990. The estimated population served by these facilities in 1990 was 9.06 million. Ohio ranked

eighth in the Nation in public-supply withdrawals and seventh in the number of people served in 1990. The estimated total use per capita (total water use divided by population served) in 1990 was 143 gal/d (gallons per day).

### Ground Water

In 1990, public-supply facilities in Ohio withdrew an estimated 396 Mgal/d from ground-water sources. This quantity represents 30 percent of the total amount of water withdrawn for this category in 1990. The greatest ground-water withdrawals for an Ohio county in 1990 were reported by suppliers in Montgomery County, at an estimated 91 Mgal/d, whereas suppliers in Lorain and Noble Counties reported withdrawals of less than 10,000 gal/d (fig. 1).



[Ground-water withdrawal in million gallons per day]

Figure 1.--Estimated ground-water withdrawals for public supply, by county, 1990

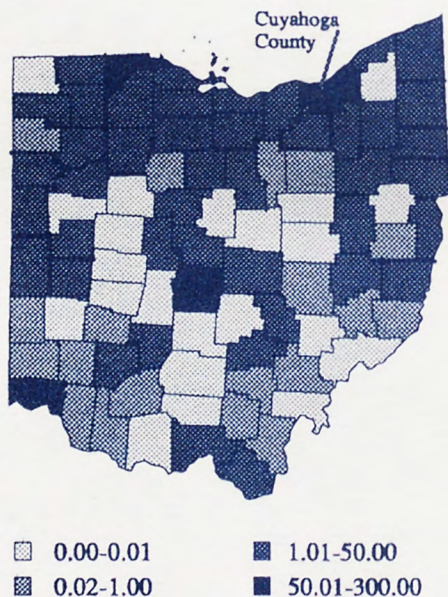


The water was obtained from seven principal aquifers in the State. Sixty-two percent of the total amount of ground water used by public supply was withdrawn from outwash aquifers, while 8 percent was withdrawn from alluvial aquifers.

In 1990, the estimated population served from all ground-water sources was 3.16 million. Estimated total ground-water use per capita in 1990 was 125 gal/d.

### Surface Water

In 1990, public-supply facilities in Ohio withdrew an estimated 904 Mgal/d from surface-water sources. This quantity represents 70 percent of the total water withdrawn by this category in 1990. The greatest surface-water withdrawals for an Ohio county in 1990 were reported by suppliers in Cuyahoga County, at an estimated 297 Mgal/d, whereas suppliers in several counties reported withdrawals of less than 10,000 gal/d (fig. 2).



[Surface-water withdrawal in million gallons per day]

Figure 2.--Estimated surface-water withdrawals for public supply, by county, 1990

Surface-water withdrawals for public supply in 1990 are shown by drainage basins in figure 3. Forty-five percent of the total amount of surface water used by public supply was withdrawn in the Southern Lake Erie basin.

In 1990, the estimated population served from all surface-water sources was 5.90 million. Estimated total surface-water use per capita in 1990 was 153 gal/d.



Drainage Basins	Water withdrawn
1. Western Lake Erie	140
2. Southern Lake Erie	402
3. Eastern Lake Erie	2
4. Upper Ohio River	38
5. Muskingum River	44
6. Scioto River	135
7. Great Miami River	25
8. Middle Ohio River	117
9. Wabash River	1

Figure 3.--Estimated surface-water withdrawals from drainage basins in Ohio for public supply, 1990 [Water withdrawn is million gallons per day]

### Selected References

Ohio Department of Natural Resources, Division of Water, 1991, Water Withdrawal Facility Registration Program--1990 water-use data: Data on file at the Division of Water office in Columbus, Ohio.

Ohio Environmental Protection Agency, 1991, Model State Information System--active community public-water supply, 17 pages (microfiche).

Solley, W.B., Pierce, R.R., and Perlman, H.A., 1993, Estimated use of water in the United States in 1990: U.S. Geological Survey Circular 1081.

Additional information on water use in Ohio can be obtained from:

U.S. Geological Survey  
Water Resources Division  
975 West Third Avenue  
Columbus, Ohio 43212-3192  
(614)469-5553