PUBLICATIONS OF THE GEORGIA WATER-USE PROGRAM

Water-use information from the Georgia Water-Use Program has been published by the Georgia Geologic Survey and the U.S. Geological Survey. The Georgia Geologic Survey publications are available at cost; the U.S. Geological Survey publication is available upon request.

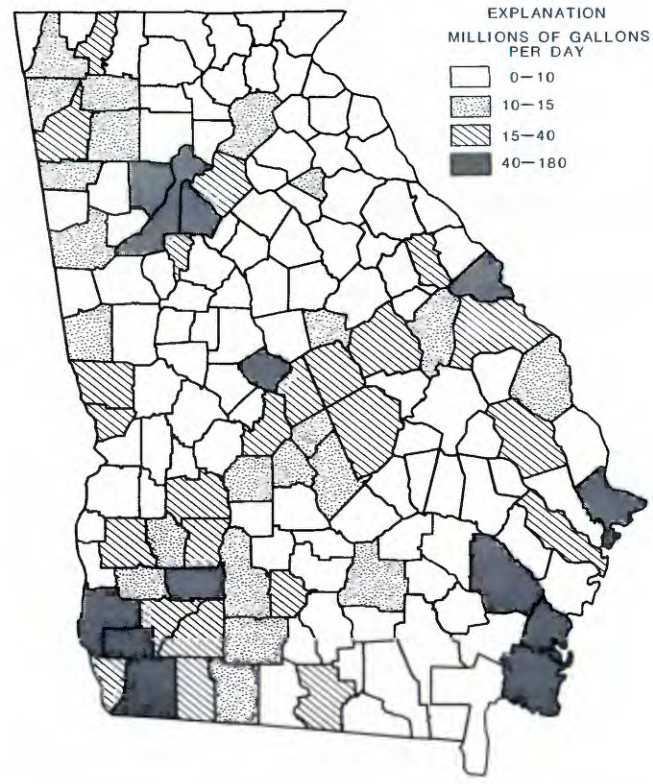
1). Pierce, R. R., and Barber, N. L., 1981, Water use in Georgia, 1980--A preliminary report: Georgia Geologic Survey Circular 4, 15 p.

2). Pierce, R. R., and Barber, N. L., 1982, Water use in Georgia, 1980--a summary report: Georgia Geologic Survey Circular 4-A, 17 p.

3). Pierce, R. R., Barber, N. L., and Stiles, H. R., 1982, Water use in Georgia, by county, for 1980: Georgia Geologic Survey Information Circular 59, 180 p.

4). Pierce, R. R., Barber, N. L., and Stiles, H. R., 1984, Georgia irrigation, 1970-1980: A decade of growth: U.S. Geological Survey Water-Resources Investigations Report 83-4177, 29 p.

WATER USE IN GEORGIA IN 1980 BY COUNTY
(All categories except power generation)



QUESTIONS REGARDING THE GEORGIA WATER-USE PROGRAM CAN BE DIRECTED TO:

Georgia Water-Use Program
Georgia Geologic Survey
Room 400
19 Martin Luther King, Jr. Dr., S.W.
Atlanta, GA 30334

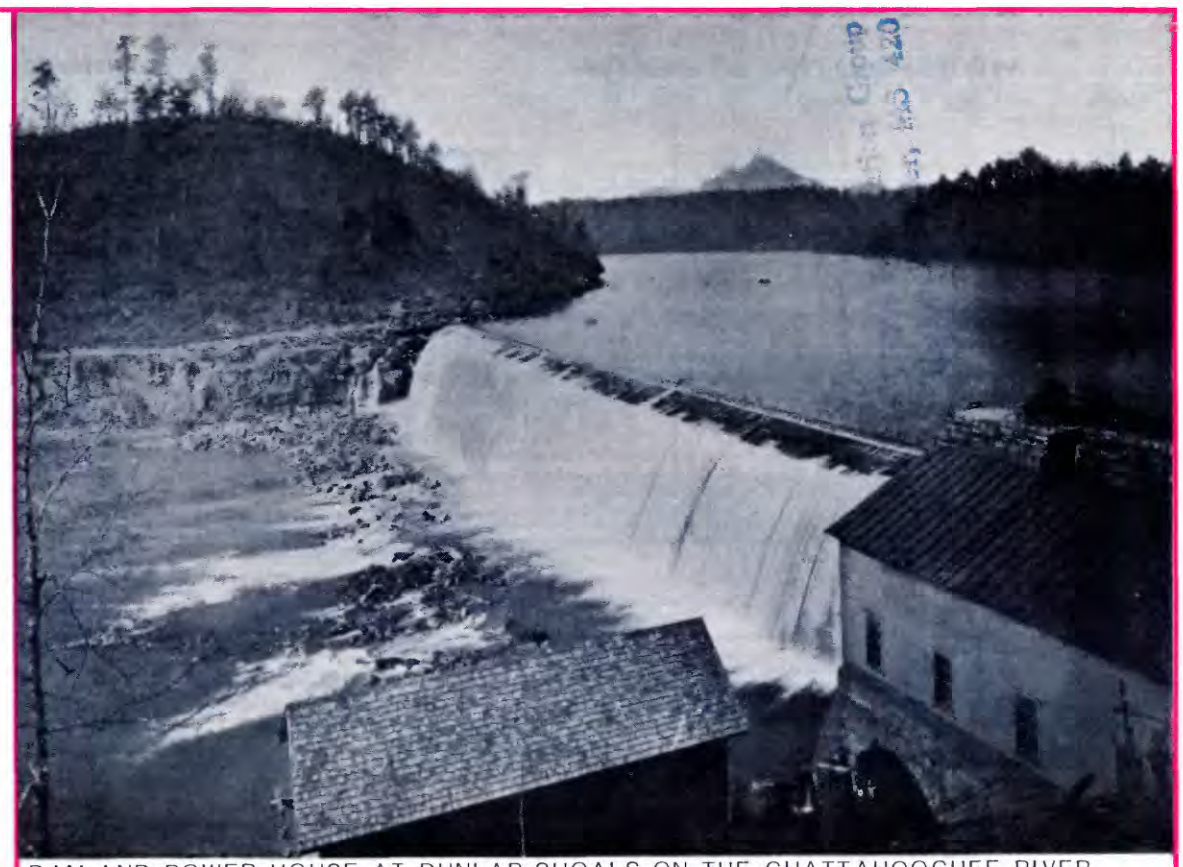
Georgia Water-Use Program
U.S. Geological Survey
6481 Peachtree Industrial Blvd.
Suite B
Doraville, GA 30360

U.S. Department of the Interior/
Geological Survey

THE GEORGIA WATER-USE PROGRAM

A Cooperative Effort of the
U.S. Geological Survey
and the
Georgia Geologic Survey

OPEN-FILE REPORT 85-481



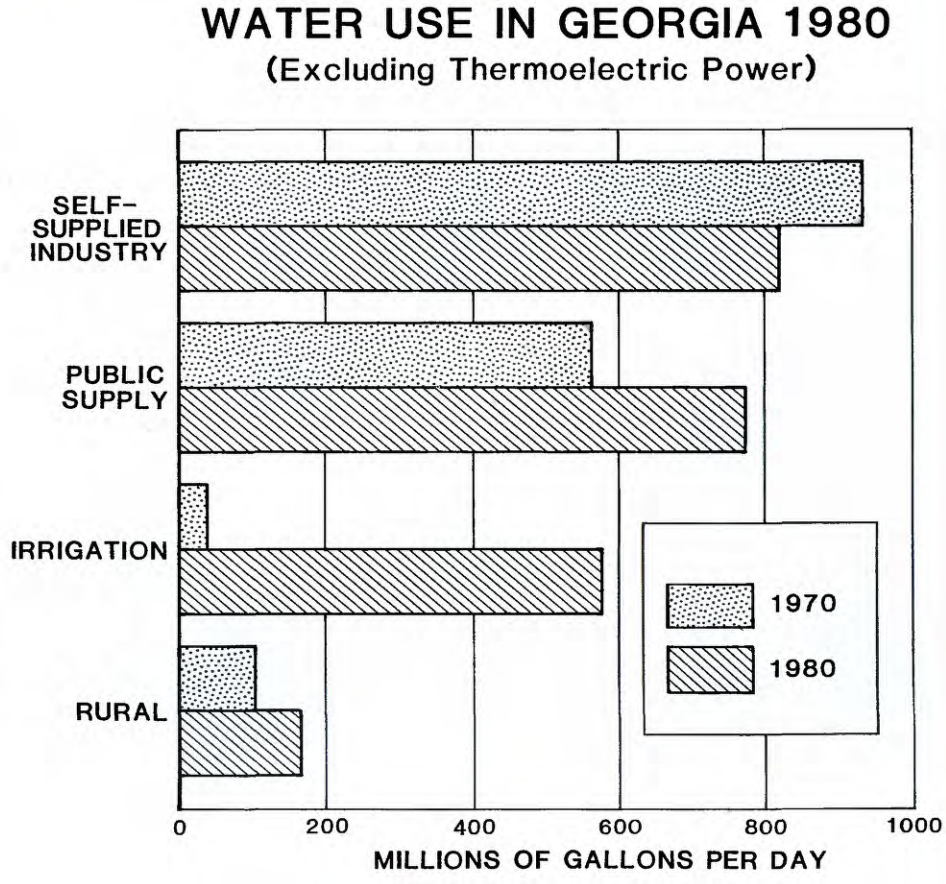
DAM AND POWER-HOUSE AT DUNLAP SHOALS ON THE CHATTAHOOCHEE RIVER NEAR GAINESVILLE, GEORGIA. GEOLOGICAL SURVEY OF GEORGIA BULLETIN 16 "WATER-POWERS OF GEORGIA," 1908

THE GEORGIA WATER-USE PROGRAM
by Julia L. Fanning

WHY COLLECT WATER-USE INFORMATION?

Water used in Georgia increased from 5,560 to 6,765 million gallons per day (22 percent) between 1970 and 1980. In 1970 the population of Georgia was about 4,600,000. By 1980 it had reached an estimated 5,500,000, a 20-percent increase. The amount of irrigated land in the State increased from 79,600 acres to nearly one million acres during the decade, which resulted in a 12-fold increase in irrigation water use. The value of goods produced by Georgia's industries increased from $21,000,000 in 1970 to $32,000,000 in 1980 (figures adjusted for inflation). These were the major factors contributing to the significant increase in water use.

For years, ground water and surface water in Georgia were thought of as unlimited natural resources. However, with the impact of recent droughts and the increasing demand for water it has become apparent that proper management of Georgia's water resources is necessary to assure continuing supplies of good-quality water. To make decisions on water resources, a manager needs comprehensive, up-to-date information on the quantity of water being used in the State, and the total resources available for use.



WHAT IS THE GEORGIA WATER-USE PROGRAM?

A goal of the Georgia Water-Use Program is to collect and compile information on the principal water users in the State: self-supplied industry, public supply, irrigation, rural domestic and livestock, thermoelectric, and hydroelectric. Since 1979, this joint effort between the Georgia Geologic Survey and the U.S. Geological Survey has proved effective in bringing together in one place accurate information on the amount of water used in Georgia.

Georgia law requires nonagricultural users of more than 100,000 gallons of water per day to obtain a permit and report their total usage for each month. Agricultural users who exceed this limit also must report their total usage, but are not required to obtain a permit. Small industries, communities, and subdivisions which supply water for at least 25 people or that have a minimum of 5 hookups must obtain permits.

The reported information, supplemented with data gathered by mail surveys from hydroelectric facilities and estimates of smaller quantities used for rural domestic and livestock, is assimilated into the Georgia Water-Use Data System (GWUDS). This computerized system has been devised for the storage of all water-use data. These data can be referred to at any time and accessed for specific areas of interest. For example, information is available on total county water use by category such as self-supplied industry, or on the amount of water being used by each type of self-supplied industry in the county.

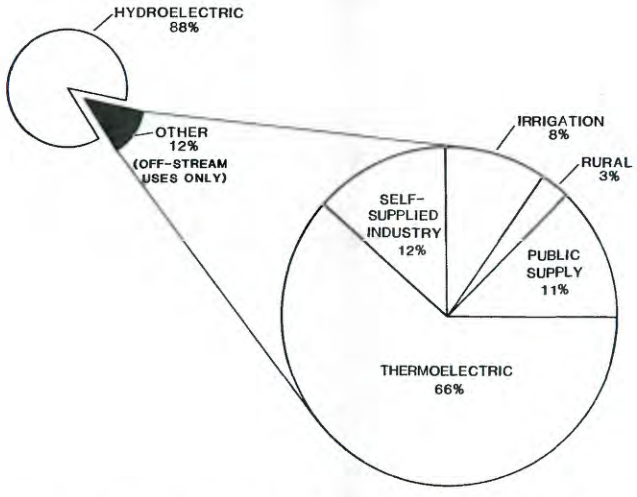
Water-use data are on file in many widely separated State and Federal offices. Compiling all of this water-use information into a standardized data base is a major goal of the Georgia Water-Use Program. An extensive data-collection effort is conducted annually to update the existing water-use file. Data on the amount of water used during the previous year are recorded, along with information on new water users and increases in permitted use.

By making information available on the source and quantity of ground water and surface water withdrawn and the quantity of water being returned, the Georgia Water-Use Program helps scientists and planners evaluate how present and future water use will affect Georgia's water supply.

HOW IS THE COLLECTED INFORMATION USED?

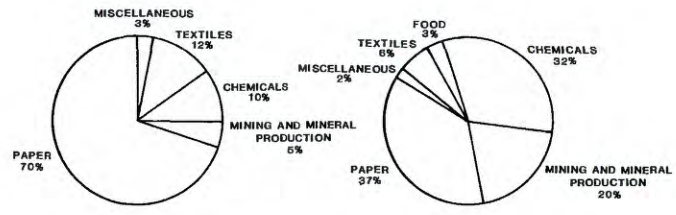
After all the water-use information has been assimilated, it is applied in various ways. Scientists develop computer models of the State's water resources that incorporate water-use data, and managers can use these models and other water-use information to make decisions on water-use permits throughout Georgia.

TOTAL WATER USE IN GEORGIA 1980



All illustrations were developed from GWUDS

INDUSTRIAL WATER USE IN GEORGIA 1980



SURFACE WATER
421 MGD

GROUND WATER
397 MGD

Water-use data are basic elements in the design and plan of large-scale water projects. The information can show trends in water use with time and point out potential problem areas. Knowledge of the quantity of ground water and surface water being used can be helpful in planning for the growth of cities and the development of new industries.

With the current Georgia Water-Use Data System and the continued cooperation of water users in the State, critical information can be provided to water-resource managers. Decisions based on this important information will help maintain Georgia's "plentiful natural resource".