WATER FACT SHEET

U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

WATER-RESOURCES ACTIVITIES IN OHIO, 1986

The Ohio District of the Water Resources Division, U.S. Geological Survey, provides information on Ohio's water resources for the overall benefit of the State and the Nation. An integral part of the Survey's mission is to conduct — on a continuing, systematic, and scientific basis — investigations of the Nation's land, mineral, and water resources, and to publish and disseminate the information needed to understand, to plan the use of, and to manage these resources. The activities of the Water Resources Division fall into eight broad categories:

- Collection of hydrologic data.
- Water-resources investigations and assessments.
- Basic and problem-oriented hydrologic and water-related research.
- Acquisition of information useful in predicting and delineating water-related natural hazards.
- Coordination of the activities of all Federal agencies in the acquisition of water data, and operation of water-information centers.
- Dissemination of data and the results of investigations.
- Provision of scientific and technical assistance in hydrologic studies.
- Administration of the State Water Resources Research Institute Program and the National Water Resources Research Grant Program.

The U.S. Geological Survey has been conducting water-resources investigations in Ohio for almost 90 years. During that period, volumes of data have been collected and more than 150 reports have been published on various aspects of Ohio's water resources. Work of the Ohio District is carried out through a District office in Columbus and a field office in New Philadelphia. Collection of hydrologic data and the analytical and interpretive appraisals of the data for continuing determination and evaluation of the quantity, quality, and use of Ohio's water resources is the responsibility of the District's Hydrologic Surveillance Section and Hydrologic Investigations Section.

The District Chief is responsible for the overall operation and management of the District. A 48-person staff consisting of hydrologists, hydrologic technicians, and other administrative and technical personnel carries out diverse tasks in support of the District's varied program. Among the disciplines represented by the District's professional and technical staff are engineering, geology, chemistry, biology, forestry, entomology, and public health.

Funds to support the work of the Ohio District are derived from three principal sources: Federal (U.S. Geological Survey), State and local cooperators, and other Federal agencies. The District presently has 17 State and local cooperators, and three cooperators among other Federal agencies.

The District's present program, which consists of 27 projects, centers on collection of hydrologic data, assessment of hydrologic impacts of coal mining and reclamation, modeling of rainfall-runoff relations and processes, and assessment of ground-water systems. Determinations of chemical quality of water and the use of digital models are integral parts of most investigations.

Surface-water data were collected at 136 continuous-record stations and 80 partial-record stations during the 1985 water year (October 1, 1984, through September 30, 1985). Ground-water levels were measured in 460 wells during this period. Basic surface- and ground-water data are published annually.

Twenty-one projects were initiated during or before Federal fiscal year 1985 and are described in a previous report by Eberle (1985). The six projects started in fiscal year 1986 are described below. Locations of new projects are shown on figure 1.

FEDERAL (U.S. GEOLOGICAL SURVEY) PROGRAM

A. Regional Trends in Water-Well Drilling in the United States, 1984 (not on figure 1).

Purpose: Analyze trends in the numbers of water wells drilled in the United States since

1960, with special emphasis on the period 1980-84.

B. Techniques for Operating In Situ Water-Quality Monitoring Stations.

Purpose: Compare the technicalities and economics of operating an in situ monitor using the "package sensor" concept with the U.S. Geological Survey's minimonitor and flow-through monitor. The three monitors will be operated simultaneously at each of four sites to assess accuracy, reliability, and service time required for their operation and maintenance.

STATE AND LOCAL COOPERATIVE PROGRAM

C. Quality of Surface Water and Ground Water in Active Coal Mining Areas.

Cooperator: Ohio Department of Natural Resources, Division of Reclamation.

Purpose: Provide baseline surface- and ground-water-quality data and other data necessary to determine the impact of mining and reclamation on local hydrologic systems. Twenty small basins will be studied in detail through long-term synoptic and short-term intensive monitoring. Ground-water assessments will be completed in basins with productive shallow aquifers that are likely to be disturbed during mining.

D. Ground-Water Hydrology and Quality Assessment of Lucas, Sandusky, and Wood Counties, Northwestern Ohio.

Cooperators: Counties of Lucas, Sandusky, and Wood.

Purpose: Provide the data and interpretation necessary for assessment of ground-water hydrology and water quality of the three-county area. The Silurian/Devonian bedrock carbonate acquifer and selected Pleistocene surficial aquifers will be studied in detail to determine direction of ground-water movement, to establish a ground-water-quality baseline, and to compare ground- and surface-water quality.

E. Ground-Water Movement and Quality in Northeastern Union County, Ohio.

Cooperator: Village of Richwood.

Purpose: Describe ground-water-flow directions, seasonals water-level fluctuations, and areal and seasonal changes in water quality in the Richwood area, northeastern Union County.

OTHER FEDERAL AGENCY PROGRAM

F. Long-Term Surface-Mine Impacts on the Hydrologic Systems in Two Small Watersheds.

Cooperator: U.S. Office of Surface Mining.

Purpose: Determine the long-term impacts of surface coal mining on ground-water quality and quantity. The occurrence of ground water in and beneath overburden materials in reclaimed areas, resaturation rates, and changes in water quality will be described.

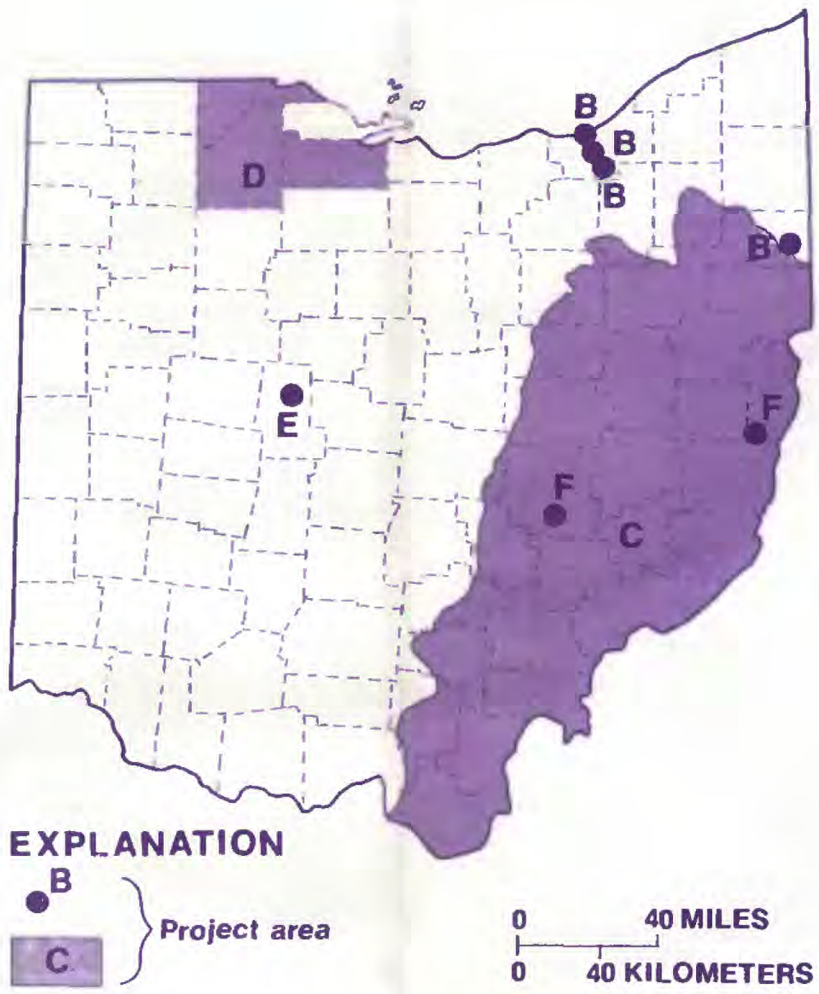

Figure 1.--Location of project areas.

For additional information on these projects or other activities of the Ohio District, please contact:

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REFERENCE CITED

Eberle, Michael (compiler), 1985, Index of Current Water-Resources Activities in Ohio, 1985: U.S. Geological Survey Open-File Report 85-555, 59 p.

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