

# **Annual Report for Fiscal Year 2002**

## **Division of Water Ohio Department of Natural Resources**



Samuel W. Speck  
Director  
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Chief  
Division of Water

# Division of Water



## Mission

To ensure the wise management of Ohio's water resources.

## Vision

To be a leader in water resources management by providing the highest quality customer service.

## Guiding Principles and Values

We commit to providing the highest quality customer service by adhering to these guiding principles and values:

- ◆ Ensure the highest level of protection for public health, safety and welfare
- ◆ Continually evaluate and improve programs, policies and services
- ◆ Use best available and innovative technology
- ◆ Promote public education of water management
- ◆ Provide prompt and effective technical assistance
- ◆ Faithfully administer regulations as mandated
- ◆ Promote resource management partnerships
- ◆ Promote professional growth and development through training and education
- ◆ Promote pride in job
- ◆ Provide a positive work atmosphere

## Chief's Comments by Jim Morris

Looking back over FY02, I think it would be safe to say that it was a year of change.

Resources continued to be a challenging element of our operation as we again saw reductions in our General Revenue Fund appropriations. I'd have to say that the staff of the Division, in their usual outstanding fashion, adapted to change as best they could and continued on. No one could possibly imagine that 9/11 would happen and that the economy would slow as much as it did.

In reaction to decreasing resources, the Division took a good look at our program self-assessments and statutory mandates and decided to handle all reductions on a cross program basis. A relatively equal reduction in all programs certainly seems to be the best philosophy for a Division with the broad mandates and important job with which we are tasked.

Reduced resources affected our personnel levels and a number of Division of Water staff took advantage of the Early Retirement Incentives. In all, six staff members retired in FY02 – Peter Finke, Joel Vormelker, Robert "Red" Truax, Leroy Goodwin, Al Luczyk and Jim Sanderson. All are greatly missed for their expertise and experience. In addition to the retirees, the Division eliminated all vacancies and found it necessary to abolish one position in the Dam Safety program.

Certainly a sad note for all of us was the death of Peter Finke in April. Peter was close to many in the Division, as well as to many others across the country. His work in developing the Division's floodplain management program spanned several decades and created a truly outstanding program here in Ohio. Peter was my supervisor in 1978 when I first joined the Division as an intern and personally had been a significant mentor during my professional career. I think it touched all of us that the Ohio Floodplain Management Association presented him with the first Peter G. Finke Award for individual leadership in floodplain management, an award so aptly titled with his name.

The Department reorganized the Coastal Management Program at the end of Fiscal

Year 2002 and formed a new Office of Coastal Management. The Division of Water's Coastal Engineering Program was transferred into this new office, which is located in Sandusky. The Department's goal with the new office was to reorganize all coastal functions into one field office in order to better serve the coastal constituency. I greatly appreciate the efforts of the Division of Water coastal staff, and we wish them well in their new circumstances.

Not all the news was negative. I think we can look over the accomplishments listed in this report and certainly acknowledge that we accomplished a great deal. A few of the highlights would be:

- ◆ The Floodplain Management program received the Tom Lee State Award from the Association of State Floodplain Managers – recognition as an outstanding state floodplain program.
- ◆ In cooperation with Ohio EPA and their Source Water Protection Program, staff completed digital Ground Water Pollution Potential Maps for Muskingum, Belmont, Washington, Harrison, Wayne, and Holmes counties. Staff completed potentiometric surface maps for the buried valley aquifers in Franklin County, Sugar Creek basin (Stark County), and the Sandy Creek basin (Columbiana, Carroll, and Stark counties).
- ◆ Staff completed design, testing, and implementation of a new ground water observation well network database. An Internet application was also implemented that provides for viewing and retrieving data and other numerical and graphical statistical products from the Ohio Observation Well Network database.
- ◆ Approximately 27,000 well logs were data entered into the well log computer system. 15,000 of these were backlogged well log forms (dating back two years). The well log system now has approximately 735,000 well logs in

the database, and the information is accessible through the Division's web site.

- ◆ Locational information (X-Y data) for approximately 43,000 well logs was converted and placed in the well log computer system. Approximately 100,000 well records have locational data in our database.
- ◆ The Coastal Engineering Program completed an analysis of the professional engineering requirement for shore structure permits and made recommendations to the Department for process changes.
- ◆ The Dam Safety Program developed a new process and procedures for an enforcement program to address safety problems with high-risk dams.
- ◆ The Canal/Hydraulic Operations Program completed projects with local partners to improve both the Miami & Erie and Ohio & Erie Canals.

With the signing of the Annex to the Great Lakes Charter in June, 2001, staff from the Division of Water began to participate in deliberations with other Great Lakes states and provinces on implementing the Annex. All states and provinces were asked to appoint two people from each state or province (Ontario and Quebec) to the Water Management Working Group; one technical person and one who had ties to the governor's or premier's office. As Governor Taft is the chair of the Council of Great Lakes Governors, Director Speck was asked to be chair of the Working Group. Kate Bartter of the Governor's Office was also appointed to the Working Group. Three sub-committees were established. Staff from the Division of Water have been appointed to two of those sub-committees and have been providing assistance to Director Speck on the project. Due to 9/11, travel and budget difficulties, no draft reports or products were available in FY02. The outcome of this effort could likely be a water withdrawal permitting program for at least the Lake Erie basin and an interstate compact for regional review of larger water withdrawal projects.

As we move forward into another year of change and challenge we will be concentrating on updating our strategic plan and continuing to utilize those resources we have in the best ways we can. As I've said a number of times, I feel privileged to work with such an outstanding group of people and with a Division that has as important a mission as the Division of Water.

## **Accomplishments for Fiscal Year 2002 by Section and Program**

### **Water Management Section**

#### **Canal/Hydraulic Operations**

- ◆ Canals staff worked with local partners to provide funding and field assistance for the completion of a detailed survey of the Department's Ohio & Erie canal lands from Summit Lake to Barberton. It was the first time since the completion of the original survey of the canal (approximately in the 1920's) that the department conducted another detailed boundary line survey to identify current ownership and to facilitate resolving encroachment issues.
- ◆ The program successfully partnered with Summit Metroparks, the City of Akron, and the Ohio & Erie Canal Corridor Coalition (OECCC) to secure federal funds to conduct a master plan for the canal from Summit Lake to Akron/Barberton Corporation Limit.
- ◆ Akron staff worked with local partners to complete the "Towpath Companion," a tour book of the canal from Cleveland to New Philadelphia. The tour book is being sold at participating businesses and organizations along the canal corridor.
- ◆ St. Marys staff worked with representatives from the Miami & Erie Canal Corridor Association (MECCA) and the Office of Communications to develop a guide brochure for the canal from Delphos south to Piqua. The brochure will help to increase the visibility of the canal program and MECCA. A detailed tour book similar to the "Towpath Companion" will be developed in the near future utilizing grants and/or private funds for the Miami & Erie Canal.
- ◆ Phase 2 of the capital improvements plan for the M&E Canal was bid out this fiscal year. Construction is anticipated to begin during the first quarter of FY03. The project will dredge portions of the canal and rehabilitate locks and other structures.

#### **Coastal Engineering**

- ◆ The program initiated and completed a project to collect input from coastal stakeholders on the PE requirement for the shore structure permit. Some coastal

constituencies had questioned the need and value of having the designs for all shore structures completed by a PE. The project developed a survey that was distributed to coastal property owners and other stakeholders. In addition to the survey, interviews were conducted with selected property owners, contractors, engineers, and local officials. The project also consulted with other state programs and with the State Board of Registration for Professional Engineers and surveyors. Information from the surveys and interviews was compiled into a report with recommendations and presented to the department administration.

- ◆ The program hired a new CEA coordinator to assume the application and processing of CEA permits for the department. In conjunction with this hiring, the program began development of a standard process for the issuance of CEA permits.
- ◆ The initial phase was completed for the development of a GIS for the Coastal Management Program. Division staff with GIS expertise assisted Coastal Engineering staff in developing spatial data for shore structures along the coast.
- ◆ In FY02, the Department announced plans to reorganize the coastal management programs into a new Office of Coastal Management. The Coastal Engineering Program will be part of this new office when it is formed at the beginning of FY03. The Division has worked with the department administration and other affected divisions to provide a successful transition to the new office.

#### **Dam Safety**

- ◆ The program completed a project to develop criteria and a procedure for enforcement action against the owners of substandard dams. The project developed risk-based criteria for evaluating dams to determine priorities for enforcement. Based on the criteria, the program developed a list of priority dams for enforcement and began actions

to bring them into compliance with current dam safety standards.

- ◆ The program developed a new system for the tracking of time spent on project and program activities. With this information, the program is better able to make decisions on the allocation of staff time, and to set goals for dam safety periodic inspections and other projects.
- ◆ Program staff completed the inspection of ninety-five Class I (high-hazard) dams. This met the ORC mandate (inspection of each dam at least once every five years) for high hazard dams. However, limitations of staff resources did not allow for meeting the mandate for the inspection of Class II (significant hazard) and Class III (low hazard) dams.
- ◆ All program staff were trained in the use of HEC-HMS computer modeling program. The Division contracted with a private consultant to provide the training.
- ◆ The program hosted the Midwest Regional Technical Seminar for the Association of State Dam Safety Officials in June in Columbus. The seminar was a three-day course on plan review and construction inspection.

### **Floodplain Management**

- ◆ The Association of State Floodplain Managers awarded the program the Tom Lee Award for the outstanding state floodplain program for 2002. The award was presented at the ASFPM annual conference in Phoenix, AZ.
- ◆ The program initiated the Appalachian Flood Risk Reduction Initiative (AFRRI), which will assist fifteen Appalachian Ohio communities with development of local floodplain management plans (DMA2000 compliant) and current detailed flood data. The initiative is a partnership between the federal Economic Development Administration, the Ohio Emergency Management Agency, the Ohio Department of Natural Resources, and the Governor's Office of Appalachia. Direct funding, technical assistance in mitigation planning, and engineering/mapping services will be provided for communities selected through the competitive grant process. Through this project, the Division of Water is integrating our new geographic

information system technologies and honing our hydrologic/hydraulic analysis and digital mapping capabilities to support effective local floodplain management.

- ◆ The Division accepted an operational geographic information management system for selected flood hazard information. The information system is based upon three key applications:
  - 1) general flood hazard information management (relational database),
  - 2) an inventory of the existing structures in special flood hazard areas to support mitigation planning, and
  - 3) expanded hydrologic and hydraulic analysis capability.

The inventory of existing structures and hydrologic/hydraulic modeling capability are being utilized in the AFRRI projects.

- ◆ A compendium of higher standards has been developed to support communities that wish to regulate floodplains beyond the National Flood Insurance Program (NFIP) minimum standards.
- ◆ The program collaborated with the Ohio Department of Commerce and the Board of Building Standards to develop an amended version of the International Code Council's International Building Code that was adopted in January 2002 as the Ohio Basic Building Code for commercial and industrial development. Previously, the Ohio Basic Building Code did not include any NFIP or flood protection criteria.
- ◆ The program worked with the Ohio Building Officials Association (OBOA), the National Institute of Building Sciences Ohio Council (NIBS), and the Ohio Emergency Management Agency to create an ad-hoc committee to respond to the need for post-flood inspection support. The committee is charged with creation of a statewide mutual aid agreement for building inspectors, a standard scope of work and inspection product, and a memorandum of agreement for communities requesting inspection assistance. The inspection product and MOA are designed to ensure that communities will utilize the information to recovery smarter and address NFIP compliance responsibilities.

## Water Resources Section

### Ground Water Resources

- ◆ Staff successfully completed the contract with OEPA in assisting them with their Source Water Assessment and Protection Program (SWAP). The following SWAP work was accomplished this year:
  - ◆ Completed Resource Characterization for all 88 counties.
  - ◆ Completed draft Ground Water Pollution Potential (GWPP) maps for Carroll and Holmes counties, and completed GWPP GIS coverages for Belmont, Carroll, Harrison, Holmes, and Wayne counties.
  - ◆ Completed digital GWPP maps from existing draft maps for Fulton, Henry, Hocking, Lucas, and Pike counties.
  - ◆ Converted the Stark County GWPP to a digital format.
  - ◆ Completed Potentiometric-Surface Maps (ground water surface elevation maps) for Clark, Franklin, and Tuscarawas counties and for the Sandy Creek buried valley and the Sugar Creek buried valley.
- ◆ As part of a 319 Grant commitment staff completed work for Ground Water Pollution Potential Maps (GWPP). GWPP maps were drafted for Carroll, Fulton, Henry, Hocking, Lucas, and Pike counties. All of these maps, except for Carroll County, were digitized into Arc/Info, and assembled into GIS Coverages.
- ◆ Locational information (X-Y data) for approximately 43,000 wells drilled in Champaign, Clark, Montgomery, Morgan, Portage, Stark, and Summit counties were converted and placed in the well log computer system. The system now has about 100,000 well logs with location data. This information allows for the retrieval of well log data using coordinates (State Plane or Latitude and Longitude) which enables the data to be used for investigating, modeling or mapping ground water systems and for water resources planning.
- ◆ Data from approximately 27,000 well logs were entered into the well log computer system. About 15,000 of these were backlogged well log forms. This was truly a team effort as many employees within the Division contributed to completing this goal. The well log system now has approximately 735,000 well logs in the database. The information is accessible

through the Division's web site.

### Water Inventory

- ◆ The web page which was designed for the State of Ohio Observation Well Network in FY01 was finalized, placed on the Division's website, and checked for completeness in FY02. Observation wells are used to monitor an aquifer's response to changing climatic conditions and the impacts from man-induced activities. Currently, 117 wells scattered throughout the state are actively monitored. Data have been collected at nearly 300 sites throughout the years. This new Internet application allows the user to view and/or retrieve data from the Ohio Observation Well Network Database. Data from some well sites are available from the late 1930s to present. Several options offer a wide range of flexibility in viewing and/or retrieving current and historical data, both graphically and numerically. A table of summary statistics is also provided for each observation well.
- ◆ In cooperation with the USGS, the staff supported and participated in the preparation of three new hydrologic reports during FY01 and FY02. In FY02 these reports were reviewed, finalized and published:
  1. "Low-Flow Characteristics of Streams in Ohio through Water year 1997"
  2. "Hydrologic Considerations for Estimation of Storage-Capacity Requirements of Impounding and Side-Channel Reservoirs for Water Supply In Ohio"
  3. "Techniques for Estimating Selected Streamflow Characteristics of Rural, Unregulated Streams in Ohio"These publications provide up-to-date information and methodologies for water supply and water quality planning.
- ◆ The statistics for the "normals" (I.e., the period of record for comparison) for the hydrologic data used in the "Monthly Water Inventory Report for Ohio" were updated and integrated into the monthly publication.
- ◆ Data entry was completed for 1250 years or more than 452,000 days of data from discontinued observation wells. This data will be added to the State of Ohio Observation Well database and will also be available through the newly completed web page application. The

data from these historic wells with anywhere from 10 to 28 years of record will be valuable for comparison with data from newer observation wells and well log information.

- ◆ Staff partnered with WMAO and held a conference in June 2002 that focused on the water resources data collection activities in the state. Information gathered during this conference will be used to develop strategies for strengthening the support and efforts for collecting critical water resources data.

### **Water Resources Education**

- ◆ 33 new Water Education for Teachers (Project WET) facilitators were certified by conducting two Project WET Facilitator Training Workshops in March 2002. And 590 educators were certified in Project WET through 29 Project WET educator workshops conducted by Project WET facilitators.
- ◆ The Second Annual "Make A Splash" Festival with Project WET was held at the Sharon Woods Metro Park in Westerville, Ohio on September 21, 2001. Festival volunteers from the Ohio Department of Natural Resources, Metro Parks (Columbus and Franklin County), Franklin County Soil and Water Conservation District, and Keep Columbus Beautiful presented Project WET activities to 280 third grade students from Whitehall Elementary.

### **Water Supply Planning & Watershed**

#### **Hydrology**

- ◆ A coastal grant to perform a water quantity assessment for the Huron, Vermilion, Black, and Rocky River basins was applied for and received. The study will be conducted in FY03.
- ◆ A new Division of Water bulletin, "Basin Descriptions and Flow Characteristics of Ohio Streams" was initiated.
- ◆ Staff assisted City of Delphos and URS Consultants with investigation of water supply alternatives and feasibility of an off-stream reservoir project.

## Ohio Water Advisory Council

The Ohio Water Advisory Council is created by statute in Ohio Revised Code Section 1521.031. The council consists of seven members appointed by the Governor. Each member represents a different area of expertise or interest and serves a two-year term. The Council's primary function is to meet quarterly and provide advice, recommendations, and direction to the Chief of the Division of Water on goals, programs, and issues. During FY02, members included:

<b>Member</b>	<b>Interest or Expertise</b>
Joan Brassaemle Akron, Ohio	Ground Water
Doug Johnson Vice Chair Dayton, Ohio	Dam Safety
Dr. Harry Kaneshige Chair Athens, Ohio	Representing Public
Dr. Vincent T. Ricca Columbus, Ohio	Floodplains
Dr. Robert Stiefel Columbus, Ohio	Surface Water
Sandra Zellmer Toledo, Ohio	Representing Public
Paul R. Labovitz Peninsula, Ohio	Canal Lands

The Council met on the following dates during the fiscal year and discussed the primary focus area indicated:

**October 5, 2001** - Canal Land Policy

**December 7, 2001** - SWOT (Strengths, Weaknesses, Opportunities, Threats)

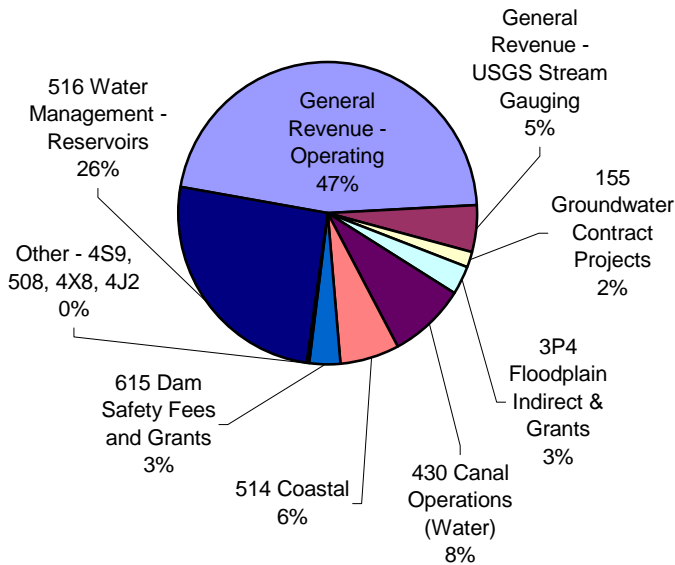
**March 8, 2002** - Water Sales/Leasing Procedures & Policy Considerations

**June 7, 2002** - Strategic Planning

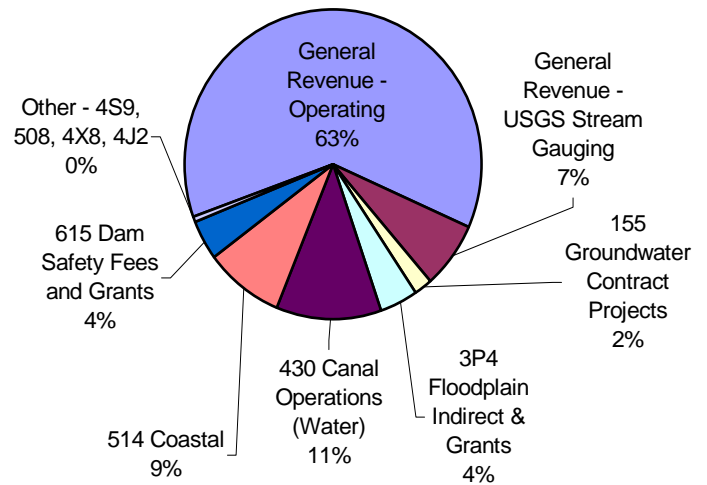
# Fiscal Report FY02

## Overview of Appropriations

### All Funds



### All Funds Minus 516



Fund	Amount	% All	% - 516
General Revenue – Operating	\$3,732,219	47	63
General Revenue – USGS Stream Gauging	408,544	5	7
Fund 155 Groundwater Contract Projects	128,195	2	2
3P4 Floodplain Indirect & Grants	251,758	3	4
430 Canal Operations (Water)	675,523	8	11
514 Coastal	511,543	6	9
615 Dam Safety Fees & Grant	261,615	3	4
Other – 4S9, 508, 4X8, 4J2	26,416		
516 Water Management - Reservoirs	2,062,359	26	-
	\$8,058,172		

\* Note: Fund 516, the Water Management Fund, is used primarily for pass through payments to the U.S. Army Corps of Engineers for reservoir projects and to pay the state's share of upground reservoir operation, maintenance, and repair projects. No personnel costs were charged to Fund 516 in FY02.

## Office Locations and Telephone Numbers

### **Central Offices**

Ohio Department of Natural Resources  
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1939 Fountain Square  
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Telephone: (614) 265-6717

FAX: (614) 447-9503 or (614) 265-6767

Website: [www.ohiodnr.com/water](http://www.ohiodnr.com/water)

### **Miami & Erie Canal Office**

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### **Ohio & Erie Canal Office**

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