

# **Building Strong Collaborative Relationships for a Sustainable Water Resources Future:**

**STATE OF OHIO**

SUMMARY OF STATE WATER PLANNING

U.S. Army Corps of Engineers  
Civil Works Directorate  
441 G Street NW  
Washington, DC 20314-1000

December 2009

The findings contained in this report are based on the information collected from the literature search and interviews for this initiative and should not be construed as an official Department of the Army position, policy or decision unless so designated by other official documentation.

# **STATE OF OHIO**

## **1. STATE/REGIONAL WATER PLANNING STATUS**

Statewide water planning in Ohio is done by the Ohio Water Resources Council (OWRC), which consists of members from nine state departments and an advisory group. The Ohio Department of Natural Resources Division of Water (ODNR-DW) supports the planning initiatives of the OWRC and other notable regional planning efforts: community-level water supply planning, watershed action planning, and Ohio's conservancy districts.

The OWRC was formed in 1993 from a governor's task force on water resources, and later written into state law in 2001 as a "forum for policy development, collaboration, and coordination among state agencies, and strategic direction with respect to state water resource programs" (1). The purpose of the council is networking, collaborating, and working to build consensus around Ohio's major water resource planning objectives. In 2002 OWRC published its first Four-Year Strategic Plan, which included goals, objectives, and action items for management of the state's water resources through the year 2005. This plan, and subsequent versions, is equivalent to a statewide water plan for Ohio. The plan was partitioned into key goal topics: protection, management and restoration; planning; information; economic development; infrastructure financing; recreation; and education (2). Each of the goal topics has several associated objectives which are accompanied by specific action items aimed at fulfilling the objective and achieving the goal. Each action item also has responsible agencies assigned to it and an indication of the status of resources needed to complete the item.

Since the first Strategic Plan, OWRC has developed another set of goals, objectives, and action items related to a different set of goal topics: data and information; education; watersheds; quality; quantity; hazards; and infrastructure (1). An updated planning document has not been published for the most recent planning goal areas listed above; however the information is available on the OWRC website. Ohio's participation in Great Lakes planning initiatives is included in the OWRC's strategic plans, and the ODNR-DW is responsible for coordinating and implementing the terms of the Great Lakes Basin Compact. The Compact binds the eight Great Lakes states into an agreement to plan for and manage the basin's water resources.

## **2. RESPONSIBLE STATE AGENCIES/REGIONAL ENTITIES**

The Ohio Water Resources Council (OWRC) was first formed in 1993 as a result of the governor's Blue Ribbon Task Force on Water Resources. In 2001, the OWRC was permanently established by state law. It is the primary water planning entity in Ohio, with responsibility for collaborating with state agencies. Membership includes an Executive Assistant to the governor and the heads of nine state agencies: the Ohio departments of Agriculture, Development, Health, Natural Resources and Transportation; the Ohio Environmental Protection Agency; Ohio Public Works Commission; Ohio Water Development Authority; and Public Utilities Commission of Ohio. The Advisory Group to the OWRC consists of 20 members appointed by the OWRC and 8 technical members representing a variety of stakeholders groups. The contact information for the OWRC is as follows:

Gail Hesse  
Ohio EPA, Lazarus Government Center  
P.O. Box 1049, Columbus, Ohio 43216-1049  
614-644-2146, 614-644-2745 (fax)  
[gail.hesse@epa.state.oh.us](mailto:gail.hesse@epa.state.oh.us)

Sara Lynaugh  
Ohio Department of Natural Resources  
2045 Morse Rd, Building B2  
Columbus, Ohio 43229  
614-265-6789, 614-265-6767 (fax)  
[sara.lynaugh@dnr.state.oh.us](mailto:sara.lynaugh@dnr.state.oh.us)

The Ohio Department of Natural Resources – Division of Water (ODNR-DW) is responsible for assisting communities with water supply and watershed planning, and provides support to the Ohio conservancy districts. Water planning program also coordinates interstate issues involving the Great Lakes and Ohio River. The Division of Soil and Water Conservation is currently merging with the Division of Water. The contact information for the ODNR-DW is as follows:

David Hanselmann, Chief of the Division of Water  
2045 Morse Road, Building B2  
Columbus OH 43229-6693  
614-265-6710  
[david.hanselmann@dnr.state.oh.us](mailto:david.hanselmann@dnr.state.oh.us)

Ted Lozier, Administrator, Division of Water  
2045 Morse Road, Building B2  
Columbus OH 43229-6693  
614-265-6728  
[ted.lozier@dnr.state.oh.us](mailto:ted.lozier@dnr.state.oh.us)

John Kessler, Assistant Chief of the Division of Soil and Water Conservation  
2045 Morse Rd, Building B3  
Columbus, OH 43229  
614-265-6610  
[John.kessler@dnr.state.oh.us](mailto:John.kessler@dnr.state.oh.us)

### 3. WATER MANAGEMENT VISION AND GOALS

The OWRC has published a mission, vision, and set of principles in its first Strategic Plan, as follows:

- **Mission:** *Guide the development and implementation of a dynamic process to advance the management of Ohio's water resources.*
- **Vision:** *To be the premier state in managing water resources to benefit public health, ecological integrity, and economic vitality for Ohio's present and future generations.*

- **Principles:**
  - *Preservation and management of Ohio's water resources is fundamental to human existence and the ecosystem, and must be balanced between human needs and environmental protection.*
  - *Access to safe, potable water supplies at reasonable cost is a right of all Ohio citizens, now and in the future.*
  - *The interests of all stakeholders, including government, public and private organizations, and individuals, in water-related issues deserve fair and objective consideration and must be recognized and respected so that benefits are maximized and detrimental effects of plans and decisions are minimized.*
  - *Watersheds and smaller natural drainage units within them form the geographic and hydrologic basis for successful water planning, protection, management, and restoration programs at the state, regional, watershed and local levels.*
  - *Working partnerships among stakeholders must be recognized as essential to the cooperation, collaboration and shared responsibilities needed to successfully manage Ohio's water resources.*
  - *Preventive measures to maintain high quality waters and stem further damage to degraded waters must receive top priority in management plans and programs, followed by restoration/remediation of degraded waters to the extent feasible.*
  - *Accessibility to water information combined with good science must underlie research, standards and decision making in all resources programs.*
  - *The cost of the development and implementation of water-related plans, programs, and projects must be shared as equitably as possible among the beneficiaries.*

(Source: [2])

The ODNR-DW does not have a published vision or mission statement for water planning in Ohio.

#### **4. SCOPE OF WATER RESOURCES PLANNING AND MANAGEMENT**

##### **Ohio Water Resources Council 2002 Strategic Plan**

The OWRC released its first strategic plan in 2002, outlining a set of goals and accompanying objectives and action items to be completed by 2005. This plan covered the topics of protection, management and restoration; planning; information; economic development; infrastructure financing; recreation; and education. The document also contains a chapter on the conditions and needs assessment for the state – subdivided into a Resources Inventory containing factual information about Ohio's water resources, Analysis explaining how the data suggests a need to address certain issues, and Issues which explains how the seven topics listed above were decided upon as the focus of the Plan. Following is a list of the seven goal topics and the objectives that were included as part of the 2002 plan. The plan also listed ongoing and future actions aimed at achieving each objective, and the lead agencies involved (which are not listed here).

Goal: Protection, Management and Restoration▪ **Objectives:**

1. Promote preventive and regulatory **programs** to protect water resources for public and private uses.
2. Support implementation of restoration efforts to improve and protect water quality and quantity.
3. Identify, protect and manage sensitive and critical water resources areas.
4. Strengthen the state's role in water quantity management.
5. Promote water conservation strategies.
6. Promote local water resource protection and management initiatives.
7. Promote the maintenance and improvement of the hydrologic and ecological integrity of Ohio's watersheds and boundary water.
8. Ensure that Ohio's public water systems provide adequate supplies of safe drinking water.

Goal: Planning▪ **Objectives:**

1. Facilitate and enhance communication and coordination among local, regional, state and federal water resource programs.
2. Establish a water resource strategic plan to guide implementation of state agency programs.
3. Promote watershed-based planning.
4. Promote coordination with and among regional and local planning efforts by providing support and resources.

Goal: Information▪ **Objectives:**

1. Enhance collection, analysis, and evaluation of water resource data and supporting technical information.
2. Promote cooperation, collaboration, and technology transfer among state, federal, and local governments and other entities that collect, manage and/or use water data.
3. Establish mechanisms for citizens, organizations and agencies to have easy access to water-related information and technical assistance.

Goal: Economic Development▪ **Objectives:**

1. Promote sustainable water management in land use and economic development planning at state, regional and local level.
2. Encourage collaboration between state agencies and other entities to identify proactive incentives to meet water quality objectives.
3. Encourage the use of waterborne transportation where economically and environmentally feasible.

Goal: Infrastructure Financing▪ **Objectives:**

1. Evaluate the demand for financing and enhance marketing of the available grants, low interest loans, and tax credits to the public and private sectors.
2. Develop alternative funding strategies and incentive programs for the public and private sectors.

3. Develop mechanism for more effective leveraging of grants, subsidized loans, and tax credits to the public and private sectors.
4. Promote the development and implementation of local and regional water resource and infrastructure plans by applicants for state and federal financing assistance.
5. Identify and encourage economically feasible technologies that will help small communities and individual property owners meet environmental standards.

Goal: Recreation

▪ **Objectives:**

1. Support public access to water-based recreation.
2. Maintain, rehabilitate, upgrade, and develop facilities as appropriate to support the present and future demand for water-based recreation.
3. Encourage heritage tourism as a tool for conserving water and water-related resources.

Goal: Education

▪ **Objectives:**

1. Provide and support educational opportunities on the importance of water resource management, protection, conservation, use, and safety.
2. Support educational programs on accessing and utilizing water-related data and information.
3. Promote and support citizen and community involvement in water resource protection and planning.

(Source: [2])

### **Ohio Water Resources Council 2006 Strategic Plan**

In 2006, the OWRC completed its updated Strategic Plan; however this version has not been published as a formal document as it was in 2002, though the list of goals and objectives is available on the OWRC website. Neither is there a published document which outlines the progress made on the particular objectives of the 2002 Strategic Plan. The 2006 Strategic Plan identifies seven new water resource focus topics and a set of goals and objectives for each. The Plan also includes specific indicators/measures for tracking the progress of the actions associated with each goal/objective. Listed below are the objectives for the seven goals topics of the 2006 Plan.

**Goal: Education and Outreach** (agencies involved include Ohio EPA Division of Drinking and Groundwater and Office of Environmental Education, and ODNR Division of Water)

Objectives	Action Items
1. Implement a state-led awareness campaign	Water awareness campaign for general public
	Participatory events for targeted audiences to promote awareness and behaviors
	Internet/GIS delivery of water info to visually communicate water resource issues
2. Correlate water resources education with K to 12 state content standards	Identify essential water concepts & skills for students
	Integrated water resources education into existing curricula
3. Coordinate water resources education efforts among state agencies and with other key organizations	Water resources education programs designed to convey– attitude and action, information and communication, and skill development
	Integration with existing environmental education efforts.
	A web-based water portal

**Goal: Data and Information** (agencies involved include ODNR, USGS, Ohio EPA, and Miami Conservancy District)

Objectives	Action Items
1. Coordinate efforts to identify long-term data needs	Interagency committee
	Standards for data collection
	Cost-benefit regarding collection decisions
2. Manage data/information on a watershed basis	Formats and systems integrated to share data and information
	GIS allow for data management by watershed
	State metadata set for water data, routinely updated
3. Provide easy access to data and information	Web-based portal
	Link via the portal to provide interpretation and answers
	Data and information integrated between all levels of government and private sector

**Goal: Watershed Management** (agencies involved include ODNR Division of Soil and Water Conservation and Division of Water, Ohio EPA Division of Surface Water, and Ohio State University Institute for Local Government Administration and Rural Development)

Objectives	Action Items
1. Align state water resource programs by watersheds	OWRC continue to facilitate watershed management
	State agencies establish goals and organize/administer programs affecting water resources on a watershed basis
2. Partner with all levels of water management players - local, state, regional, federal and international	State support of local watershed management
	Funding
	Integration of programs on a watershed basis
	Data portal



**Goal: Water Quality** (agencies involved include Ohio EPA Division of Surface Water and Division of Drinking and Groundwater, ODNR Division of Water, Ohio Department of Health, Ohio Department of Agriculture, and the State Agency Coordinating Committee on Groundwater)

<b>Objectives</b>	<b>Action Items</b>
1. Develop water quality data collection and characterization capabilities to adequately analyze water quality conditions and status and trend information	Refined assessment techniques for all waters
	Access and availability of water quality data for stakeholders
	Techniques to assess attainment for recreation and public drinking water supply beneficial uses
	Techniques to incorporate nutrient criteria into Ohio water quality standards
	Ability to report on Ohio water quality conditions at statewide and watershed/aquifer scales
	Stakeholders trained in data collection and analytical methods
	Identification of areas with ground water quality impact
2. Integration and leverage of water quality programs and resources	Coordinated approaches to land use decision making that support water quality restoration and protection
	Information-based decision making for watersheds and drinking water source protection areas
	Partnerships among the public and private sectors to support the planning and implementation cycle of watershed projects (assess, plan, implement, evaluate)
	Alignment of funding resources to support the planning and implementation cycle of watershed projects (assess, plan, implement, evaluate)
	Incorporate sensitive aquifer protection strategies into watershed projects and into regulatory programs as necessary
	A web-based water portal to provide easy access to water quality data and information
	Improved integration of water quantity and water quality management

**Goal: Water Quantity** (agencies involved include ODNR, Ohio EPA, USGS, Miami Conservancy District, and the Workgroup for Water Resources Monitoring)

<b>Objectives</b>	<b>Action Items</b>
1. Improved water quantity data and characterization	Improved capacity for data collection and analysis
	Water budgets for Ohio watersheds
	Characterized ground water – surface water interactions
	Characterization of zones of ground water recharge
	Improved data and information on existing water users
2. Integration and leverage of water quantity management programs and resources	Collaboration between programs for an inventory of the water quantity data and information
	Assessment of water quantity needs to support environmental sustainability
	Data and information delivery system on a watershed basis for local planning and management efforts
	A web-based water portal
3. Prepare for mid-term and long-term water quantity issues	Implement Great Lakes Basin Water Resources Compact
	Framework that allows for equitable use of the resource
	Tools to support decision-making relative to water quantity issues
	Improved integration of water quantity and water quality management

**Goal: Water-Related Natural Hazards** (agencies involved include Ohio Emergency Management Agency, ODNR Division of Water, Ohio EPA, and Ohio Department of Administrative Services)

Objectives	Action Items
1. Assist state agencies and local governments to incorporate water related hazards in all plans	All local governments are prepared to respond to water related natural hazards
	More efficient recovery from water related hazards
	Strengthened technical assistance and information dissemination
2. Provide leadership for cooperative management of Ohio's water resources to reduce water related hazard risk and protect water resources	Strengthened technical assistance for floodplain and coastal management programs or regulations to be implemented at the local level
	State agency actions, such as construction, development and policy, will be considered and complimentary of local programs to reduce natural hazard losses
	Local programs incorporate consideration of activities in areas such floodplains, agricultural lands, coastal and landslide prone areas and other water related sensitive areas in their land use plans
3. Promote sustainable development and land use across Ohio through providing water related hazard information, technical assistance and collaborative partnerships	Identification of areas of risk, areas with repetitive problems, and areas where the built environment including structures and infrastructure are at risk, to develop plans to address
	Strengthened technical assistance and information dissemination
	Updated data required for mitigation plans
	Guidance for local governments and private sector, as appropriate, to develop mitigation plans
	Integration of local mitigation plan actions with other related plans, such as source water protection and watershed plans, where similar goals and actions are identified
	Strengthened ongoing coordination among the state agencies and OEMA regarding preparedness, response, recovery, mitigation and post-evaluation efforts

**Goal: Water Resource Infrastructure** (agencies involved include Ohio Department of health, Ohio EPA, ODNR, Ohio Water Development Authority, Ohio Public Works Commission, Public Utilities Commission of Ohio, and Ohio Department of Development)

<b>Objectives</b>	<b>Action Items</b>
1. Build local technical and managerial capability	Educate local public officials as to the full cost of clean, safe water.
	Consistently define local capabilities and target assistance
	Strengthen assistance to local officials
	Identify mechanisms to meet local financing needs
	Maximize available public funds and achieve multiple programmatic needs
	Increase sustainable water management for economic development
	Enhance watershed management programs
2. Strengthen local coordination and planning	Evaluate existing planning mechanisms to develop and implement regional water resource infrastructure planning models
3. Identify needs, sources of funding and shortfalls of financing for water, wastewater, storm water, combined sewer overflows and watershed infrastructure	Form an interagency committee to identify the “universe” of water resource infrastructure needs and sources, and to estimate the shortfalls

(Source [5])

### **Community Water Supply Planning**

The ODNR and Ohio EPA completed water supply plans for the entire state between 1967 and 1978. Plans for individual counties or parts of counties were updated in the 1980s and early 1990s (see Figure 1). The water supply plans are not publically available online. The effort by the state to develop these plans was aimed at identifying current and future water supply needs and encouraging communities to develop needed supply sources in an efficient and timely manner (Source [3]). This includes analyzing the systems by inventorying the existing source and treatment facilities, projecting water use into the future, comparing projected water use with reported existing system yields, identifying projected deficiencies, and formulating alternatives for developing projected needs at the appropriate time (Source [3]). The implementation of recommended alternatives has been cost-shared by the state with communities or the federal government (when supplies can be allocated through existing flood control projects).



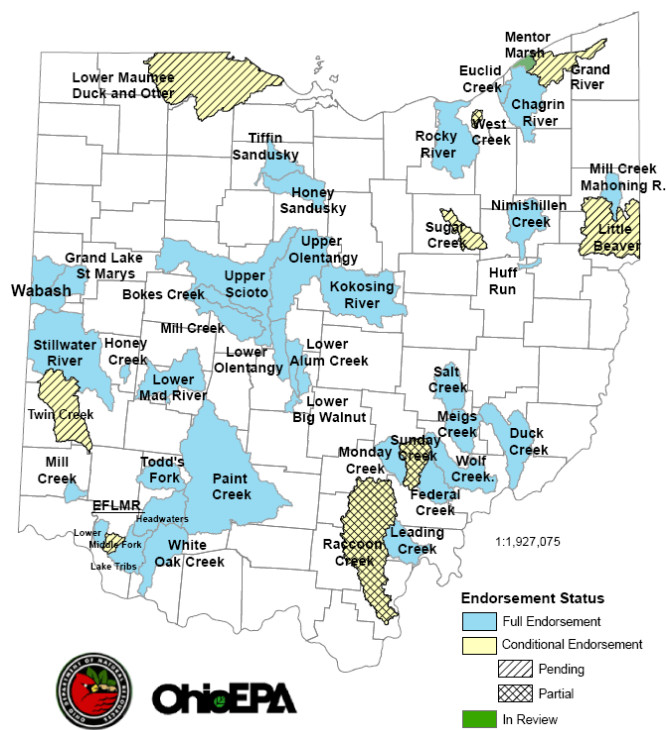
**Figure 1. History and Status of Water Supply Plans in Ohio (Source [3])**

**Watershed Action Planning**

The ODNR and Ohio EPA provide guidance and support to regional watershed coordinators who develop and implement watershed action plans. The plans are developed and implemented entirely at the local level, but funding can come from the state level in the form of Watershed Coordinator Grants. The plans are reviewed and endorsed by the ODNR and Ohio EPA. “The goal of each plan is to restore and maintain the chemical, physical and biological integrity of water resources within the watershed. Implementation of these plans can include:

- *Targeting of ‘best management practices’*
- *Installation of restoration projects such as dam removal and stream restoration*
- *Upgrading local land use policies*
- *Protection of high quality resources through easement purchase and other voluntary set-aside programs*

(Source: [6])



**Figure 2. Status of Locally-Developed Watershed Action Plans (Source [6])**

Figure 2 shows the status of the state’s endorsement of locally-developed watershed action plans.

### Conservancy Districts

Water planning and management across the state of Ohio is also accomplished through conservancy districts – political subdivisions of the state formed in order to solve water management problems. The districts came about after serious flooding in 1913 to create a venue for adequate flood management. The conservancy districts’ roles have evolved and now cover water resource issues related to recreation and stormwater drainage as well. “Pursuant to implementing its court-approved work plan, a conservancy district has the right of eminent domain, and may charge user fees, levy special assessments, and issue bonds” (Source [4]). The ODNR supports the conservancy districts as an advisor and as a point of contact for state and federal assistance.

## 5. PARTNERSHIPS, STAKEHOLDER, AND PUBLIC INVOLVEMENT

Two groups assist the Council in pursuing its goals. The State Agency Coordinating Group, consisting of staff from the nine member agencies, serves Council members in a support role. The Advisory Group, including 20 appointed members and six technical support members representing a variety of stakeholder groups, advises the Council and participates in work groups to develop recommendations on water resource issues. The appointed Advisory Group members serve for a two-year term and the technical support members serve on a permanent basis (Source [2]). Listed below are the current members of the Advisory Group and the technical support group.

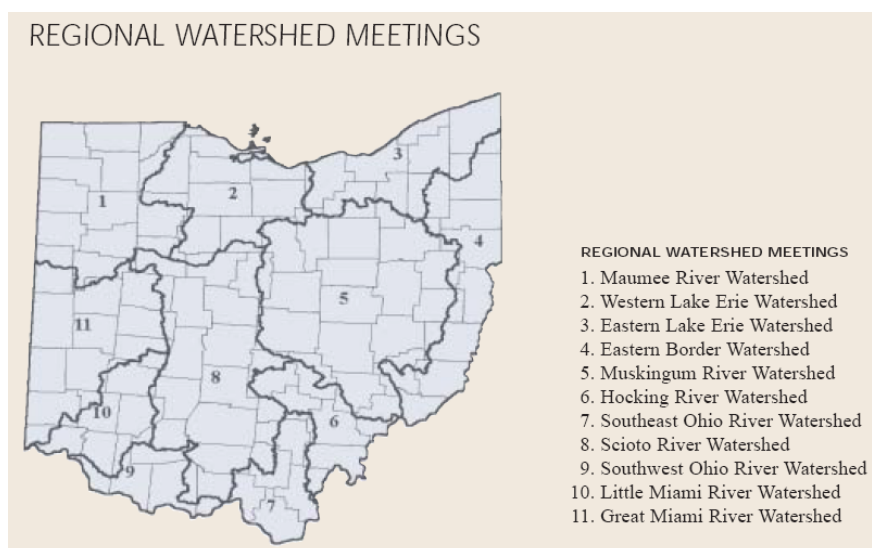
#### *Advisory Group*

- [American Water Works Association](#)
- [Audubon Ohio](#)
- [County Commissioners Association](#)
- [Izaak Walton League](#)
- [Ohio Association of Regional Councils](#)
- [Ohio Farm Bureau](#)
- [Ohio Federation of Soil & Water Conservation Districts](#)
- [Ohio Aggregates & Industrial Minerals Association](#)
- [Environmental Education Council of Ohio](#)
- [Ohio Conservancy District](#)
- [Ohio Chamber of Commerce](#)
- [Ohio Electric Utility Institute](#)
- [Ohio Environmental Council](#)
- [Ohio Manufacturer's Association](#)
- [Ohio Municipal League](#)
- [Ohio Rural Water Association](#)
- [Ohio Township Association](#)
- Ohio Water Environment Association
- Ohio Water Well Association
- The Nature Conservancy
- Water Management Association of Ohio

#### *Technical Support Group*

- [Great Lakes Rural Community Assistance Partnership](#)
- [Ohio University's Voinovich School of Leadership and Public Affairs](#)
- [Ohio River Valley Sanitation Commission](#)
- [Ohio Sea Grant](#)
- [The Ohio State University Extension](#)
- [U.S. Army Corps of Engineers](#)
- [U.S. Department of Agriculture, Natural Resources Conservation Services](#)
- [U.S. Department of Agriculture, Rural Development](#)
- U.S. Geological Survey, Ohio Water Science Center

During the development of the OWRC’s first Strategic Plan, the Council involved the public in defining issues of importance through watershed-level public meetings and telephone and mail surveys. The state was divided into 11 watersheds and the OWRC staff coordinated with local planning agencies to hold a series of meetings in each watershed in order to present the concept of the Strategic Plan and solicit feedback on issues of importance to the general public. Figure 3 shows the division of Ohio into the 11 watersheds. According to Appendix A of the 2002 Strategic Plan, “the most frequently mentioned concern was protection of stream or riparian corridors considered important as filters for nonpoint source runoff and as wildlife habitat” (Source [2]). According to the telephone poll of 839 randomly selected Ohio residents, 96 to 97 percent of respondents were concerned with the protection of Ohio’s surface and ground water resources (Source [2]). .



**Figure 3. Division of Ohio for Regional Watershed**

## 6. PLAN IMPLEMENTATION STRATEGY

For each of the seven goals established in the 2006 Strategic Plan of the OWRC, there are several objectives and corresponding action items. Lead agencies are assigned to each action item and an indicator for measurable progress has been established. For example, within the objectives for achieving the Education and Outreach goal, action items include incorporating components of established water education programs into the K-12 curriculum. The indicator or measure of this action item is the number of teachers trained in water education activities, and who are making it part of their curriculum. The agencies responsible for see this action item through are the Ohio EPA, the Office of Environmental Education, and the ODNR Division of Water. The Plan also specifies the status of resources required to complete each action item, giving a designation of (1) complete with existing; (2) develop/identify to complete; or (3) new needed. The following table illustrates several examples of how the Strategic Plan is structured, showing the goal, objective, action item, lead agency, and indicator combinations.

**Table 1. Example of the 2006 Strategic Plan (5)**

Objective(s)	Action (Program / Initiative)	Indicator / Measure	Lead and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
<i>Goal: Education and Outreach</i>				
2. Correlate water resources education with K to 12 state content standards	Components of Project Wet and “Healthy Water/Healthy People” and other water education programs incorporated into K to 12 curriculums.	Number of teachers trained in water education activities and making it part of their curriculum	Ohio EPA – OEEF ODNR – DOW	1
<i>Goal: Data and Information</i>				
3. Provide easy access to data and information	Enhance OWRC web site with links to existing water resource data sets	<ul style="list-style-type: none"> <li>- Number of links, agencies providing data, and databases</li> <li>- Web traffic including: hits, downloads, and secondary page hits</li> </ul>	ODNR*, All	3
<i>Goal: Watershed Management</i>				
2. Partner with all levels of water management players – local, state, regional, federal and international	Develop evaluation and tracking tools to measure progress towards watershed goals (surface & groundwater).	Tools developed for use on a watershed basis (e.g. Credible Data Level II Rules, Data Management System)	OEPA/DSW	3
<i>Goal: Water Resource Infrastructure</i>				
2. Strengthen local coordination and planning	Conduct forum on feasibility of regional infrastructure planning.	<ul style="list-style-type: none"> <li>- Forum conducted</li> <li>- Workgroup formed to identify models and a potential pilot project.</li> <li>- Pilot project is tested.</li> </ul>	OWDA* and Ohio EPA* PUCO, ODOD, OPWC, ODH, ODNR	1



## 7. OUTCOMES ASSESSMENT PROCESS

The progress of the 2006 Strategic Plan of the OWRC can be tracked on their website. There is public access to this database, and the user can search for the status of projects categorized by the lead agency responsible for the objective.

## 8. NEEDS, CHALLENGES AND CRITICAL PRIORITIES - INTERVIEW INSIGHTS

Ohio's current water planning efforts stem from several key issues facing the state: water supply and the impact on instream flow, groundwater use agreements, sustainable water use, invasive species, and stream restoration. The state is also a very active participant in carrying out the objectives of the 2008 Great Lakes Compact, which is primarily focused on preserving the water resources within the Great Lakes Basin.

The state has learned that local entities – nonprofits, volunteers, and local governments – will take the lead on water resources issues in their regions. The state and federal government are best suited to be in a support role to local organizations. The state agencies involved in the statewide water planning documents have learned that there must be consensus and buy-in from all responsible agencies during the development of the plan. There also must be follow-through will the individual responsible agencies to ensure that specific objectives are underway after the plan has been adopted.

Ohio is beginning to explore the issue of climate change as it relates to their planning efforts, particularly answering the question: What criteria or analyses can be put into planning efforts to address this issue? There have been recent stormwater flooding issues that raise the question of whether shifting trends are the cause of climate change or hydro modification, and the state would like to explore this further in future planning efforts.

The state is receptive to help from the federal government with all aspects of water resources management planning and implementation, but on an as needed basis. Partnerships with state, local and federal entities have been successful in Ohio, such as with the Western Lake Erie Basin Partnership.

## 9. REFERENCES

- [1] Ohio Water Resources Council website. Retrieved 4/29/2009 from: [www.dnr.state.oh.us/owrc](http://www.dnr.state.oh.us/owrc)
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- [6] Ohio Department of Natural Resources – Division of Soil and Water Conservation website. Retrieved 4/29/2009 from: <http://ohiodnr.com/soilandwater>