

## **OWRC Strategic Plan 2010 – 2014 Action Items**

### **Preamble**

The Ohio Water Resources Council was originally formed as a recommendation of the 1993 Governor's Blue Ribbon Task Force on Water. In 2001, Governor Taft signed legislation (ORC, Section 1521.19) to define the Council's roles and responsibilities. The OWRC now serves as an ongoing forum for policy and program development, collaboration and coordination among state agencies.

The OWRC has been guided by successive iterations of a Strategic Plan since its inception. Over the years the OWRC Strategic Plan served as a blueprint for management of Ohio's water resources while balancing human needs and resource protection. Effective water resource management yields many benefits at local, regional and state levels including efficiencies in water costs and uses, minimization of risks and planful approaches among resources, needs and uses. These efficiencies are crucial for both the business and government sectors. Just as local governments must provide efficient water services to their citizens, many businesses must have access to accurate, timely data and information about water resources to manage their operations.

The current Strategic Plan includes seven key themes that identify critical focal areas for Ohio's water programs. They are: 1) Education and Outreach, 2) Watershed Management, 3) Water Quality, 4) Water Quantity, 5) Data and Information, 6) Water Resource Infrastructure, and 7) Water Related Natural Hazards. The 2010-2014 Action Items identifies the specific actions the state programs will undertake. Rather than listing all of the many state programs under the seven themes, this list of Action Items focuses on the actions the OWRC as a collective body will pursue.

### **EDUCATION AND OUTREACH**

Water education and outreach is necessary to protect the sustainability of Ohio's water resources. Research demonstrates that simply providing information usually has little or no effect on people's behavior. Effective water education and outreach must include three components – attitude & action, information & communication, and skill development.

By 2025, two out of every three people in the world will live in water stressed conditions according to United Nations Environment Program estimates. Ensuring the sustainable use of Ohio's water resources requires education and outreach efforts as a part of school curriculum so that all Ohioans have the opportunity to understand the value of one of Ohio's greatest assets. Ongoing efforts are also needed to educate decision making by all water users from private citizens to large municipalities and industries. Increasing focus will be directed towards managing water resources through conservation, recycling, and reuse. Future decision making capability regarding water resources will impact Ohio's economy, environment and quality of life.

### **Objectives:**

1. Coordinate and support state-led water awareness campaigns for the general public.
2. Coordinate water resources education efforts among state agencies and with other key organizations.

### **Action Items**

- Facilitate an education and outreach work group of the OWRC to provide water resources content to programs such as WTOL (Toledo) EcoTrack, WLWT (Cincinnati) Project Earth and other news media outlets, and, support programs of member agencies and stakeholder partners (e.g., Source Water Environmental Education Teams (SWEET), *Healthy Water*, *Healthy People*, Project WET, etc.).
- Develop opportunities for education and outreach for the Ohio Balanced Growth Program in cooperation with the Ohio Lake Erie Commission. Ensure linkages with the Ohio Balanced Growth Strategy.
- Outreach to the OWRC Public Advisory Group to solicit feedback, input and engagement on Ohio water resource management issues.

### **WATERSHED MANAGEMENT**

A watershed is an area in which the natural hydrological boundaries drain to a common location. Watershed boundaries can be determined for surface and ground water and although linked they may not exhibit the same boundaries. Watersheds are often referred to as nature's boundaries, an area of land within which all living things are inextricably linked. They provide identifiable geographic areas and a logical basis for organizing policies and strategies to managing water resources.

Watershed management consists of those coordinated human activities aimed at controlling, enhancing, protecting, or restoring watershed functions for the chemical, physical and biological integrity of water resources. Water resource integrity addresses both water quality and quantity issues. Effective regulatory and voluntary programs require cooperation with local officials and private citizens as they play a key role in the health of a watershed through decisions that affect the type and location of human activity within a watershed. Therefore, cooperation among all water management stakeholders is key to the success of watershed management. Achieving environmental objectives regarding Ohio's surface and ground water requires addressing the strategic need for watershed management.

### **Objectives:**

1. Facilitate alignment of state water resource programs by watersheds.
2. Support partnerships among all levels of water management players – local, state, regional, federal and international.

### **Action Items**

- Review the update to the Ohio Nonpoint Source Management Plan highlighting Ohio's strategies for implementation of "state endorsed" watershed action plans and TMDLs.
- Identify potential pilot projects to provide strengthened state support for state endorsed plans including watershed action plans, balanced growth plans and source water protection plans by collaborating on priority projects for implementation.

- Collaborate with the Balanced Growth State Assistance Work Group on state support for watershed planning projects as identified in the *Enhancing the Ohio Balanced Growth Program, June 2010 to December 2012, State Agency Action Items List*.
- Assure appropriate state agency involvement in regional initiatives for the management and protection of the Ohio River and Lake Erie basins.

## **WATER QUALITY**

Water resource management includes the responsibility to restore, protect and maintain the quality of surface and ground waters across the State. Ohio has historically measured progress on water quality for surface water based upon the percent attainment of the standards (or benchmarks) for aquatic life in streams (fish and macroinvertebrates). Ohio is developing measures to track progress for human health, recreation and drinking water goals.

Nearly half of Ohioans rely on ground water to meet their daily water need. Ninety percent of Ohio's public water supplies use ground water as a source of drinking water. Because Ohio does not have ground water standards, assessment activities have focused on characterizing ground water quality and identifying areas of water quality impact. The effect of ground water and surface water interaction needs to be more fully incorporated into water quality analysis to assess impacts especially in locations of induced infiltration by water supply wells. Developing data collection and characterization to adequately analyze water quality conditions and the integration and leveraging of water quality programs have been identified as a strategic issue.

Numerous land management activities affect water quality and collaborative approaches are needed to maximize water quality benefits from protection activities. Ohio must have the water quality knowledge necessary to promote sound decision making in local watersheds and statewide programs. Monitoring and assessment activities must be designed and conducted to provide information about water quality status and trends. As land uses continue to change in response to local needs, more sophisticated analyses and information will be needed to ensure clean water and healthy watersheds.

### **Objectives:**

1. Develop water quality data collection and characterization capabilities to adequately analyze water quality conditions and status and trend information.
2. Utilize an integrated approach to leverage water quality programs and resources to support assessment and restoration activities.

### **Action Items**

- Utilize the outcome of the Geothermal Well Work Group to determine the need for regulations and guidance for construction, maintenance and abandonment of wells/borings associated with geothermal heating/cooling systems.
- Collaborate on strengthening strategies to address nutrient impairments including harmful and nuisance algal blooms.

- Facilitate a work group to evaluate impacts from salt storage facilities and other selected contaminant sources and identify options and recommendations for mitigation.

## **WATER QUANTITY**

A thorough understanding of the quantity of water required for various uses is critical for developing sustained use of Ohio's water resources. Sufficient quantities of fresh water are necessary for economic development, agriculture, and recreation and supporting ecosystems. Improving water quantity data and characterization, strengthening cooperation between water management programs, and preparing for future water quantity issues are critical for Ohio state agencies to serve water customers more efficiently.

The Intergovernmental Panel on Climate Change projects changing climatic conditions will lead to increases in precipitation intensity and variability resulting in increased risks of flooding and drought. Tracking data and information on droughts, floods, storm water runoff, in-stream flows, ground water recharge, water withdrawals, development-related storm drainage, and water diversions is critical for effective decision-making. More sophisticated analyses and information will be needed to ensure equitable use and sustainability of the resource and minimize potential water quantity conflicts.

### **Objectives:**

1. Support the improvement of water quantity data and characterization, including ground-surface water interactions.
2. Integrate and leverage water quantity management programs and resources.
3. Prepare for short-term and long-term water quantity issues.

### **Action Items**

- Identify the potential for statewide implementation of the Conservation and Efficiency Program and regulatory thresholds for water withdrawals currently under development as part of the Ohio provisions of the Great Lakes Compact.
- Facilitate multi-agency collaboration on strategic issues related to climate change to identify information needs and analytical capabilities necessary for potential changing hydrologic conditions.

## **DATA AND INFORMATION**

The application of knowledge and expertise to safeguard and manage Ohio's water resources requires data and other information. These are produced and compiled by various government and non-government agencies. The continued collection of long-term water resources data, effective management of the data and easy access to data and information have been identified as a strategic issue.

Water resources data and information are critical to informed decision making by citizens, public officials, regulators, consultants, business and industry representatives. The result of not addressing this strategic need is increased cost, increased uncertainty

and less than optimal decision making. For example, the loss of long-term stream gauges impacts the accuracy of flood frequency data that can cause underestimation or overestimation of flood risk. Either case can result in significant costs in terms of dollars and at times the loss of life.

**Objectives:**

1. Coordinate efforts to identify long-term data needs.
2. Manage data/information on a watershed basis.
3. Provide easy access to data and information.

**Action Items:**

- Support development of the Environmental Resources Information Network (ERIN) as a tool to strengthen water resources management.
- Facilitate coordination of a water monitoring work group of the OWRC focused on collaboration among local, state and federal monitoring projects and programs to ensure sustainable support for water resource information management needs. The work group will focus on:
  - Evaluation of technical information and methods for defining ground water/surface water interaction
  - Models applicable for Ohio to identify water regime extremes
  - Potential monitoring needs related to changing flow and rainfall patterns
- Enhance the OWRC website to facilitate information exchange across water resource programs and initiatives. Update the [www.ohio.balancedgrowth.gov](http://www.ohio.balancedgrowth.gov) website to support ongoing program efforts. Update the ground water metadata database and determine the feasibility of hosting the database on a state agency server linked to the OWRC website.

**WATER RESOURCE INFRASTRUCTURE**

Water, wastewater, stormwater, combined sewer overflows and watershed protection or management infrastructure play a critical role in the strength of the economy and public health by ensuring clean, safe water for Ohio's citizens, businesses and industries. Infrastructure includes not only physical structures such as waterlines, sewers, decentralized on-site water and wastewater systems, water and wastewater treatment plants, but it also includes non-physical measures such as best management practices and water conservation to protect and restore valuable water resources – streams, lakes, groundwater, and wetlands. Infrastructure can be owned by public, private, profit, non-profit, and investor-owned entities. Local entities can be public, private, profit, non-profit, and investor-owned.

In many instances, new and replacement construction, rehabilitation and maintenance of critical infrastructure have been postponed, resulting in infrastructure deterioration. At the same time, demand for new infrastructure in developing areas has outstripped existing capacity. The problem is compounded by increasing costs to meet new federally mandated regulations to reduce certain pollutants, inadequate planning and the trend towards the federal government providing less investment in infrastructure. Small

commercial systems and individual property owners in rural areas not served by public water and sewer also have a responsibility and need to maintain the private infrastructure for water supply and wastewater treatment on private properties. These private, decentralized systems represent a different challenge for local government for compliance, monitoring, and maintenance. Addressing these infrastructure challenges is critical to ensure clean, safe water for public health and continued economic development through sustainable water management.

**Objectives:**

1. Identify and adopt specific approaches state agencies and other service providers can adopt to promote and build local technical, financial, and managerial capability.
2. Work with local Balanced Growth projects to integrate infrastructure planning as a component of local land use planning and decision making

**Action Items:**

- Convene a work group of state agency participants and other key stakeholders to develop strategies to:
  - Identify mechanisms to meet local financing needs.
  - Educate local public officials as to the full cost of clean, safe water.
  - Optimize available public funds and achieve multiple programmatic needs.

**WATER RELATED NATURAL HAZARDS**

The State of Ohio has experienced thousands of hazard events (including 36 Presidential disaster declarations, 34 were water related), resulting in millions of dollars in losses and casualties. The leading water related hazard in Ohio is flooding, causing millions of dollars in damage and lives lost every year. These costs are borne by businesses and government alike. Other water related hazards include droughts, winter storms, landslides, coastal erosion and dam failures. Hazards may also be related to other water related sensitive areas such as contamination of water at source water protections areas.

The Ohio Emergency Management Agency (OEMA) is leading mitigation efforts against the effects of future disasters by working with approximately two dozen state agencies, non-governmental groups, and several other federal agencies including the Federal Emergency Management Agency (FEMA) to develop the State of Ohio Mitigation Plan. In addition to the State of Ohio Mitigation Plan, all jurisdictions in Ohio are required to develop hazard mitigation plans if they wish to remain eligible for Federal mitigation funds. To effectively implement hazard mitigation, local stakeholders must help define sustainable development and accept a change of attitude, cultural shift and a cross-disciplined approach to dealing with water related hazards.

Policies and actions that will reduce or eliminate the impact of water related hazards need to be integrated with other policies for achieving economic, social and environmental goals through planning. Basic knowledge on water related risks and ways to sustain the

impact of disaster events involving water must be shared. There has to be a collaborative commitment between all levels of government, elected officials and the private sector to change the management of hazard areas. Programs and actions that subsidize the risk for uses in the hazard area must be evaluated.

**Objectives:**

1. Assist state agencies and local governments to incorporate water related hazards in all plans.
2. Provide leadership for cooperative management of Ohio's water resources to reduce water related hazard risk and protect water resources.
3. Promote sustainable development and land use across Ohio through providing water related hazard information, technical assistance and collaborative partnerships.

**Action Items:**

- Collaborate with the Ohio Emergency Management Agency on preparedness programs to address the impacts of water related natural hazards. Determine the feasibility of adding OEMA as a member of the OWRC.
- Monitor emerging issues related to other hazards to water and wastewater infrastructure.