



## 2015-2019 Strategic Action Plan



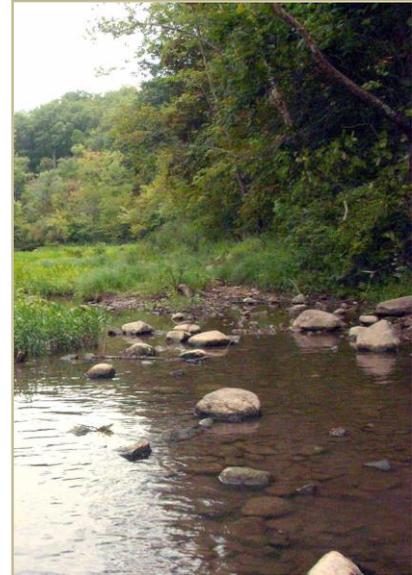
### Member Agencies:

- Ohio Environmental Protection Agency
- Ohio Department of Natural Resources
- Ohio Department of Health
- Ohio Water Development Authority
- Ohio Public Works Commission
- Ohio Department of Transportation
- Public Utilities Commission of Ohio
- Ohio Department of Agriculture
- Ohio Development Services Agency
- Office of the Governor

## 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, legislation was signed (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 planned 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.

- Education and Outreach
- Watershed Management
- Water Quality
- Water Quantity
- Data and Information
- Water Resource Infrastructure
- Water Related Natural Hazard

The 2015-2019 Action Items document identifies the specific actions the state programs will undertake. Information for this update was gathered in meetings with the public advisory group and state agency coordinating group, and incorporates activities to address recent hazards like climate change and harmful algal blooms. 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 and action, information and communication, and skill development.

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

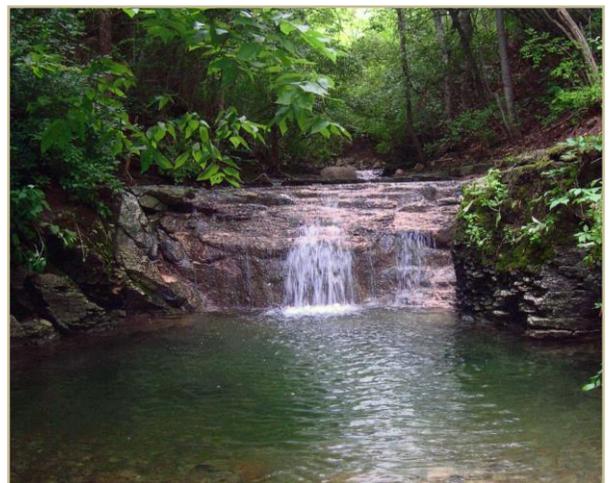


- Facilitate an education and outreach work group of the OWRC to provide water resources content to news media outlets, and support programs of member agencies and stakeholder partners.
- Support the Ohio Water Education Program (OWEP) and its sponsorship of the national Project WET.
- Develop opportunities for general education and outreach on planning and land use practices for water resources protection through 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

- Develop necessary programs, policies, and initiatives to achieve full Federal approval of the Ohio Coastal Nonpoint Source Pollution Control Program.
- Collaborate with the Balanced Growth State Assistance Work Group on state support for watershed planning projects and improvements to the Ohio Balanced Growth Program as identified in the Ohio Balanced Growth Strategy.
- Maintain relevance and integrity of “state endorsed” watershed action plans through systematic re-review and dissemination of endorsement continuation conditions, including an annual implementation reporting requirement.
- Assure appropriate state agency involvement in regional initiatives for the management and protection of the Ohio River and Lake Erie basins, e.g. Harmful Algae Bloom committees, Ohio River Basin Alliance.
- Encourage state agency collaboration in the restoration and protection of watershed water quality targets that have been identified by the Total Maximum Daily Load (TMDL) or an equivalent process.

## 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 has also developed 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.

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

- Evaluate and track implementation of the Ohio Nutrient Reduction Strategy.
- Provide updates, as necessary, to the state's nutrient strategy.

## 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, 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.

Recent climate change studies project changing 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

- Support efforts to provide science for decision makers on water withdrawal impacts pursuant to the Great Lakes Compact and natural gas extraction.
- Facilitate multi-agency collaboration on hydrologic conditions issues related to climate change.
- Evaluate the surface water gage network for its ability to support decisions related to natural gas extraction and water withdrawals.

## 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. The long-term data sets are especially critical to evaluate trends in stream flow and impacts of climate change.

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. Develop protocols to provide access to data and information.
2. Coordinate efforts to identify and support long-term data needs.
3. Manage data/information so that it is available on a watershed basis.

### Action Items

- Facilitate coordination of work groups 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.
- Facilitate a discussion of water resources issues, data needs and gaps, and support of data networks.
- Investigate means to centralize and serve geospatial data for emergency response, preparedness, and mitigation
- Enhance the OWRC website to facilitate information exchange across water resource programs and initiatives.

## 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 regulations to reduce certain pollutants, inadequate planning and the trend towards federal agencies 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. Coordinate infrastructure funding agencies to develop:
  - a. a strategy to incentivize the development of infrastructure plans/asset management on a community and regional basis and
  - b. a strategy to encourage owners of publicly owned infrastructure to partner and to share resources with other owners.

## Action Items

- Convene a work group of agency and other stakeholders to:
  - a. Conduct an inventory of the capacities of water and wastewater systems to determine which systems have excess capacity;
  - b. Identify policy issues that need to be addressed and make recommendations;
  - c. Develop a process for optimizing available public funds to achieve multiple programmatic needs;
  - d. Identify mechanisms to meet local financing needs;
  - e. Develop educational materials for local public officials that describe the full cost of providing infrastructure services; and
  - f. Develop educational materials for local public officials on the benefits of shared resources and partnerships.
- Based on the results of the action item above, develop specific approaches that state agencies and service providers can adopt to promote and build local technical, financial and managerial capability.
- Consider Legislative recommendations.

## Water Related Natural Hazards

The State of Ohio has experienced thousands of hazard events, 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 state agencies, non-governmental groups, and federal agencies including the Federal Emergency Management Agency (FEMA) to develop the State of Ohio Hazard Mitigation Plan. In addition to the State of Ohio Hazard Mitigation Plan, all jurisdictions in Ohio are required to develop local 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 must 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

- Explore opportunities to enhance the connection between the Ohio Balanced Growth Program and flood mitigation planning efforts.
- Incorporate climate change into the State of Ohio Hazard Mitigation Plan.
- Develop capacity to access climate projection data and information to assist with state and local planning including mitigation, adaptation and Balanced Growth plans.