

Ohio Water Resources Council Strategic Plan

EDUCATION AND OUTREACH

Water education and outreach is necessary to protect the sustainability of Ohio’s water resources. Effective water education and outreach must include three components – attitude & action, information & communication, and skill development. Research demonstrates that simply providing information usually has little or no effect on people’s behavior. The implementation of an awareness campaign, correlation of water resources education with K-12 state content standards, and coordination of water resources education efforts have been identified as a strategic issue.

Objectives:

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-12 state content standards.
 - Identify essential water concepts & skills for students

Wise decision making by all water users from private citizens to large municipalities and industries is necessary as the era in which expanding water supplies is ending and managing water resources through conservation, recycling, and reuse will be necessary. 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 a focus on the strategic need for both water quantity and quality education and outreach. Future decision making capability regarding water resources will impact Ohio’s economy, environment and quality of life.

- 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

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
1	Develop and launch Storm Center - weather/web cast water resource protection programs, in one market	<ul style="list-style-type: none"> - Percentage of Central Ohioans have seen weather cast water resource protection message or visited the website - Number of sponsors supporting water awareness campaigns - Increase in survey respondents knowledge and actions related to water resources 	Ohio EPA - DDAGW	2
1	Develop OWRC information in brochures, fact sheets, web sites, pod-casts, and displays for targeted audiences, including general public, special interests and elected officials.		Ohio EPA - DDAGW	1
2	Components of Project Wet and “Healthy Water/Healthy People” and other water education programs incorporated into K-12 curriculum.	Number of teachers trained in water education activities and making it part of their curriculum	Ohio EPA – OEEF ODNR – DOW	1
3	Meet with the other organizations to develop mechanisms for improved communication/coordination and overall collaboration	Increase in joint participation in environmental/water education programs	Ohio EPA - DDAGW	1

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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 cost significantly in terms of dollars and at times the loss of life.

Objectives:

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

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
3	Enhance OWRC web site with links to existing water resource data sets	<ul style="list-style-type: none"> - Number of links, agencies providing data, and databases - Web traffic including: hits, downloads, and secondary page hits 	ODNR*, All	3
3	Move metadata to OWRC web site	Metadata moved to OWRC site	ODNR*, USGS	1
3	In conjunction with implementation of "credible data law" develop standards for water data by establishing and chartering a standards workgroup	OWRC adoption of standard(s) for web site	OEPA*, All	2
1, 2, 3	Establish linkage between OGRIP and OWRC	Regular OGRIP subgroup communication with OWRC-SACG	OEPA*, All agencies with OGRIP subgroup members	2
2	Support the completion the high resolution National Hydrography Dataset for all watersheds within and flowing into Ohio.	High resolution NHD is complete for Ohio	OEPA*, All	2
1, 2	Complete MCD Pilot Project to better understand and optimize water data collection systems in the Great Miami River Watershed	<ul style="list-style-type: none"> - GIS coverage of all major water monitoring networks available - Willingness of data collectors to implement strategy - Willingness of data collectors to explore the funding ideas further 	ODNR*, MCD, OEPA, USGS	1

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1	Establish Water Data Monitoring Council	Council convenes and establishes regular council coordination meetings and activities	ODNR, All	1
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WATERSHED MANAGEMENT

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 resources integrity addresses both water quality and quantity issues. 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. The alignment of state water resource programs

by watershed, along with partnering between all levels of water management players have been identified as a strategic issue.

Effective regulatory and voluntary programs require cooperation with local officials and private citizens because 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 players 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. 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

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
1.	Develop indicators and evaluate cost-effectiveness of watershed coordinator grants program.	- Indicators Developed - Completed Report & Recommendations	ODNR/DSWC* OEPA/DSW OSU	1
2.	Facilitate discussions to develop mechanisms to fund watershed planning and implementation projects.	Additional funding concepts and strategies to support watershed programs.	ODNR/DSWC* OEPA/DSW OSU	1
1.	Conduct analysis of obstacles to alignment of state policies and programs (including regulatory) with state endorsed watershed action plans.	Completed report and recommendations on ways to improve alignment with endorsed watershed plans.	ODNR/DSWC OEPA* OSU	2
1, 2	Develop approaches to providing coordinated local, state, & regional watershed technical support services to watershed groups/programs.	Coordinated approach developed for technical support of local watershed projects/programs.	ODNR/DSWC OEPA OSU/ILGARD	2
1, 2	Enhance the water resources directory to include: 1. structured by watershed 2. on-line and searchable 3. relate to “Appendix 8” 4. web directory of watershed plans	Directory complete and on-line	ODNR	1
2	Assist development of a state association of watershed groups.	Active state association of watershed groups	OSU-EXTENSION	2

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2	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
1, 2	Support water quality assessment reporting at 14-digit HUC scale.	Water quality assessment reporting at 14-digit HUC scale.	OEPA/DSW	1
1, 2	Equip watershed groups with the skills to measure progress towards water quality goals.	<ul style="list-style-type: none">- "Level II Credible Data" training developed and offered.- Social indicators developed	OEPA/DSW	3
2	Agencies support progress toward creation of a water data portal by continuing to provide updates to the water resource metadata web site to ensure the quality and usefulness of content.	Water resource metadata web site maintained with current information	ODNR-DOW	2

WATER QUALITY

Water resource management includes the responsibility to restore, protect and maintain the quality of surface and ground waters across the State. Ohio measures 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 a goal of 80% attainment of these aquatic life uses by 2010. Currently, 64% of large rivers (large rivers are defined as having drainage areas >500 square miles) meet aquatic uses while only 48% of watersheds fully meet these uses. Watersheds are smaller than large river basins and have drainage areas of approximately 130 square miles. 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.

Concerted efforts are needed to focus our restoration and protection activities to meet and hopefully exceed the 80% goal for surface water and protect the functions of wetlands and headwater streams. Ground water restoration and protection efforts need to focus on the sensitive aquifers where the active ground water-surface water interaction and land use influence water quality. Numerous land management activities affect water quality and collaborative approaches are needed to maximize water quality benefits from protection activities. Ohio must expand knowledge about water quality and capture water quality data electronically to ensure data availability and to help 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 growth and development continue, 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.
 - 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 impacts
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

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
1	Refine the assessment of the status and condition of significant Wadeable streams, large rivers, and lakes	Inclusion in the 2006 and 2008 Integrated Report	Ohio EPA - DSW	1

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1	Finalize and implement methodology for beneficial use assessment of 1. public drinking water and 2. recreation	Inclusion in the 2006 (partial) and 2008 Integrated Report	Ohio EPA - DSW	1
1	Finalize and implement rule development for wetlands biocriteria	Implementation of 401 mitigation rules by 2007	Ohio EPA - DSW	1
1	Implement methodology to assess primary headwaters	Primary headwater assessment tools included with mitigation rules by 2007	Ohio EPA - DSW	2
1	Evaluate ground water & aquifer / surface water interaction assessment techniques	Recommend techniques to be incorporated into the TMDL process and related programs	Ohio EPA – DDAGW ODNR - DOW	1
1	Finalize rules for nutrient criteria for lakes, streams and rivers to establish standards for allowable discharge	Rules proposed in 2008	Ohio EPA - DSW	1
1	Document areas with verified ground water contamination	Map areas and input attribute and geospatial data in a Ground Water Quality Impacts database; Incorporate summary results into the 2008 Integrated Water Quality Report	Ohio EPA – DDAGW* ODNR ODH	1
1	Develop a groundwater strategy to assess ground water impacts and defines a common approach to define impairment; Strategy will guide: <ul style="list-style-type: none"> - corrective actions - appropriate public health interventions 	A ground water beneficial use assessment methodology developed by April 2008. The methodology will establish a consistent process to identify/map sensitive hydrogeologic settings and develop water quality criteria to map impaired ground waters.	Ohio EPA – DDAGW* With the State Agency Coordinating Committee on Ground Water	1
1	Develop credible data Level II monitoring training for watershed stakeholders	<ul style="list-style-type: none"> - Level 2 Qualified Data Collector in each watershed - Number of Level 2 QDCs in each watershed 	Ohio EPA - DSW	2
2	Improved geographic targeting of farmland preservation programs		ODA	
2	Ensure linkage between state decision-making and watershed goals (including consideration of potential impacts on Lake Erie)	<ul style="list-style-type: none"> - Utilize lessons gleaned from the Balanced Growth Initiative, water quality trading projects and other initiatives - Improve Lake Erie Quality Index Score 	All	1
2	Develop list of potential restoration/protection sites.	List developed and used for directing funding resources	Ohio EPA - DSW	1

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, not only for economic development, agriculture, and recreation, but also for supporting ecosystems. Many programs in government agencies and other organizations use water quantity data and information. Improving water quantity data and characterization, strengthening cooperation between water management programs, and preparing now for future water quantity issues have been identified as a strategic issue.

Many types of water use place quantity demands on Ohio's available water supplies. These uses include natural uses such as stream flows needed to sustain fish and wildlife or infiltration of rainfall needed to recharge aquifers. Water quantity is also linked to water quality with regards to issues such as pollutant concentration levels, wastewater discharge requirements, and

anthropogenic impacts associated with rainfall/recharge events. Environmental and climatic conditions play a major role in the demands for and the availability of water supplies. Effective decision-making relies on water quantity data and information from both naturally occurring events and human activities. 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. Managing Ohio's water resources for sustained use cannot be successful without the knowledge and understanding of the hydrologic cycle, the myriad of demands on the resource and fluctuation in ground and surface water supplies. As growth and development continue, more water quantity conflicts will occur and more sophisticated analyses and information will be needed to ensure equitable use and sustainability of the resource.

Objectives:

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

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources
1	Develop methods to characterize, base flows, surface water/ground water interaction, water budgets and land use impacts for small watersheds through completion of pilot watershed studies (i.e. Maumee sub-watershed, Upper Mad River, Darby Creek, Grand R.)	Tools developed for state-wide application	ODNR Water* - All	1. complete with existing 2. develop/identify to complete 3. new needed 2
2	Develop list of areas/watersheds where tools from Objective 1 may be applied based on program and resource needs.	List of areas/watersheds	ODNR*, OEPA, USGS	1) Anticipate completion with existing resources

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3	Enact Great Lakes Charter Annex compact legislation in Ohio.	Legislation enacted	ODNR Water* - All	1) Anticipate completion with existing resources
3	Develop Ohio water conservation guidance as template for Great Lakes basin level "efficiency objectives" required by the Great Lakes Charter Annex.	Ohio conservation guidance developed	ODNR Water* - All	2) Need to develop/identify resources to complete
2	*Enhance OWRC web site with links to existing water resource data sets	<ul style="list-style-type: none"> - Number of links, agencies providing data, and databases - Web traffic including: hits, downloads, and secondary page hits 	ODNR* - All Assistance from Wrkgrp for Water Resources Monitoring (WWRM)	2) Need to develop/identify resources to complete
2	*Move metadata to OWRC web site	Metadata on OWRC site	ODNR, USGS	1) Anticipate completion with existing resources
2	*Develop a better understanding and optimize water data collection systems in the Great Miami River Watershed	<ul style="list-style-type: none"> - Complete MCD Pilot Project - GIS coverage of all major water monitoring networks available - Willingness of data collectors to implement strategy - Willingness of data collectors to explore the funding ideas further 	ODNR Water*, Miami Conservancy District, WWRM	1) Anticipate completion with existing resources

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WATER RELATED NATURAL HAZARDS

The State of Ohio has experienced thousands of hazard events (including 36 Presidential disaster declarations), resulting in millions of dollars in losses and casualties. Thirty-three of those disaster declarations were water related. Since January 1, 1964, federally declared disasters in Ohio have resulted in federal and state disaster recovery costs of nearly \$473 million – damages were much higher. In fact, one single event, the 1913 flood, when adjusted for 2003 dollars resulted in over \$2 billion in damages.

The leading water related hazard in Ohio is flooding, which occurs every year causing millions of dollars in damage and lives lost. 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. Policy and programs have traditionally focused on the preparedness, response and hazard identification. To address the impact of water related hazards and achieve development that is sustainable, we must cooperate with nature proactively. There are opportunities for planning and management of land use that will result in better and more sustainable water resources and less disaster damage in Ohio. The Ohio Department of Natural Resources (ODNR) is a leader in the development of land and water management strategies that will help reduce and eliminate water related hazards. The Ohio Emergency Management Agency (OEMA) is the central point of coordination within the state for response and recovery to disasters. The OEMA is leading mitigation efforts against the effects of future disasters by

Objectives:

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

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 (December 20, 2004). The Plan currently includes five hazards, with nine additional hazards (some of which are not water related) to be progressively added by the next three-year update. In addition to the State of Ohio Mitigation Plan, as a result of the Federal Disaster Mitigation Act of 2000, all jurisdictions in Ohio are required to develop hazard mitigation plans if they wish to remain eligible for Federal mitigation funds. Planning is underway in 87 of the 88 counties and five municipalities. Seventeen county plans have been certified. 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.

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.

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- Strengthened ongoing coordination among the state agencies and OEMA regarding preparedness, response,

recovery, mitigation and post-evaluation efforts.

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
1	Provide technical assistance to local communities for the update/revision of 88 county Hazard Mitigation Plans.	88 Hazard Mitigation Plans updated	Ohio EMA, ODNR, Division of Water support	1
1	Provide Web access to all local Hazard Mitigation Plans.	Web access to all Hazard Mitigation Plans	Ohio EMA	1
3	Completion of high-resolution (2' contours) topographic mapping of Ohio.	Ohio mapped in high-resolution	DAS support is all counties and maybe state agencies....	3
1	Map dam failure inundation areas for all ODNR managed dams.	Inundation maps available for all ODNR managed dams.	ODNR, Division of Water	3
2	Prepare draft executive order to remove state incentives for development in water related natural hazard critical areas, e.g. floodplains and wetlands.	Executive order drafted	ODNR, Division of Water	1
3	Education outreach for legislators and community leaders on issue and actual impact of disaster in losses/cost/impacts as is and future condition.	Issue paper and outreach activities.	Ohio EMA and DNR	2
1	Coordinate watershed action planning and hazard mitigation planning guidance and processes	<ul style="list-style-type: none"> - Guidance and processes coordinated - Link with Balanced Growth Initiative 	Ohio EMA, OEPA, ODNR (DOW and SWC)	2
1	Update drought plans by [date].	Drought plans updated	Ohio EMA; ODNR, Division of Water and OEPA support	1
3	Develop drought event fact-sheet.	Drought fact-sheet developed	ODNR, Division of Water	1
2	Pilot development of automated floodplain mapping tool.	Automated floodplain mapping tool available	USGS Ohio, ODNR, Division of Water	2

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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.

The public often overlooks the importance of infrastructure until an event like a waterline failure or untreated sewage enters a waterway. Despite repeated episodes which attract public attention, many local officials remain reluctant to significantly increase user charges needed for infrastructure maintenance, rehabilitation and improvements. This reluctance persists despite other evidence that the public is willing to pay for clean water, such as the increased purchases of bottled water (which is more expensive than tap water). Consequently, the prices and expenditures on infrastructure hardly reflect the true cost of providing clean, safe water. Building technical,

financial and managerial capability at the local level, strengthening planning and management coordination among all levels of government, and defining needs, sources of funding, and shortfalls of financing for infrastructure have been identified as a strategic issue.

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. 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.

Objs.	Action (Program / Initiative)	Indicator / Measure	Lead* and Supporting Agencies	Resources 1. complete with existing 2. develop/identify to complete 3. new needed
1	Coordinate training on the new HSTS rules for private infrastructure interests (service providers & professional associations).	Training provided	ODH* Ohio EPA	

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1	<p>Coordinate efforts to target entities for assistance and support for improving management capabilities. Promote self-assessment by Public Water Supplies of their technical, managerial and financial capabilities and investigate rules for existing systems to require assessment.</p>	<ul style="list-style-type: none"> - Workshop of associations and organizations conducted: approach for coordinating and targeting resources developed. - Measures for improved management capabilities developed. - Five entities successfully use the approach and their management capabilities are improved. 	<p>OWDA* and Ohio EPA* OPWC, ODH, ODNR</p>	<p>1</p>
2	<p>Conduct forum on feasibility of regional infrastructure planning.</p>	<ul style="list-style-type: none"> - Forum conducted - Workgroup formed to identify models and a potential pilot project. - Pilot project is tested. 	<p>OWDA* and Ohio EPA* PUCO, ODOD, OPWC, ODH, ODNR</p>	<p>1</p>
3	<p>Form an interagency committee to identify the “universe” of water resource infrastructure needs and sources, and to estimate the shortfalls</p>	<ul style="list-style-type: none"> - Committee Formed - Needs identified - Sources identified - Estimate established 	<p>OWDA* and Ohio EPA* PUCO, ODH, ODNR</p>	<p>1</p>