

Chapter 10

Developing Sustainable Watershed Protection Programs

10.1 Introduction

The Nonpoint Source Program Upgrade was made possible by the exhaustive participation of over 250 individuals serving on ten work groups. Many of the recommendations of the groups have been incorporated into other chapters. However, the recommendations from three groups—local watershed sustainability, funding, and education & information—were not included since they were not specific to individual sources such as urban, agriculture, or marinas. Thus, Ohio has elected to create an additional chapter on Sustainable Watershed Protection Programs to ensure the products of the three work groups become part of Ohio's CNPCP.

10.2 Striving for Sustainability

The increasing complexity of watershed projects, combined with the perennial difficulties of maintaining volunteer organizations, strain the existence of watershed groups and their ability to protect and restore watersheds. Sustainable watershed partnerships that include citizens, private industry and businesses, and government agencies that are not dependent upon government grants provide the long-term interest and focus needed for effective, local watershed management. The known and measurable water resource effects and long-term costs of rapid development and sprawl require the State to ensure protection of the state's water resources. Present and future tax dollars will best be saved by maintaining the natural flood control and drinking water quality protection that healthy watersheds provide.

Sustainable watershed partnerships also help the State meet its legal responsibilities regarding clean water.

Watershed programs that have sustainability typically exhibit six characteristics:

1. A sustainable partnership has a “sense of place” and feeling of “ownership” of the geography of the watershed and its value, a shared vision.

Experience shows that the more effective watershed projects grow from the interest and concern of residents who seek out local, state, and federal agencies and other organizations for assistance. The ideas of *sense of place* or feeling of *ownership* or *community* express the historical, economic, health, and ecological value of an area to its residents and their quality of life.

2. A sustainable partnership exists due to multiple stakeholder support and specifically includes diverse interests.

Watersheds usually have many and varied problems that require different solutions by different people. Sustainable groups recognize the value of specifically including members or partners representing the range of interests involved in a watershed's problems. Because the focus is the watershed and a shared vision, the diverse interests may set aside other differences to work toward the common goals within the Lake Erie

Basin. Conversely, sustainable groups acknowledge the difficulty, or even futility, of attempting to remedy some problems without representation from the source or sources of those problems.

3. A sustainable partnership establishes and nurtures its organizational development.

The organizational structure and level of formality in a sustainable partnership may vary over time, reflecting flexibility necessary as circumstances change. Awareness of organizational structure by a partnership may need to be developed through leadership and facilitation training. Establishment and maintenance of credibility and trust, including internal financial controls and accountability, is critical to long-term viability.

4. A sustainable partnership develops and maintains a watershed plan that defines what is being protected or restored, by what means, and with what resources.

Ohio EPA, in coordination with other state and federal agencies, published "A Guide to Developing Watershed Action Plans in Ohio" in 1997. The guide describes and outlines a planning process that generally should result in a useful watershed plan. An effective plan considers water quality in the context of the land uses of a watershed based on knowledge of natural resource problems, defines what is being protected or restored, and has a long-term view and incremental goals.

5. A sustainable partnership educates its members and the community and provides access to information and networking.

Ongoing education of members, the greater community, and policy makers is a hallmark of sustainable partnerships because "everyone lives in a watershed." Their viability depends in part on instilling and maintaining watershed awareness in others; over the long-term, new members may be recruited for new efforts as the watershed plan is put into action. Education and awareness building are typically informal, through newsletters, field days, and "get your feet wet" events.

6. A sustainable partnership implements and evaluates watershed-based activities.

The watershed is central to a watershed partnership, whose ability to raise funds and maintain credibility depends on doing things to benefit the watershed. Watershed protection or restoration projects, education, and the evaluation of these activities are used collectively to implement the watershed plan.

10.3 Strategies and Recommendations

Changes in the way watershed projects are approached create new challenges for existing governmental programs. For example:

1. Watershed protection, management, and decision-making are evolving from government directed to citizen directed.
2. Government is moving from directing watershed activity to aiding locally directed activity. Citizens are moving from disinterested or passive participation to directly determining watershed activity.

As the roles change, the limitations of existing programs become more evident and each sector is challenged to evolve and experiment with new ways of interacting.

Although the federal government still invests heavily in point source pollution control, similar funding for nonpoint source pollution control is not available. Federal funding is devoted to nonpoint source pollution controls, but has not kept pace with increasing nonpoint source needs. Implementation funding is usually for specific projects for a short time period, while funding for planning and organizational development is almost non-existent. Watershed groups typically work without a watershed plan and focus on piecemeal project activity, living from one grant to the next.

The following recommendations were derived from coastal and statewide nonpoint source work groups. Although several recommendations are being implemented or are under consideration, taken as a whole they do not, at this time, represent policy adopted by the State of Ohio. Further evaluation and consensus building will be undertaken to allow Ohio to develop a comprehensive implementation agenda.

Objective 1

Help watershed groups increase awareness of water quality issues.

Objective 1 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Focus watershed outreach funding on activities that increase appreciation and awareness of watershed	State directed and controlled watershed outreach money used exclusively for this purpose	Funding	Ohio EPA OSUE ODNR	Years 2-3
Help groups determine costs of watershed action for short and long-term needs, including fund-raising, reliance on multiple funding sources, and local financial investment	Manual produced for use by local watershed groups	Funding	OSUE ODNR	Years 2-3
Increase mini-grant program with minimal administrative requirements for watershed awareness activities	Increase number of groups that receive funding	Combine SWCD money with Section 309 and 319 money	ODNR Ohio EPA	Years 2-3
Develop statewide watershed protection media event	Annual media event	Media program	OSUE ODNR Ohio EPA NRCS	Years 2-3
Establish a clearinghouse for communities to access resources & funding for multi-objective water resource programs.	Clearinghouse in place	Funding	ODNR Ohio EPA OSUE	Years 2-3

Objective 2

Support the development and maintenance of sustainable watershed groups by providing funding for organizational development, planning, and implementation.

Objective 2 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Dedicate portion of annual nonpoint source funding to support local watershed coordinators/specialist.	Annually funded	GRF 319 grants	Ohio EPA ODNR	Year 1
Provide planning money to local watershed partnerships	At least 15 watershed plans completed	319 grants	Ohio EPA	Years 1-5
Dedicate \$2 million of General Revenue Funds annually to match dollar for dollar, local and federal funds acquired by local watershed partnerships for implementation	Line item in biannual budget	Funding	ODNR	Years 2-3
Help create and finance regional watershed councils	Councils created	Staff	ODNR OSUE	Years 2-3

10.4 Financing Sustainable Watershed Programs

Since the creation of programs to focus on improving water quality over 25 years ago, more than \$6 billion of public funds have been spent in Ohio to control point sources of pollution. In 1991 and 1992 alone, expenditures for municipal wastewater treatment totaled more than \$825 million. Positive environmental results can be attributed to these expenditures—the miles of streams fully attaining their aquatic life use standards increased from 34.4 percent in 1988 to 57.8 percent in 1998. Point sources now account for less than 5 percent of stream impairment.

However, since nonpoint pollution now causes the majority of impairments to Ohio's water resources, it is clear that future improvements in Ohio's water quality will not be achieved unless nonpoint sources are controlled and reduced. It is time for a comprehensive and complete approach to funding nonpoint pollution controls.

Some of the earliest nonpoint pollution projects in Ohio began in the 1970s as agricultural demonstration projects designed to improve Lake Erie by reducing erosion. Projects offered federal financial assistance for practices such as no-till crop planting, grassed waterways, and other agricultural practices.

Funding specifically aimed at all nonpoint sources of pollution came with the 1987 amendments to the Clean Water Act under Section 319. Ohio's NPSMP (1989) directed that at least 75 percent of these funds be used to treat problems at the watershed and aquifer level. Currently, Ohio's funding from Section 319 is slightly more than \$6 million annually.

Beyond federal funding, the State of Ohio has provided funding for water quality monitoring and assessment, and regional Ohio EPA staff dealing with nonpoint issues. Ohio EPA staff who regulate stormwater, livestock waste, and stream modification (Section 401) are supported in part by fees charged to the regulated industry. Ohio also supports a significant proportion of 88 county SWCD offices' annual operating budgets, and provides over \$2 million annually for watershed management practices and technical assistance through the ODNR Division of Soil and Water Conservation.

At the local level, county and municipal governments are bearing an ever-increasing burden for pollution control. Local agencies oversee home sewage disposal systems, operate solid waste facilities and sewage treatment plants, and are responsible for stormwater infrastructure and building site inspection. Although no estimates are available for these functions, conservatively their cost would run into the hundreds of millions of dollars annually.

Issues

The major funding problems facing nonpoint pollution control in Ohio include:

- Sources of funding are many, but often uncoordinated.
- Funding levels are inadequate to result in measurable water quality improvements.
- Programs are largely voluntary, making it difficult to target the worst problems within a watershed.
- There is insufficient technical staff to adequately implement programs or enforce regulations.
- Many funding programs influence land use, but do not routinely consider or mitigate water pollution impacts (development, water and sewer lines, transportation development).
- Funding primarily focuses on short-term practices and projects.

Ohio must begin to play a larger role in watershed protection. Federal funding for watershed protection efforts has declined (e.g., USDA programs), and it is increasingly difficult for local government to provide funding for discretionary programs. More important, there is a fundamental responsibility on the part of the state to protect its natural resource base. The state's responsibilities (i.e., the doctrine of public trust) are embodied in law and supported by several court cases. It is more than a legal responsibility, it is an economic and social imperative.

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Objective 1

Increase the type and number of nonpoint funding options.

Objective 1 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Consider establishing surcharge on pesticide & fertilizer sales to support watershed programs.	Completion of a feasibility study	Political support Legislative sponsor	Watershed groups ODA ODNR	Years 2-3
Provide lower interest rates to encourage implementation of stronger pollution prevention programs	Reduced WPCLF rates for specific NPS projects	Watershed group support Ohio EPA support	Ohio EPA, DEFA	Years 1-2
Develop grants for smaller projects with minimal application & reporting requirements.	New guidelines	None	ODNR OEPA USDA	Years 2-5
Encourage funding to enable watershed groups to educate local citizens, develop ownership of watershed issues, & mentor local leaders.	Increased funding for education/outreach	Funding increases or reallocations	OEPA ODNR	Years 1-5
Identify & support funding for maintenance of stormwater erosion and sediment control practices.	Changes in departmental grant and loan conditions	Policy changes Greater use of Section 319 federal consistency requirements	Ohio EPA ODNR	Years 2-4
Implement Ohio Environment Preservation Fund for establishing greenways and protecting stream corridors	Passage of Environmental Bond initiative	Voter approval	Governor's Office	Years 1-2
Initiate "Cool It Ohio" program to encourage electric utilities to invest in local carbon sequestration through riparian area reforestation and preservation of corridors	Increased Ohio utilities investment in restoring/ reforestation in Ohio watersheds	USDA or other funds directed at carbon sequestration issues	ODNR NRCS	Years 2-4

Objective 2

Speed up development of TMDLs for impaired water bodies on state's 303(d) list.

Objective 2 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Develop watershed trading pilot programs to implement TMDL plans	Trading protocols in TMDLs	Completion of TMDLs by Ohio EPA	Ohio EPA	Years 2-10
Incorporate TMDL external advisory group recommendations with OEPA TMDL Team Report & federal rules into final Ohio TMDL strategy (pending final federal rules).	Completion of activity	Staff	OEPA	Year 1
Develop protocols for collection & use of stakeholder-collected data & information for TMDLs.	Completion of activity including training & development of outreach materials	Staff	OEPA	Year 3
Develop & implement three-tiered validation process to track progress towards attainment of water quality standards.	Completion of activity	Staff	OEPA	Year 3
Provide funds to local watershed groups to prepare plans for watersheds listed on state's 303(d) list (impaired watersheds)	Completed watershed plans	Section 319 and other grants	Ohio EPA ODNR	Years 1-3

Objective 3

Improve statewide nonpoint source program management.

Objective 3 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Streamline Section 319 program application, funding & reporting requirements, & processes to reduce administration & delays of local grant awards.	Changes in Section 319 application and reporting requirements	Staff time to prepare revised forms and requirements	Ohio EPA	Years 1-2

Objective 4

Expand technical assistance and financial incentives programs to reduce nonpoint sources of pollution.

Objective 4 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Implement Ohio Watershed Action Agenda	Funded portions of the WAA	Governor and Legislative support	ODNR OSUE	Years 1-2
Alter priorities of State Revolving Loan Fund to provide greater incentives for nonpoint source control plans and implementation	Increased percentage of WPCLF dollars for nonpoint BMPs	Changes in policy, prompted by watershed groups, et al.	Ohio EPA	Years 1-3
Enact legislation creating conservation tax credit for donation of lands that protect water resources (North Carolina model)	Law change	Political support from watershed, farm, other groups	ODNR League of Conservation Voters	Years 2-4

10.5 Education, Information, Marketing, and Awareness

Because nonpoint source pollution is a result of human actions on the landscape (e.g., construction projects, food and fiber production, septic systems), the actions of every resident contribute to polluted runoff into the rivers, streams, lakes and groundwater of Ohio. Evidence of the need for public action to improve water quality is contained in the public comments compiled during a 1998 series of public meetings in which concerns, comments and suggestions were solicited as part of the process to revise the Ohio NPSMP. Private citizens, agency and organization representatives, and locally elected and appointed government officials indicated increased public awareness and education are basic needs if further progress in improving aquatic resource quality is to occur.

Issues

Many existing NPS programs and projects include educational programs as part of the overall project or program. This term is loosely applied to everything from informational flyers, news releases for marketing purposes, to skill-building educational programs. Efforts need to employ proven program development models for non-formal education with adult learners. Without solid program design, program outcomes are unlikely to be those intended or desired.

Second, many programs and delivery methods primarily target the easy-to-reach audiences. Agencies and organizations with long-standing and well-established clientele groups can easily reach them with information and education programs. However, the nature of nonpoint source pollution requires efforts that extend, or have the potential to extend, to each and every household. New program delivery strategies are needed to accomplish that.

Finally, program evaluation is nearly non-existent. In the rare occasions when any evaluation is done, it occurs after the project is completed, and project personnel are trying to determine what can be measured.

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Objective 1

Use watershed-based NPS information as an interdisciplinary theme in formal and non-formal educational settings.

Objective 1 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Create NPS Education Steering Committee as subcommittee of Nonpoint Source and Watershed Advisory Board discussed in Chapter 2 of this document	Committee selection and action	Staff	NPS Education Steering Committee	Years 2-3
Encourage adoption of <i>Greenacres</i> -type education programs consisting of student monitoring and reporting to community, funding teacher training, and site selection	Development and distribution of program materials describing attributes of this type of program to all existing groups and to new groups as formed	\$500 program materials	NPS Education Steering Committee	Years 2-3
Assist watershed management/NPS pollution educators in developing their "tool kit" consisting of teaching and learning information, science-based knowledge about water resources, and methods for improving program effectiveness	15 mini-grants per year	\$15,000 mini-grants for "tool boxes"	OSUE ODNR	Years 2-3
Provide tools & training to local officials regarding their authorities to protect water resources (e.g., maps, planning models, ordinances, etc.).	50 officials trained per year	\$10,000 pro-gram materials	ODNR OSUE Ohio EPA	Years 4-5
Provide free credits at teacher colleges for non-formal watershed group education	Free credit courses offered at least one Ohio teacher college	Staff	Ohio teacher colleges	Years 6-10

Objective 2

Provide local groups with the tools and resources needed to educate local citizens about NPS pollution.

Objective 2 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Conduct regional Section 319 grant writing seminars in each OEPA district before call for proposals go out.	Seminars held	Staff time	OEPA	Year 1
Provide regional training and resource materials for local volunteers to enable them to develop watershed plans.	100 trained per year	319 grants	OSUE ODNR Ohio EPA	Years 1-4
Establish standards and provide resources to support quality assurance/quality control efforts for volunteer monitoring programs	Development and publication of standards for QA/QC	Staff Funding	Ohio EPA	Years 2-3
Develop website to provide GIS-based water quality, toxic release and other information	Development of website	Staff	ODNR Ohio EPA OSUE	Years 4-5
Encourage funding to support sustainable local watershed partnerships.	20 in year 1 50 total by year 10	Funding	ODNR Ohio EPA	Years 1-10
Organize and conduct training programs for urban stream restoration activities	2 training programs conducted per year	Staff \$100,000 program materials and support	ODNR OSUE	Years 6-10
Provide interpretation of Ohio's 305(b) report, technical support documents and other water resource information	Development and distribution of new interpretive materials annually	Staff	Ohio EPA OSUE	Years 2-3
Disseminate results of early use of OEPA's <i>Water Quality Planning Guide</i> to watershed partnerships statewide & update Guide as needed.	Feedback from recipients	None	OEPA	Years 1-5
Demonstrate use of GIS in integrating land use and water resource quality data in user-friendly manner	Demonstration to 20 groups per year	Staff \$10,000 education programs	ODNR OSUE	Years 4-5

Objective 3

Provide information on the economic, health and social benefits of protecting water resources as an incentive for action.

Objective 3 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Establish clearinghouse to: –provide information from regulatory agencies, researchers, and successful watershed projects in other states –provide easy access to lists of other sources of information	Clearinghouse (virtual, physical) established	Funding Staff	OSUE	Years 2-3
Develop information on the benefits of functions of natural streams	Information published and distributed to existing groups and new groups annually	\$500 printed materials	OSUE & OSU School of Nat. Res. ODNR Ohio EPA	Years 2-3
Implement Ohio Watershed Network program	Implementation within one year	Funding Staff	OSUE	Year 1
Conduct BMP demonstrations at state and metro parks	Demonstrations at 5 parks per year	Staff Funding	ODNR	Years 4-5
Conduct biennial study of Ohioans' environmental knowledge, behavior, and attitudes	Survey results published within one year of survey being conducted	Funding Staff	OSUE	Years 6-10

Objective 4

Develop a statewide strategy for delivering NPS pollution messages and involving local businesses in providing marketing assistance for local initiatives.

Objective 4 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Form marketing advisory committee and secure necessary marketing expertise needed.	Responsibilities and functions defined Advisory group members recruited OWN marketing plan revisited	Staff Funding Contract services Donated services	ODNR Ohio EPA OSUE	Year 1

Objective 4 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Sponsor statewide meeting for watershed groups and/or encourage grass roots watershed involvement in "Connecting Ohio Watersheds Conference."	Increased group participation	None	ODNR OSUE OEPA	Year 1
Develop and use new term to replace "nonpoint source pollution"	New term developed and adopted by state agencies	Funding Contract services Donated services	NPS Marketing Advisory Committee	Years 2-3
Develop themes for local groups to use to create media interest	Use of 2 themes in media per year	Funding Contract services Donated services	NPS Marketing Advisory Committee	Years 2-3
Create governor's award for local watershed groups	Presentation of Governor's Award annually	—	Ohio EPA ODNR	Years 4-5
Develop concept of "watershed-friendly" lawns and homes by providing check-list and recognition of accomplishments	5,000 checklists published and distributed	\$2,000 program promotion and checklists	OSUE ODNR	Years 4-5
Encourage displays at statewide conferences & special events promoting stream protection & greater NPS pollution control.	Increased NPS message presence	Small funding for displays	ODNR OEPA OSUE	Years 1-5
Target high visibility businesses and industries to carry message	Use of one NPS messages by business and industry (beverage, recreation, leisure)	—	NPS Marketing Advisory Committee Chambers of Commerce	Years 4-5

Objective 5

Provide consistent NPS pollution messages to various media organizations and promote the concept of individual action and connectedness to local aquatic ecosystems.

Objective 5 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Erect highway signs: "Entering _____ Watershed—__% of its stream miles support aquatic life"	Erection of signs in 5 watersheds per year	\$500,000 signs	ODOT ODNR	Years 6-10

Objective 5 Recommendation	Measure(s) of Success	Resource(s) Needed	Responsible Organization(s)	Time Frame Beginning
Provide NPS pollution message and water quality information to recreational users at place and time of use	Print and distribute 2,000 information leaflets, signs, etc. per year	Funding for information products	ODNR	Years 2-3
Adopt and promote "block watch" concept for streams, rivers, lakes and ditches	Prepare, print and distribute program guidance suggestions to 15 groups per year	Funding for: program development and committee work program promotion materials	NPS Education Steering Committee	Years 4-5