



This document is one chapter from the EPA “Handbook for Developing Watershed Plans to Restore and Protect Our Waters,” published in March 2008. The reference number is EPA 841-B-08-002. You can find the entire document http://www.epa.gov/owow/nps/watershed_handbook.

Handbook for Developing Watershed Plans to Restore and Protect Our Waters

Chapter 3. Build Partnerships

March 2008

Handbook Road Map

- 1 Introduction
- 2 Overview of Watershed Planning Process
- 3 Build Partnerships
- 4 Define Scope of Watershed Planning Effort
- 5 Gather Existing Data and Create an Inventory
- 6 Identify Data Gaps and Collect Additional Data If Needed
- 7 Analyze Data to Characterize the Watershed and Pollutant Sources
- 8 Estimate Pollutant Loads
- 9 Set Goals and Identify Load Reductions
- 10 Identify Possible Management Strategies
- 11 Evaluate Options and Select Final Management Strategies
- 12 Design Implementation Program and Assemble Watershed Plan
- 13 Implement Watershed Plan and Measure Progress

3. Build Partnerships

Chapter Highlights

- Identifying driving forces
- Identifying stakeholders
- Keeping stakeholders engaged
- Integrating with key local, state, tribal, and federal programs
- Initiating outreach activities

Read this chapter if...

- You want to find out what kinds of stakeholders should be involved in developing your watershed plan
- You want to get stakeholders involved early in the process
- You don't know what kinds of programs you should integrate into your planning efforts

3.1 Why Do I Need Partners?

Bringing together people, policies, priorities, and resources through a watershed approach blends science and regulatory responsibilities with social and economic considerations. The very nature of working at a watershed level means you should work with at least one partner to improve watershed conditions. In addition, watershed planning is often too complex and too expensive for one person or organization to tackle alone. Weaving partners into the process can strengthen the end result by bringing in new ideas and input and by increasing public understanding of the problems and, more important, public commitment to the solutions. Partnerships also help to identify and coordinate existing and planned efforts. For example, a watershed organization might be interested in developing a volunteer monitoring program but is unaware that the local parks department is working on a similar program. Researching and identifying partners can help to avoid reinventing the wheel or wasting time and money.



Budgets can be unpredictable, and resources for watershed improvement efforts, such as fencing cows out of streams, are limited. Resources like technical assistance, mapping abilities, and funding are always strained, but working with partners might provide some of the resources that can get your effort closer to its goals more efficiently.

Before you begin to identify and recruit potential partners, you should ask yourself, “Why are we developing a watershed plan?” To answer that question, you should identify the driving forces behind the need for the watershed plan.

Dealing with Multiple Political Jurisdictions in a Watershed

There are very few watershed in a single county and few large rivers in a single state. Coordinating watershed planning and management in multiple political jurisdictions can be difficult, but encouraging stakeholders to focus on the water resource under study and opportunities to cooperate can help to address water quality impairments or threats. Engaging the technical and field staff of federal, state, tribal, county, and local agencies in gathering data and identifying the full range of management options can help to create a collaborative, coordinated approach that can be built upon and further refined by elected officials, managers, and citizens.

3.2 Identify Driving Forces

Watershed plans can be initiated for various reasons and by various organizations. For example, a local agency might want to develop a watershed plan to comply with new federal and state water quality regulations. Or perhaps a watershed organization wants to develop a watershed plan to help coordinate future land-use planning efforts to protect sensitive environmental areas in the community. It could also be that preliminary data collection has

identified some specific problems. EPA acknowledges that watershed plans are appropriate tools for both restoring waters that are impaired and protecting waters that are threatened. Plans are also appropriate for those wishing to better coordinate water resources activities, use resources more efficiently, and integrate various required activities, such as protecting source water, implementing Total Maximum Daily Loads (TMDLs), managing forests and other lands, or complying with stormwater regulations. It's important to identify the driving forces motivating you to develop a watershed plan. These forces will set the foundation for developing your plan's goals and objectives. The typical watershed planning drivers are described below.



3.2.1 Regulatory Issues

Water resource or other regulations sometimes require a planning or management document that contains some or all of the elements required in a watershed plan. Communities pursuing efficient, effective approaches to planning often initiate a comprehensive watershed planning effort to streamline multiple planning tasks, like the following:

- Clean Water Act section 303(d) requirements for developing (TMDLs)
- Clean Water Act section 319 grant requirements
- Federal and state National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit regulations
- NPDES discharge permit requirements
- Source water protection requirements under the Safe Drinking Water Act
- National Estuary Program and coastal zone conservation/management plan requirements
- Federal and state source water assessment and protection program regulations
- Baseline and monitoring studies to implement federal and state antidegradation policies
- Endangered Species Act requirements

Hydromodification, Flows, and Watershed Management

It should be noted that altering river and stream flows through dams and diversions can have a major influence on the ability of such waters to sustain native fish populations, manage internal sediment loads, control flooding, and handle other physical, chemical, and biological issues. Flows are managed by state water agencies, interstate compacts, dam operators, and other entities identified under federal and state laws. For detailed information on dealing with flow and other conditions affecting the ecological integrity of surface waters (e.g., hydromodification), go to www.epa.gov/owow/nps/hydromod/pdf/hydro_guide.pdf and www.epa.gov/owow/wetlands/restore/principles.html.

3.2.2 Government Initiatives

Dozens of federal, state, and local initiatives target geographic areas like the Chesapeake Bay or the Great Lakes, or attempt to focus on one aspect of a management program, such as the following:

- EPA-supported, geographically targeted programs (e.g., Chesapeake Bay, Great Lakes)
- U.S. Department of Agriculture (USDA) initiatives (e.g., 2002 Farm Bill program, Forest Service planning)
- Other federal water resource initiatives (e.g., those sponsored by the Bureau of Land Management, the Bureau of Reclamation, and the National Oceanic and Atmospheric Administration)

River Compacts and Watershed Management

Beginning with the Colorado River Compact of 1922, Congress has approved about two dozen river management compacts in an attempt to equitably allocate and manage the waters of interstate rivers. The allocation formulas and management objectives in the river compacts vary, but for the most part they seek to protect existing uses and water rights. River compacts can provide a good framework for coordinating multiple watershed plans in large river basins. For more information on river compacts, visit www.fws.gov/laws/lawsdigest/interstatecompacts.htm.

- Congressional mandates (e.g., Comprehensive Wildlife Conservation Strategies required of wildlife management agencies in each state)
- Stream or river restoration planning (e.g., by cities, counties, states)
- River authority and other state-enabled (or required) watershed planning initiatives (e.g., intra- or interstate river compacts)
- State initiatives like Pennsylvania's Growing Greener program or Michigan's Clean Michigan Initiative

3.2.3 Community-Driven Issues

Often the decision to develop a watershed plan comes from within the community. People have a desire to protect what they have or to restore water resources for future generations. Some compelling issues include the following:

- Flood protection
- Increased development pressures
- Recreation/aesthetics (e.g., river walks, boating, fishing, swimming)
- Protection of high-quality streams or wetlands
- Post-disaster efforts
- Protection of drinking water sources

If you're reading this document, you might be part of the group that is leading the development of a watershed plan. In general, the leader's role involves identifying and engaging other stakeholders that should be participating in plan development and implementation. Section 3.3 discusses the importance of stakeholder involvement and provides some information on how to identify and involve stakeholders.

Fire Helps to Energize Watershed Planning Efforts

The Pajarito Plateau Watershed Partnership (PPWP) began in 1998 in response to a draft watershed management plan prepared by the Los Alamos National Laboratory (LANL). The development of LANL's plan did not initially include the stakeholders in the hydrologic watershed. Instead, the plan was for LANL's property. LANL decided to work with the stakeholders, including tribes, Los Alamos County, the Forest Service, the National Park Service, and others, to develop a complete watershed plan. As the plan was developed, however, the partnership began to have trouble keeping the group engaged. Some stakeholders lost interest, and others limited their participation.

It wasn't until after a controlled burn went out of control in May 2000 and burned almost 50,000 acres of the watershed that the group found a common purpose—post-fire rehabilitation. The group has received section 319 grant money for rehabilitation activities, such as seeding, reforestation, and trail maintenance, throughout the watershed. A watershed assessment was completed, and the group has shifted its focus to sediment erosion issues in one subwatershed.

For more information, see the PPWP Web site at www.volunteertaskforce.org/ppwatershed/default.htm.

3.3 Identify and Engage Stakeholders

Successful development and implementation of a watershed plan depends primarily on the commitment and involvement of community members. Therefore, it is critical to build partnerships with key interested parties at the outset of the watershed planning effort. People and organizations that have a stake in the outcome of the watershed plan are called stakeholders. Stakeholders are those who make and implement decisions, those who are affected by the decisions made, and those who have the ability to assist or impede implementation of the decisions. It's essential that all of these categories of potential stakeholders—not just those that volunteer to participate—are identified and included. Key stakeholders also include those that can contribute resources and assistance to the watershed planning effort and those that work on similar programs that can be integrated into a larger effort. Keep in mind that stakeholders are more likely to get involved if you can show them a clear benefit to their participation.



Before you start identifying stakeholders, find out if your state has developed a watershed planning guide. You might find useful information that will help you to identify the relevant stakeholders and programs for your watershed planning effort.

3.3.1 Identify Categories of Stakeholders

It is daunting to try to identify all the players that could be involved in the watershed planning effort. The makeup of the stakeholder group will depend on the size of the watershed (to ensure adequate geographic representation), as well as the key issues or concerns. In general, there are at least five categories of participants to consider when identifying stakeholders:

- Stakeholders that will be responsible for implementing the watershed plan
- Stakeholders that will be affected by implementation of the watershed plan
- Stakeholders that can provide information on the issues and concerns in the watershed
- Stakeholders that have knowledge of existing programs or plans that you might want to integrate into your plan
- Stakeholders that can provide technical and financial assistance in developing and implementing the plan

As a starting point, consider involving these entities:

- Landowners
- County or regional representatives
- Local municipal representatives
- State and federal agencies
- American Indian tribes
- Business and industry representatives
- Citizen groups



Unconventional Partners

The staff of the American Samoan Coastal Program created a Religious Consciousness Project to help spread the word about the islands' environmental problems. For years, program staff had tried unsuccessfully to get village mayors involved in efforts to protect coastal water resources. Through the project, program staff offered to present information on water quality, population growth, and nonpoint source pollution during church gatherings. As a result of the church partnership, a village mayors workshop was held, ultimately leading to the start of a new water quality project focusing on water resource education.

- Community service organizations
- Religious organizations
- Universities, colleges, and schools
- Environmental and conservation groups
- Soil and water conservation districts
- Irrigation districts

The development of the stakeholder group is an iterative process. Don't worry about whether you have complete representation at the outset. Once the stakeholders convene, you can ask them if there are any gaps in representation.

↳ Section 3.4 provides more detailed information on possible local, state, tribal, and federal program partners that you might want to include in your stakeholder group.

3.3.2 Determine Stakeholders' Roles and Responsibilities

Before contacting potential stakeholders, you should ask yourself the following questions and have at least a rough idea of the answers. This exercise will help you to determine the level of effort needed for the stakeholder process and will provide initial guidance to stakeholders.

- What is the role of the stakeholders?
- How will decisions be made?
- Are stakeholders expected to develop any work products?
- What is the estimated time commitment for participation?

Begin by contacting the people and organizations that have an interest in water quality or might become partners that can assist you with the watershed planning process. Consider who would be the most appropriate person to contact the potential partner. Those who might have a stake in the watershed plan should be encouraged to share their concerns and offer suggestions for possible solutions. By involving stakeholders in the initial stages of project development, you'll increase the probability of long-term success through trust, commitment, and personal investment.

Worksheet 3-1 Stakeholder Skills and Resources Checklist

Skills in Stakeholder Group

- Accounting
- Graphic design
- Computer support
- Fund-raising
- Public relations
- Technical expertise
(e.g., geographic information systems, water sampling)
- Facilitation

Resources Available

- Contacts with media
- Access to volunteers
- Access to datasets
- Connections to local organizations
- Access to meeting facilities
- Access to equipment (please describe)
- Access to field trip locations

3.3.3 Provide a Structure to Facilitate Stakeholder Participation



Once you've identified and contacted stakeholders, you'll organize them to help prepare and implement a watershed plan. Stakeholder groups range from informal, ad hoc groups to highly organized committees. The method you choose will likely depend on the makeup of the stakeholders willing to participate, the time and financial resources available, and your capabilities with respect to facilitating the plan development effort. The following examples provide some indication of the range of options available for stakeholder participation.

Decisionmakers. The governing boards of some state river authorities require representation from a broad array of public agencies and private entities, including business interests, recreational organizations, and environmental groups. Giving decision-making power to stakeholders often increases the amount of analysis and time needed to make decisions, but it can provide a venue for generating needed support and resources for watershed planning and management activities.

Advisors. Many watershed planning initiatives involve stakeholders as part of a steering committee or advisory group. Although stakeholders do not have the power to make and enforce decisions, they can create momentum and support for moving the process forward in the directions they choose if they are somewhat united and cooperative in their approach.


Supporters. Sometimes stakeholders are invited to participate because of their ability to provide technical, financial, or other support to the watershed planning process. Under this approach, watershed planners seek out stakeholders that have assessment data, access to monitoring or project volunteers, educational or outreach networks, or other assets that can be used to enhance the watershed plan. For example, the U.S. Geological Survey (USGS) might be invited to provide water quality monitoring data, such as flow data from the many gauging stations across the country.

3.3.4 Identify Stakeholders' Skills and Resources

For the group of stakeholders that have agreed to participate in the planning effort, determine what resources and skills are collectively available to support the planning phases. A wide range of technical and "people" skills are needed for most planning initiatives. Stakeholders might have access to datasets, funding sources, volunteers, specialized technical expertise, and communication vehicles. Use  Worksheet 3-1 to determine your stakeholders' skills and resources.  A full-size worksheet is provided in appendix B.

Ohio Builds Strong and Effective Watershed Groups

Ohio has adopted a program philosophy that strong and effective local watershed stakeholder groups are necessary to develop and implement integrated watershed plans. According to Ohio, the key to watershed organization capacity-building is active stakeholders that provide technical knowledge, financial ability, networking ability, organizational skills, and legitimacy (decisionmakers with the authority to implement and support problem and solution statements and recommended action items).

 Additional information about Ohio's philosophy for strong and effective watershed groups is available at www.epa.state.oh.us/dsw/nps/NPSMP/WAP/WAPccsustainable.html.

Ways to Engage and Involve Stakeholders

At Home

- Reading brochures
- Visiting a Web site
- Completing a survey
- Adopting practices that conserve water and protect water quality at home or at work
- Reviewing documents

Out in the Community

- Managing practice tours and watershed fairs
- Conducting coffee shop discussions
- Making educational presentations

Action-oriented Activities

- Stenciling, stormdraining
- Monitoring volunteer work
- Stream cleanup

3.3.5 Encourage Participation and Involvement

As stakeholders begin to show an interest, you'll likely note that the type and degree of effort that individuals or organizations are willing to put forth will vary. Some stakeholders

will want to be directly involved in the detailed technical process of planning, whereas others will simply want to be periodically updated on progress and asked for feedback. Still others won't want to plan at all, but instead will want to know what they can do now to take actions that will make a difference. In other words, you'll likely be faced with managing planners, advisors, doers, and watchers. A key step, therefore, involves organizing the effort to help stakeholders plug in at the level that is most comfortable for them and taps their strengths.

If you're not talking about issues that are important to the stakeholders, they'll be less likely to participate in the process. Here are some tips to remember when working with stakeholders to help ensure their long-term participation and support.

Focus on issues important to the stakeholders. If they can't see how their issues will be addressed in the watershed plan, you need to change the plan or clearly show them where their issues are addressed.

Be honest. Much of the process is about trust, and to build trust you must be honest with the stakeholders. That's why it's important to tell them how decisions will be made. If their role is advisory, that's OK, but they should know up front that they will not be involved in the decision-making process.

Start early. Involve stakeholders as soon as possible in the watershed planning process. This approach also helps to build trust by showing them that you have not developed a draft document and just want them to review it. They will help to shape goals, identify problems, and develop possible management strategies for the watershed.

Recognize differences early in the process. It's OK if everyone does not agree on various issues. For example, not all data compiled by some stakeholders, such as tribes, will be shared with a group if there are cultural concerns to be considered. If you ignore these differences, you'll lose credibility and any trust that the stakeholders had in the process.

Communicate clearly and often. The watershed planning process is long and complex. Don't leave stakeholders behind by failing to communicate with them using terms familiar to them. Regular communication and updates can be done through Web sites, newsletters, fact sheets, and newspaper inserts. Also remember that sometimes it will take time before

More on Working with Stakeholders

🔗 To find more detailed information on forming watershed stakeholder groups, keeping a group motivated, conducting outreach, resolving conflict, and making decisions using consensus, download a pdf version of *Getting In Step: Engaging and Involving Stakeholders in Your Watershed* from www.epa.gov/owow/watershed/outreach/documents.

🔗 The Conservation Technology Information Center (CTIC) has developed a series of documents to help you know your watershed. This information clearinghouse for watershed coordinators helps to ensure measurable progress toward local goals. The clearinghouse is available at www2.ctic.purdue.edu/kyw/kyw.html.

Facilitating Stakeholder Groups

Any watershed coordinator learns quickly that he or she needs to be a good facilitator, find one in the stakeholder group, or hire one. Outside facilitators (third-party persons not connected directly to the sponsoring agency or other stakeholders at the table) are usually best. The facilitator should be perceived as a neutral party who will not contribute his or her ideas to the group. The facilitator should be objective and maintain a broad perspective but should also challenge assumptions, act as a catalyst, generate optimism, and help the group connect with similar efforts. It's important to make sure that the stakeholders feel comfortable with the facilitator.

It's important also that the facilitator have strong facilitation skills like understanding productive meeting room layouts, knowing the different ways decisions can be made, understanding how to help settle conflicts and how to move people with conflicting views toward consensus, and being able to manage time well and keep the discussion on point during meetings.

reluctant stakeholders come to the table, so you need to have a means of communicating with them and keeping them up-to-date. When they do decide to participate in the process, they'll already be well informed.

Team-Building Exercise for Stakeholders

At the first stakeholder meeting, give each person a blank sheet of paper. Tell everyone to “draw a map of your community.” Many will want more guidance on what to do, but just repeat the initial instructions.


When the participants are finished, ask them to exchange papers with each other. Then ask the group the following questions:

- What does this map tell you about this person's community?
- What appears to be the “center” of the community? What are its boundaries?
- What does this map suggest about this person's perception of the environmental character of the community?
- Who included people, water resources, roads, trees, administrative buildings?

This exercise helps the stakeholders to get to know each other and to start getting a feeling of their values and how they use the resources in the community.

—Adapted from  *Community and the Environment: A Guide to Understanding a Sense of Place*, available at www.epa.gov/CARE/library/community_culture.pdf.

3.3.6 Initiate Outreach Activities to Build Awareness and Gain Partners

Information/education (I/E) activities are key to building support for the watershed planning effort, as well as helping to implement the plan. I/E activities (also called outreach) are needed at the very beginning of the watershed planning effort to make potential partners and stakeholders aware of the issues, recruit them to participate, and educate them on the watershed planning process. Often a separate outreach and education committee is created under the umbrella of the watershed planning team. This committee can help develop related materials and a strategy for integrating I/E into the overall watershed planning effort. Eventually, outreach will be most successful if individual stakeholders reach out to their constituents or peer groups about actions that need to be taken to improve and maintain water quality. The education committee can help support this effort by developing materials for stakeholders to use to educate their constituents.  Chapter 12 provides more detail on the I/E component.

Developing and distributing effective messages through outreach materials and activities is one of the most important components of getting partners and stakeholders engaged in the watershed planning and implementation processes. Outreach materials and activities should be designed to raise public awareness, educate people on wise management practices, and motivate people to participate in the decisionmaking process or in the implementation of actions to restore and protect water quality. To achieve these objectives, you should communicate effectively with a wide range of audiences or groups. At the outset of your watershed planning effort, you might consider developing an informational brochure and a slide presentation for your stakeholder group that explains current issues in the watershed and the need to develop a watershed plan. Once the stakeholder group convenes, it can tailor these materials and determine the preferred formats for disseminating information to various audiences. Remember that your I/E activities should be targeted to specific audiences and will change over time as you develop and implement your watershed plan.

Watershed plan organizers might need to sponsor a broad spectrum of activities to engage and involve most of the stakeholders effectively. People differ widely in how much time and energy they're willing to expend on community-based activities. Some people might want simply to be informed about what's going on in their community, whereas others might want a voice in the management decisions made and how they're implemented. A program that offers many different types of participation opportunities that involve varying levels of effort is likely to attract more willing participants.

3.4 Integrate Local, State, Tribal, and Federal Programs into Your Watershed Planning Effort

Because developing and implementing watershed plans usually involves a combination of at least some local, state, tribal, and federal partners, it's important to identify any potential programs and activities that might be relevant to your watershed planning effort and

determine whether representatives from these programs should participate in your stakeholder group. Many such programs have planning components, collect monitoring data, implement controls, or develop regulations that you might want to incorporate into your watershed plan. In addition, some states have developed multiagency partnerships for the support of monitoring and management practice implementation, which local groups can access. Including partners from these organizations in the watershed management process can help to ensure that any available datasets are identified and that any potential funding opportunities are noted.

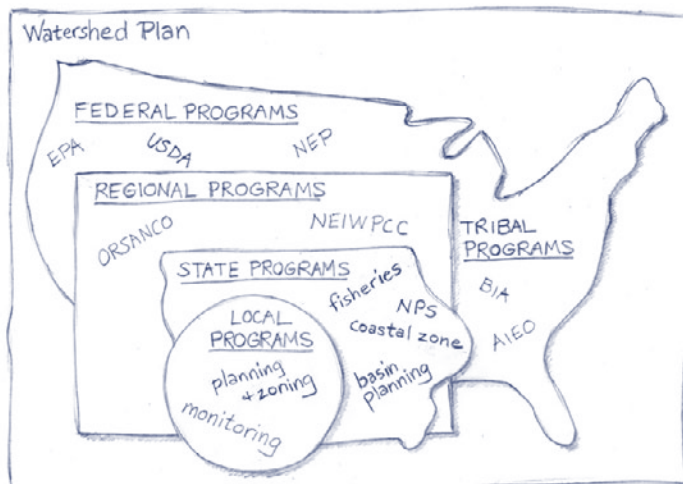
The various local, state, tribal, and federal programs that might provide personnel and resources to strengthen your stakeholder group, as well as technical assistance in developing your watershed plan, are briefly described below. Chapter 5 provides more detail on specific datasets that might be available from these programs.

You're not expected to involve all of these programs, but you should be aware of them if they address issues and concerns that are important to your planning effort.

Examples of Local Programs and Organizations

- Stormwater management programs
- Parks and recreation departments
- Local elected officials and councils
- Planning and zoning programs
- Soil and water conservation districts
- Cooperative extension
- Solid waste programs
- Water and sewer programs
- Watershed organizations
- Volunteer monitoring programs

🎯 Start at the local level and then broaden your search to include state and tribal programs. Then research which federal programs are relevant to your watershed planning effort. Most likely, the federal programs will already be represented to some extent at the state level. If these programs exist at both the state and local levels, they are included here under the Local Programs heading because the local offices probably have the information most relevant to your watershed.



3.4.1 Local Programs

Because implementing the watershed plan will largely rest with local communities, it's critical that they be involved from the beginning. They usually have the most to gain by participating and the most up-to-date information on the structure of the community. In addition, some of the most powerful tools for watershed plan implementation, such as zoning and regional planning, reside at the local level. *Local* might mean city, county, or township; some states have all three. It's important to learn how the various local governments assign responsibility for environmental protection.

Local Elected Officials

Local elected officials and local agency staff should be closely involved in the plan development and implementation process. Although responsibilities vary among localities, most local government officials are responsible for establishing priorities for local programs and services, establishing legislative and administrative policies through the adoption of ordinances and resolutions, establishing the annual budget, appropriating funds, and setting tax rates. There are also opportunities to make others aware of the watershed management planning process through local government newsletters and presentations at board meetings, which are often televised on local cable television networks.

Local Cooperative Extension Offices

The county cooperative extension offices are part of a state cooperative extension network run through academic institutions. Extension agents conduct research, develop educational programs, and provide technical assistance on a broad range of problems from traditional agricultural management and production issues to farm business management, soil and water conservation, land and water quality, the safe use of pesticides, integrated pest management, nutrient management, models, forestry and wildlife, and commercial and consumer horticulture. ↪ A link to local extension offices is available from the Cooperative State Research, Education, and Extension Service at www.csrees.usda.gov/Extension/index.html.

Soil and Water Conservation Districts and NRCS Offices

Most rural counties have local Natural Resources Conservation Service (NRCS) offices and soil and water conservation districts (SWCDs), sometimes referred to simply as conservation districts. These districts and NRCS provide leadership, technical assistance, information, and education to the counties on proper soil stewardship, agricultural conservation methods, water quality protection, nonpoint source pollution, streambank stabilization, stream health, conservation planning (e.g., developing conservation plans), and various other topics related to watershed planning. Local SWCDs also offer volunteer opportunities for citizens, and they can often provide topographic, aerial, and floodplain maps; established erosion and sediment control programs; educational programs; information on the installation and maintenance of management practices; and financial assistance for installing management practices. ↪ Go to www.nacdnet.org for a directory of all SWCD locations; NRCS contact information is posted at www.nrcs.usda.gov/about/organization/regions.html.

A Mix of Top-down and Bottom-up Efforts

Involvement and leadership from both stakeholders and public agencies are vital ingredients for successful watershed management. The University of Wisconsin found in its Four Corners Watershed Innovators Initiative that "there is a myth that the watershed movement consists of spontaneous 'bottom-up' local efforts that find alternatives to the rigidity of intransigent bureaucracies and one-size-fits-all solutions." Researchers noted that although local support and the energy and resources of watershed groups are vital, "the governmental role is generally critical to successful watershed approaches, particularly if plans and solutions proposed by watershed groups are to be implemented."

Parks and Recreation Department

Local parks and recreation departments are responsible for maintaining recreational facilities and parks in a locality. They manage recreational facilities like boat ramps, nature trails, and swimming pools. They often have support groups that focus on a particular park or topic, such as the trail development or bird-watching activities. These groups can provide insight as to the values of the community in terms of natural resources.

Planning and Zoning Programs

Among the most effective tools available to communities to manage their water resources are planning and zoning. For example, local or regional planning and zoning programs can play a particularly significant role in establishing critical watershed protection areas through overlay zoning; identifying critical water resource areas (e.g., wetlands, springs); and designating protective areas such as vegetated buffers and hydrologic reserves. Professionals in these local programs can provide valuable information on the economic development plans of the region and help to identify current policies to manage growth. The zoning programs are usually linked to a community's overall master plan, so be sure to obtain a copy of the master plan.

Make sure you use local resources to find helpful information about planning and zoning programs for your community. ↪ Chapter 5 provides information on developing ordinances as part of your management program, including model language, and information included in master plans.

Regional Planning Councils

Many urban areas have regional councils represented by the participating local governments. These organizations focus on various issues, such as land use planning and the environment. For example, the Southeast Michigan Council of Governments (↪ www.semcog.org) represents seven counties, and staff work to support local environmental planning initiatives like watershed management. These organizations can provide valuable resources and expertise useful in your watershed planning effort.

Solid Waste Programs

Many local governments have solid waste programs that address the disposal of solid waste and yard waste. They might also handle the recycling, illegal dumping, and household hazardous waste programs that you might want to incorporate into your outreach activities during the plan implementation phase.

Stormwater Management Programs

The NPDES stormwater permitting program for Phase I and Phase II cities provides one of the most direct links between local government activities and watershed planning/management. Under the stormwater program, communities must comply with permit requirements for identifying and addressing water quality problems caused by polluted urban runoff from sources like streets and parking lots, construction sites, and outfall pipes. Watershed planning programs can provide important guidance to constituent cities on what types of pollutants or stressors need to be addressed by their stormwater programs, what resources are available, and what other cities are doing. ↪ Additional information about the two phases of the NPDES stormwater program is available at <http://cfpub.epa.gov/npdes/stormwater/swphases.cfm>.

Volunteer Monitoring Programs

Across the country, volunteers monitor the condition of streams, rivers, lakes, reservoirs, estuaries, coastal waters, wetlands, and wells. Volunteer monitoring programs are organized and supported in many different ways. Projects might be entirely independent or associated with state, interstate, local, or federal agencies; environmental organizations; or schools and universities. If there is an active volunteer monitoring program in your community, it can be a valuable resource in terms of data collection and a means to educate others about watershed issues and concerns. To find out if your community has a volunteer monitoring program, refer to ↪ EPA's *Directory of Environmental Monitoring Programs* at www.epa.gov/owow/monitoring/volunteer.

Water and Sewer Programs

Most local governments provide water supply and wastewater treatment services for residents. They can help determine whether there are source water protection areas in the watershed and locate water supply and wastewater discharges. They might have a water conservation program that you could incorporate into your watershed outreach program.

Watershed Organizations

Across the country there are thousands of watershed organizations, which have varying levels of expertise and involvement. These organizations will be a valuable resource in your watershed planning efforts if you can harness their members for problem identification, goal setting, and implementation of the watershed plan. If you're not sure about the organizations in your community, start by looking at ↪ EPA's database of watershed organizations at www.epa.gov/adopt/network.html.

Source Water Protection and Watershed Management

Under the 1996 amendments to the federal Safe Drinking Water Act, states must conduct source water assessments and produce studies or reports that provide basic information about the drinking water in each public water system. These assessments provide a powerful link to other watershed assessment activities and should be considered when developing the watershed plan. The source water assessment programs created by states differ, because each program is tailored to a state's water resources and drinking water priorities, but they all seek to characterize and protect sources of drinking water such as lakes, rivers, and other sources (e.g., groundwater aquifers). ↪ For more information, go to <http://cfpub.epa.gov/safewater/sourcewater/index.cfm>.

3.4.2 State and Regional Programs

Most watershed groups draw on local organizations and resources to develop and implement their projects, and some have effectively involved state programs in their efforts. In states that have adopted a statewide watershed management framework, watershed plans should be integrated into the larger watershed or basin plans sponsored under the state framework. Likewise, nonpoint source work plans for local or site-level projects funded under section 319 should be derived from the applicable watershed plan. In cases where there are no larger basin or subbasin plans, the plan under consideration should seek to integrate the full range of stressors, sources, and stakeholders that are likely to emerge as important during or after the planning and implementation process.

The following are some key state and regional programs and resources that can also be tapped to develop and implement watershed plans.

Source Water Assessment and Protection (SWAP) Programs

State and local drinking water utilities develop SWAP programs under the 1996 amendments to the Safe Drinking Water Act to protect sources of drinking water, including ground water sources. Many of these waters are

Examples of State Programs

- Statewide watershed or basin planning frameworks
- State water protection initiatives
- Coastal zone management programs
- Source water assessment and protection programs
- State cooperative extension programs
- Wetland conservation plans

affected by nonpoint source pollution. SWAP assessments delineate protection areas for the source waters of public drinking water supplies, identify potential sources of contaminants within the areas, determine the susceptibility of the water supplies to contamination from these potential sources, and make the results of the assessments available to the public. Partnering with state SWAP programs and local drinking water utilities to develop joint watershed assessments provides an excellent opportunity for watershed groups and utilities to pool funds, produce better assessments, and consider surface water and groundwater interactions. ↪ For a list of state source water protection contacts, go to <http://cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Contacts>.

State and Interstate Water Commissions

Several interstate water commissions, such as the Ohio River Valley Water Sanitation Commission (ORSANCO) and the New England Interstate Water Pollution Control Commission (NEIWPC), address water quality and water quantity issues. The Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) is a national organization representing the officials responsible for implementing surface water protection programs throughout the United States. ↪ For a listing of state, tribal, and interstate water agencies, go to www.asiwpc.org and click on the links.

State Coastal Zone Management Programs

These programs address nonpoint source pollution under section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA). These programs can provide a venue for developing or consolidating watershed plans in coastal areas. Under CZARA, states are required to identify and adopt management measures to prevent and control nonpoint source pollution, ensure that enforceable mechanisms exist, enhance cooperation among land and water use agencies, identify land uses that might cause degradation of coastal waters, identify and protect “critical coastal areas,” provide technical assistance, provide opportunities for public participation, and establish a monitoring program to determine the extent and success of management measure implementation. Projects within the approved 6217 management area will use the EPA management measures guidance to provide planning objectives for sources covered in the 6217 program. ↪ Coastal zone management measures guidance documents are available at www.epa.gov/owow/nps/pubs.html.

State Departments of Transportation

In recent years state DOTs have placed new emphasis on environmental performance related to construction, operation, and maintenance activities. In the past DOTs focused mainly on environmental compliance, but agencies across the country now take a more holistic approach to meeting environmental stewardship goals. Incorporating stewardship priorities into construction and maintenance helps DOTs achieve continuous improvement in environmental performance.

State Fish and Wildlife Programs

Most states have agencies responsible for issuing hunting and fishing permits, maintaining wildlife protection areas, protecting and managing wetlands, and protecting threatened and endangered species. These agencies develop state wildlife action plans and management plans for invasive species control, wildlife management, and habitat protection. They often have very active volunteer programs that you might be able to access to help identify community values and concerns and to help with locating key datasets as part of the characterization process.

State Health Departments

Many state health departments have an environmental health division that manages information on source water protection programs, septic system management programs, well testing and monitoring, and animal feeding operation permits. Some state programs provide online information and maps regarding fish consumption guidelines instituted because of pollutant (often mercury) contamination.

State TMDL Programs

Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes must list waters that are impaired and threatened by pollutants. States, territories, and authorized tribes submit their lists of waters on April 1 in every even-numbered year (except in 2000). The lists are composed of waters that need TMDLs. ↪ For more information about TMDLs developed and approved in your state, visit www.epa.gov/owow/tmdl.

State Nonpoint Source Programs

State nonpoint source programs help local governments, nonprofit entities, and numerous other state, federal, and local partners to reduce nonpoint source pollution statewide. State nonpoint source programs provide technical assistance, as well as funding sources, to develop watershed management plans for implementing nonpoint source activities. ↪ A directory of state nonpoint source coordinators is available at www.epa.gov/owow/nps/contacts.html.

State Water Protection Initiatives

Many states have initiated statewide or region-specific watershed management programs or have aligned management and water quality monitoring activities around a watershed framework. You should coordinate with these programs and try to integrate their framework with your goals and objectives; they, in turn, should be aware of your watershed planning issues and concerns. For example, Minnesota's Adopt-a-River program encourages Minnesota volunteers to adopt a section of a lake, river, wetland, or ravine to ensure its long-term health through annual clean-ups. To find out whether your state has any of these initiatives, go to the environmental department section of your state's Web site (e.g., Pennsylvania's Department of Environmental Protection).

State Wetland Programs

Many states and counties have developed wetland protection programs. These programs offer a variety of services, including developing educational and training materials, working to reduce loss of wetlands, providing landowners with the tools and means to manage wetlands on their property, and coordinating monitoring of wetlands. Some programs propose the use of grants to help share the costs of wetland restoration and help reduce taxes on wetland property and other conservation lands. Some states, such as Wisconsin, require decisions on federal wetland permits to meet state wetland water quality standards.

Integrating Wetlands into Watershed Management

Refer to *A Guide for Local Governments: Wetlands and Watershed Management*, which was developed by the Institute for Wetland Science and Public Policy of the Association of State Wetland Managers. The document provides recommendations for integrating wetlands into broad watershed management efforts and more specific water programs. ↪ www.aswm.org/propub/pubs/aswm/wetlandswatershed.pdf.

Regional Geographic Watershed Initiatives

In addition to statewide watershed protection programs, there are several large-scale initiatives that focus on specific regions of the country. These programs collect substantial data that you might use to help characterize your watershed. The programs include the following.

The Columbia River Initiative is a proposed water management program for the Columbia River. In 2004 the former Governor of Washington (Gary Locke) proposed this program to allow the basin's economy to grow and maintain a healthy watershed. The program would offer a plan to secure water for new municipal, industrial, and irrigation uses and to improve stream flows for fish. The proposal also provides for funding. Work on the Columbia River Initiative is on hold until further review by the legislature. ↪ For more information on the Columbia River Initiative, visit www.ecy.wa.gov/programs/wr/cwp/crwmp.html.

The Chesapeake Bay Program is a unique regional partnership that has directed the restoration of the Chesapeake Bay since 1983. Partners of the program include the states of Maryland, Pennsylvania, and Virginia; the District of Columbia; the Chesapeake Bay Commission, a tristate legislative body; EPA, representing the federal government; and participating citizen advisory groups. ↪ An overview of the Chesapeake Bay Program is available at www.chesapeakebay.net/overview.htm. ↪ For additional information about the program, visit www.chesapeakebay.net.

Since 1970 much has been done to restore and protect the Great Lakes. Although there has been significant progress, cleaning up the lakes and preventing further problems has not always been coordinated. As a result, in May 2004 President Bush created a cabinet-level interagency task force and called for a "regional collaboration of national significance." After extensive discussions, the group now known as the Great Lakes Regional Collaboration was convened. The Collaboration includes the EPA-led federal agency task force, the Great Lakes states, local communities, tribes, non-governmental organizations, and other interests in the Great Lakes region. The Collaboration has two components: the conveners (mostly elected local and regional officials) and the issue area strategy teams. The ambitious first goal of the Collaboration is to create within 1 year a workable strategy to restore and protect the Great Lakes. ↪ More information about the Regional Collaboration is available at www.epa.gov/greatlakes/collaboration.

Another collaborative effort for the Great Lakes is the Great Lakes Initiative, which is a plan agreed upon by EPA and the Great Lake states to restore the health of the Great Lakes. Also called the *Final Water Quality Guidance for the Great Lakes System*, the Great Lakes Initiative started in 1995 to provide criteria for the states' use in setting water quality standards. The plan addresses 29 pollutants and prohibits mixing zones for bioaccumulative chemicals of concern. ↪ For more information on the Great Lakes Initiative, visit www.epa.gov/waterscience/gli.

3.4.3 Tribal Programs and Organizations

If your watershed planning effort includes, or might affect, tribal lands or waters, or if you are a member of a tribe and are developing a watershed management plan, you should be aware of the various policies and initiatives regarding Indian Country. There are currently 562 federally recognized tribes. The sovereign status of American Indian tribes and special provisions of law set American Indians apart from all other U.S. populations and define a special level of federal agency responsibility. The Bureau of Indian Affairs administers and manages 55.7 million acres of land held in trust by the United States for American Indians and Alaska Natives. ↪ For more information go to www.doi.gov/bureau-indian-affairs.

In addition, EPA's American Indian Environmental Office (AIEO) coordinates the Agency-wide effort to strengthen public health and environmental protection in Indian Country, with a special emphasis on building the capabilities of tribes so they can administer their

own environmental programs. The AIEO provides contact information for all federally recognized tribal governments, maintains a list of tribes that have developed water quality standards, and provides lists of resources. 🖱️ Go to www.epa.gov/indian for more information.

EPA's Tribal Nonpoint Source Program provides information on techniques and grant funding for tribes to address nonpoint source pollution. The program's Web site (🖱️ www.epa.gov/owow/nps/tribal.html) includes guidelines for awarding section 319 grants to American Indian tribes, as well as the *Tribal Nonpoint Source Planning Handbook*. EPA also conducts training workshops for tribes interested in becoming involved in tribal nonpoint source programs and obtaining funding.

3.4.4 Federal Programs and Organizations

Various federal programs and agencies are involved in watershed protection activities like data collection, regulation development, technical oversight, and public education. In addition, federal land and resource management agencies sponsor or participate in watershed planning and management processes.

Most federal agencies have regional or state liaisons to help administer their programs. For example, EPA divides the country into 10 regions. Each region is responsible for selected states and tribes and provides assistance for all of its programs. 🖱️ To find the EPA regional office associated with your watershed, go to www.epa.gov/epahome/locate2.htm and click on a region.

Abandoned Mines Programs

The Department of the Interior's (DOI) Office of Surface Mining (OSM) works with states and tribes to protect citizens and the environment during mining and reclamation activities. OSM manages the Clean Streams Program, which is a broad-based citizen/industry/government program working to eliminate acid mine drainage from abandoned coal mines. If your watershed includes abandoned mines, contact OSM. 🖱️ For more information on the Clean Streams Program, go to www.osmre.gov/acsihome.htm.

Agricultural Conservation Programs

USDA's Natural Resources Conservation Service (NRCS) is an important partner for many water resource projects. It provides valuable support for funding the implementation of agricultural management practices, wetland restoration, land retirement, and other projects associated with watershed plans. NRCS has local offices established through partnerships with local conservation districts. 🖱️ Go to www.nrcs.usda.gov/about/organization/regions.html#regions to find state and local contact information.

As part of its watershed protection effort, NRCS administers the USDA Watershed Program (under Public Law 83-566). The purpose of the program is to assist federal, state, and local agencies; local government sponsors; tribal governments; and other program participants in protecting watersheds from damage caused by erosion, floodwater, and sediment; restoring damaged watersheds; conserving and developing water and land resources; and solving natural resource and related economic problems on a watershed basis. The program provides technical and financial assistance to local people or project sponsors, builds partnerships, and requires local and state funding contributions. 🖱️ For more information on this program, go to www.nrcs.usda.gov/programs/watershed.

Agricultural Support Programs

USDA's Farm Services Agency (FSA) has several programs that support watershed protection and restoration efforts. Under the Conservation Reserve Program (CRP), farmers receive annual rental payments, cost sharing, and technical assistance to plant vegetation for land they put into reserve for 10 to 15 years. The Conservation Reserve Enhancement Program (CREP) targets state and federal funds to achieve shared environmental goals of national and state significance. The program uses financial incentives to encourage farmers and ranchers to voluntarily protect soil, water, and wildlife resources. The Grassland Reserve Program (GRP) uses 30-year easements and rental agreements to improve management of, restore, or conserve up to 2 million acres of private grasslands. The Conservation Security Program (CSP) is a voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on tribal and private working lands. 🐾 For more information about FSA, go to www.fsa.usda.gov/pas/default.asp. 🐾 For more information on other conservation programs, go to www.nrcs.usda.gov/programs.

Coastal Programs

The National Estuary Program (NEP) was established in 1987 by amendments to the Clean Water Act that seek to identify, restore, and protect nationally significant estuaries of the United States. There are currently 28 active NEPs along the nation's coasts. NEP programs have identified a number of nonpoint source stressors as sources of estuary degradation, and they can provide valuable assistance in working with local governments and other partners to develop and implement watershed plans. 🐾 To find out if your watershed is in an NEP-designated area, go to www.epa.gov/owow/estuaries.

Federal Transportation Programs

Two offices in the Federal Highway Administration, a part of the U.S. Department of Transportation, focus on environmental protection and enhancement. One, the Office of Natural and Human Environment, focuses on environmental programs associated with air quality, noise, and water quality, and on programs associated with the built environment, including transportation enhancements, bicycle and pedestrian facilities, and scenic byways. The other, the Office of Project Development and Environmental Review, focuses on the National Environmental Policy Act (NEPA) project development process as a balanced and streamlined approach to transportation decisionmaking that takes into account both the potential impacts on human and natural resources and the public's need for safe and efficient transportation improvements. 🐾 www.fhwa.dot.gov.

An additional resource for projects dealing with the impacts of infrastructure on watershed resources is *Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects*. This approach, which was developed by a federal interagency steering team including the Federal Highway Administration, puts forth the conceptual groundwork for integrating plans across agency boundaries and endorses ecosystem-based mitigation. The document describes ways to make the governmental processes needed to advance infrastructure projects more efficient and effective, while maintaining safety, environmental health, and effective public involvement. It also describes a general ecosystem protection approach useful for watershed planning. 🐾 To read more about Eco-Logical, go to www.environment.fhwa.dot.gov/ecological/eco_index.asp.

Natural Resources

USGS maintains vast resources of information on physical processes and features such as soil and mineral resources, surface and ground water resources, topographic maps, and water

quality monitoring programs. Regardless of whether you include representatives from USGS in your stakeholder group, USGS will most likely be a valuable resource in the characterization phase. 🐾 Go to www.usgs.gov to find state contacts.

Public Lands Management

The Forest Service, an agency within USDA, manages the 195 million acres of public lands in national forests and grasslands. Each national forest and grassland in the United States has its own management plan. The plans establish the desired future condition for the land and resources and set broad, general direction for management. Most plans for the national forests were approved in the 1980s, and, by law, national forests revise their plans every 15 years or sooner. 🐾 You can reach your local Forest Service managers and their resource staff through the Forest Service Web site at www.fs.fed.us. DOI's Bureau of Land Management manages 261 million surface acres of America's public lands, primarily in 12 western states. 🐾 For more information go to www.blm.gov.

Threatened and Endangered Species Protection Programs

The U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration jointly administer the federal Endangered Species Act. USFWS has a program called Endangered Species Program Partners, which features formal or informal partnerships for protecting endangered and threatened species and helping them to recover. These partnerships include federal partners, as well as states, tribes, local governments, nonprofit organizations, and individual landowners. 🐾 Go to <http://endangered.fws.gov/partners.html>.

The USFWS's Coastal Program provides incentives for voluntary protection of threatened, endangered, and other species on private and public lands alike. The program's protection and restoration successes to date give hope that, through the cooperative efforts of many public and private partners, adequate coastal habitat for fish and wildlife will exist for future generations.

Water Quantity Issues

The Bureau of Reclamation (BOR) is a water management agency within DOI that works with western states, American Indian tribes, and others to meet new water needs and balance the multitude of competing uses of water in the West. If your watershed planning effort is in one of these states and water quantity is likely to be a key issue, consider involving BOR. 🐾 For more information go to www.usbr.gov.

Wetland Protection Programs

Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into waters of the U.S., which include many types of wetlands. This program is jointly implemented by EPA and the U.S. Army Corps of Engineers. In addition, USFWS, the National Marine Fisheries Service, and state resource agencies have important advisory roles. If your watershed includes wetlands, you might want to contact representatives from one of these agencies to identify what management programs exist or what data are available. 🐾 Go to www.epa.gov/owow/wetlands for links to laws, regulations, guidance, and scientific documents addressing wetlands; state, tribal, and local initiatives; landowner assistance and stewardship; water quality standards and section 401 certification for wetlands; monitoring and assessment; wetlands and watershed planning; restoration; education; and information about wetland programs across the country.

Laws Affecting Watershed Management

Dozens of federal statutes and hundreds of regulations affect how watersheds are managed. Most of the key legal programs are outlined above. 🐾 For a more complete list of these laws and regulations, go to www.epa.gov/epahome/laws.htm (administered by EPA) and www.fws.gov/laws/lawsdigest.htm.

Advance Identification (ADID) and Special Area Management Plans (SAMPs) are two types of wetland/watershed planning efforts that EPA and other stakeholders use to enhance wetland protection activities. ADID is a process that involves collecting and distributing information on the values and functions of wetland areas so that communities can better understand and protect the wetlands in their areas. EPA conducts the process in cooperation with the U.S. Army Corps of Engineers and in consultation with states or tribes. Because ADID efforts are usually based on watershed planning, they are extremely compatible with geographic and ecosystem initiatives like the watershed approach.

SAMPs are developed to analyze potential impacts at the watershed scale, to identify priority areas for preservation and potential restoration areas, and to determine the least environmentally damaging locations for proposed projects. SAMPs are designed to be conducted in geographic areas of special sensitivity under intense development pressure. These efforts involve the participation of multiple local, state, and federal agencies. The Corps of Engineers initiated the development of SAMPs and works with EPA. ↪ To find out if a SAMP has been conducted in your watershed, go to www.spl.usace.army.mil/samp/samp.htm.

Wildlife Protection Programs

USFWS manages the Partners for Fish and Wildlife Program. Under the program, USFWS staff provides technical and financial assistance to private landowners and tribes who are willing to work with USFWS and other partners to voluntarily plan, implement, and monitor habitat restoration and protection projects. ↪ Go to www.fws.gov/partners.