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# Executive Summary

More than twenty states are known to be developing or implementing management frameworks that use watersheds as the organizational basis for integrating water resource protection and restoration activities. These frameworks address the process and procedures for coordinating activities—from public outreach to strategic monitoring and assessment to integrated management. Seventeen of these states have used, or are currently using, technical expert facilitators to help design their frameworks. This document focuses on thirteen of these states where facilitation efforts have been completed and frameworks are being implemented:

Alaska	New Jersey
Arizona	Tennessee
Delaware	Texas
Georgia	Utah
Kentucky	Washington
Nebraska	West Virginia
North Carolina	

The purpose of this document is to describe how facilitation has helped these states, and to provide useful recommendations for states that are considering the use of facilitation for framework development.

Facilitation can be used to guide states through a challenging process that includes examining what is possible and beneficial in a statewide watershed approach (scoping), framework design and development, transition planning, and framework documentation. This support often includes a portion or all of the following:

- education on statewide watershed management and experiences in other states
- consultation on approaches for organizing and developing a statewide framework
- management of the process for designing and developing statewide frameworks
- *neutral* facilitation of discussion and consensus building
- mediation among framework development group members to resolve differences
- documentation of the framework to provide a long-term reference for a state
- assistance in making the transition to the new framework

Facilitation services have varied for each state depending on its needs, plans, perspectives, and available resources. States like Alaska, Nebraska,

New Jersey, North Carolina, Tennessee, and Washington used facilitation services for specific, short-term efforts aimed at “getting the ball rolling.” Other states such as Arizona, Delaware, Georgia, Kentucky, Texas, Utah and West Virginia have used facilitation comprehensively to help initiate, design, and establish a management framework.

According to these states, the basic attributes for a good watershed management facilitator include being able to:

- communicate the issues involved in statewide watershed management effectively
- encourage open discussion and build consensus
- provide structure and focus for the development process
- adapt facilitation styles from formal to informal as needed

A state’s decision whether it could benefit from facilitation can be based on several factors, but largely hinges on the experience and resources the state has at its disposal and the number of agencies and organizations that want to be a part of framework design. States that can devote significant staff time to organizing, planning, mediating, and documenting tasks, or that are designing a framework involving only one agency section or division, may choose not to rely as heavily on facilitation. States that have less available staff time and experience, or that have multiple potential watershed partners, may find facilitation services vital to make progress in developing or enhancing their approach.

Part 1 The Watershed Management  
Facilitation Tool





## 1.0 Introduction: What Is Facilitation and Why Is It Being Used?

### Growth of Statewide Watershed Management Frameworks in the United States

Over the last decade, more than 20 states have embarked on statewide watershed management. Watershed management is not a new regulatory program, but rather a way of coordinating existing programs and building new partnerships to better achieve shared water resource management goals and objectives (Figure 1). Success is measured in terms of improving and maintaining environmental quality and protecting public health (i.e., watershed ecosystem integrity). The term *watershed*, in this context, is broadly defined as the geographic delineation of an entire water body

system and the land that drains into it. The topographical ridge lines that define the boundaries of a watershed provide a natural basis for organizing stakeholders, tying the people to the resource, and helping them focus on solving common problems. As a result, a watershed serves as a convenient tool for integrating water resource protection and restoration activities.

Integrated management doesn't just happen. Because watershed management activities frequently involve many public and private efforts, significant coordination is

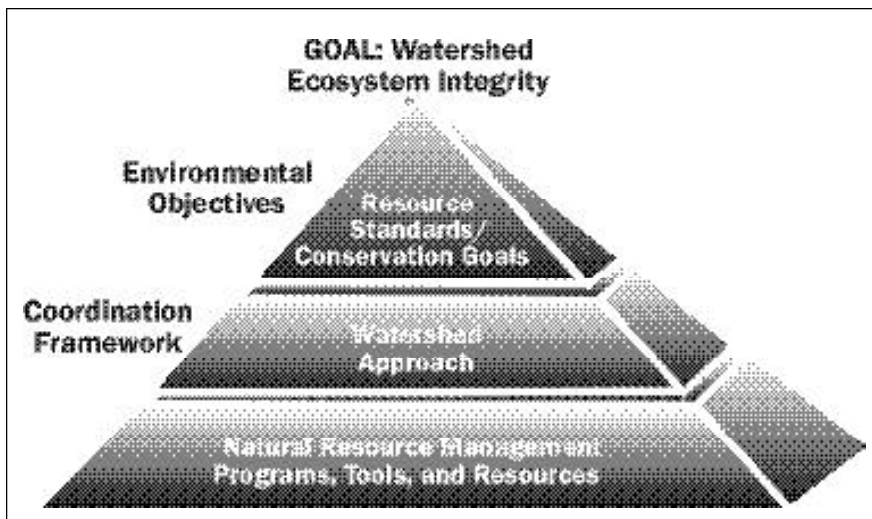


Figure 1. The Emerging Watershed Management Framework

essential to sound decision making and management. To make coordination easier and more effective many states have designed and documented management frameworks, or a lasting process for partners working together (Figure 2). These frameworks provide a support structure for coordinating efforts, including operating procedures, time lines, and ways to communicate.

### Just What Are These States Coordinating?

Generally, the statewide frameworks have three common elements (Figure 3):

(1) geographic management units, (2) stakeholder involvement, and (3) a repeating, 5-year watershed management cycle. Although each state has designed a unique management cycle, typically partners agree to key watershed management activities and an operational time line for carrying out these activities statewide. Activities usually include:

- Strategic data collection and monitoring
- Assessment by watershed
- A priority ranking and resource targeting system

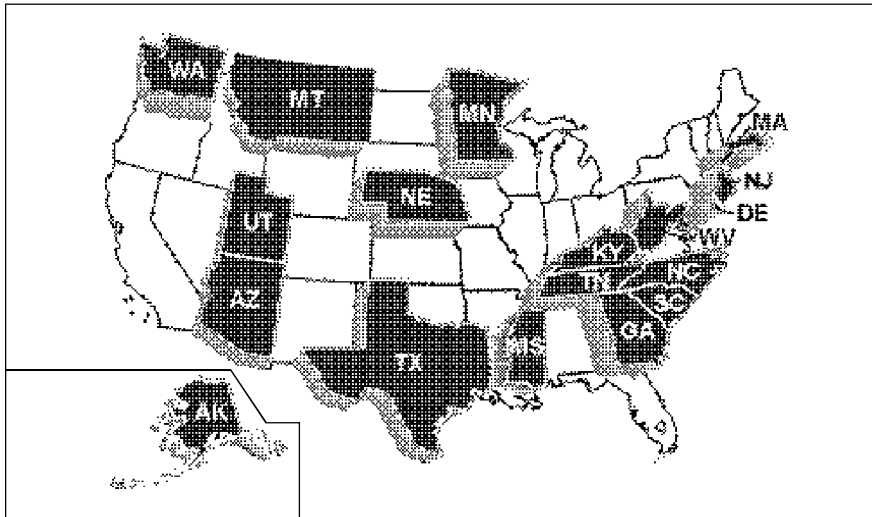


Figure 2. States Developing and Implementing Statewide Watershed Management Frameworks

- Development of management strategies
- Management plan documentation
- Plan implementation

These agreed-upon or common management units, management activities, and time lines make it easier for watershed management partners to work together on common problems. Figure 4 illustrates how watershed management activities can be scheduled and sequenced throughout an entire state using a 5-year cycle. For illustration, activities have been simplified into five categories,

shown in the legend at the bottom of the figure. Activities are sequenced through five watershed groupings, shown on the left.

The management cycle is a planning tool that improves the ability of participating organizations to collaborate on complementary water quality objectives. The cycle steps do not restrict participants from undertaking activities other than those listed in an individual step. Rather, each cycle step places an emphasis on a particular activity. For example, implementation of selected projects that do not require monitoring or assessment can be initiated early in the management cycle before the focused implementation step. In addition, there are many circumstances where monitoring and assessment activities will occur outside the intensive monitoring and assessment periods. The statewide cycle can be especially accommodating to local organizations that have completed steps ahead of the statewide schedule. However, experience from statewide watershed states indicates that local and state schedules often converge over time due to the improved opportunities for coordination that are supported by the schedule.

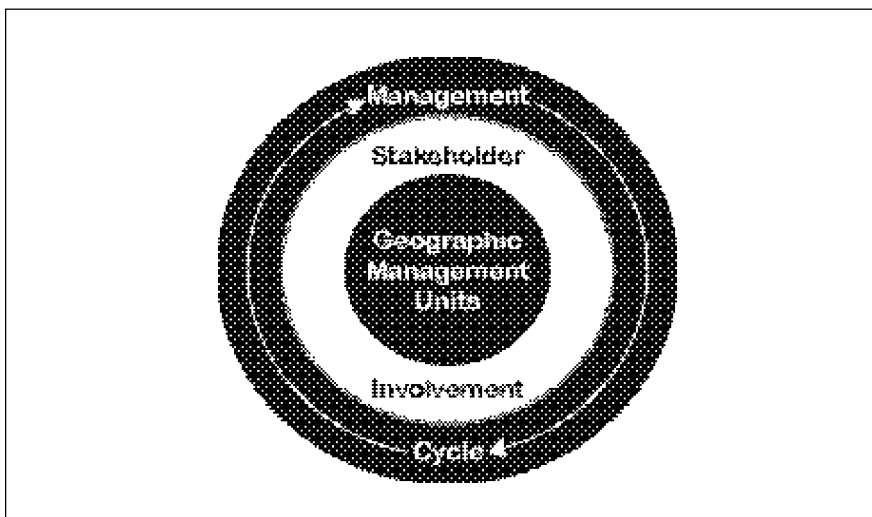


Figure 3. Common Elements of Statewide Frameworks

Designing a watershed management framework is hard work and requires careful up-front planning. For example, the management cycle illustrates the interdependence of these management activities and the importance and complexity of timing and coordination even within a single program. Adding to the complexity of framework design is the number of watershed partners at the table. Although often initiated by state water quality agencies, many existing statewide watershed management frameworks (particularly those designed in recent

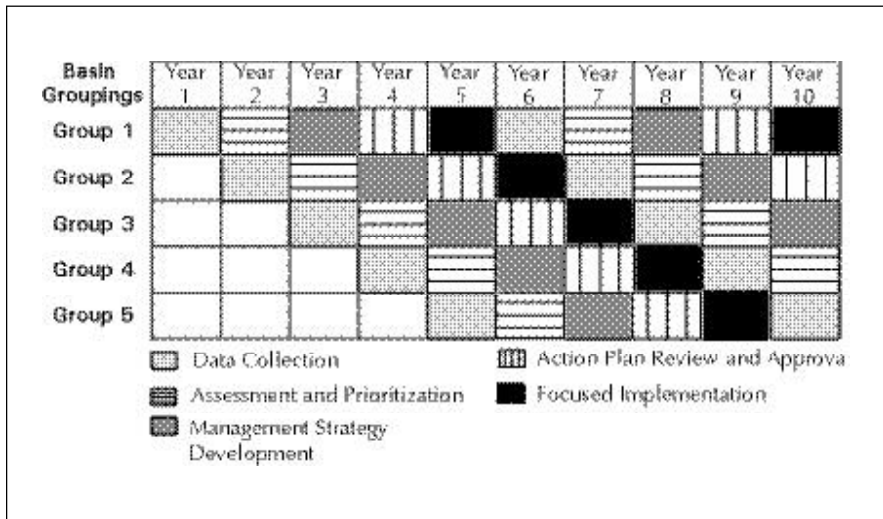


Figure 4. Example Statewide Watershed Management Schedule

years) include partnerships between multiple agencies covering local, state, and federal scales.

For more specifics on elements of a statewide watershed management approach, refer to Watershed Academy Information Transfer Series Document No. 2, *Watershed Protection: A Statewide Approach*, (EPA841-R-95-004). Also, two courses on this topic are available through the Academy: the 2-day *Watersheds 102: The Statewide Approach to Watershed Management* and the half-day *Watersheds 104: Executive Overview of the Watershed Approach*. For more

information on these courses, check EPA's website at <http://www.epa.gov/owow/watershed/wacademy.htm>.

## The Role of Facilitation

### What Is a Facilitated Approach?

Many states want to design and build a strong, durable, yet flexible watershed management framework. However, just getting started can be overwhelming for some because of the complexity of issues and number of interested partners. Once the design process begins, keeping partners involved, focused, productive, and unified requires substantial time and skill. *Facilitation* can be used to organize and guide states through this challenging process.

Many of us are familiar with the narrow definition of facilitation where a neutral party focuses entirely on the process of a meeting and serves as a moderator of discussion. In this document, however, the term *facilitate* is used broadly to mean "to make things easy or easier" (Webster's), and it includes a wide range of assistance and support. For example, a facilitated approach often includes a portion or all of the following:

- Education on statewide watershed management and experiences in other states
- Consultation on approaches for organizing and developing a statewide framework
- Management of the process for designing and developing statewide frameworks
- *Neutral* facilitation of discussion and consensus building
- Mediation among framework development group members to resolve differences
- Documentation of the framework to provide a long-term reference for a state
- Assistance in making the transition to the new framework

The approach has varied for each state depending on its needs, perspectives, and available resources. Some states have used facilitation services only to "get the ball rolling" or for specific, short-term efforts. Other

states have used facilitation comprehensively to initiate, design, and establish a management framework. The purpose of this document is to describe how facilitation has helped many states progress in developing and implementing watershed approaches. This document provides useful recommendations for states that are considering the use of facilitation for framework development.

## Which States Have Used a Facilitated Approach?

Seventeen states are known to have used (or are currently using) facilitators to help design their watershed management frameworks. This document focuses on 13 of these states where facilitation efforts have been completed and frameworks are being implemented:

Alaska	North Carolina
Arizona	Tennessee
Delaware	Texas
Georgia	Utah
Kentucky	Washington
Nebraska	West Virginia
New Jersey	

## How and Why Has Facilitation Been Used?

The types of facilitation services received by each of the 13 states are summarized in Table 1. We asked representatives from each state why they sought facilitation assistance, and here are some of their responses:

**Alaska:** “The objective of the Department of Environmental Conservation (DEC) was to establish partnerships with a broad range of stakeholders. DEC did not want primary responsibility for establishing or maintaining the statewide watershed framework. The independent facilitator was a logical extension of this strategy and was in fact necessary for development of the broadly based Alaska Watershed Partnerships framework.”

**Arizona:** “USEPA [U.S. Environmental Protection Agency] Region 9 sponsored an information session on the watershed approach. Participants responded favorably to both the watershed approach concepts and the workshop presenter (who later became our framework development facilitator).”

**Delaware:** “The Delaware Department of Natural Resources and Environmental Control is a comprehensive natural resources management agency with divisions overseeing every conceivable aspect of the environment. We in the Surface Water Division realized that, if we were to propose a watershed approach that involved the coordination and integration of activities with other divisions, an objective facilitator would be necessary to guide the framework development process.”

**Georgia:** “We were starting something new, and we wanted to learn from somebody who had already gone through the framework development process. We hoped to build on the good ideas generated by states who pioneered the statewide approach, and avoid potential pitfalls where they could be foreseen because of others’ experiences.”

Table 1. Summary of Facilitation Services Provided to 13 States

Types of Assistance Provided	States												
	AZ	DE	GA	AK	KY	NC	NE	NJ	WA	TN	TX	UT	WV
Identifying stakeholders to include in the framework design	P	P	P	P	P	P	P	P	P	P	P	P	P
Educating staff and other stakeholders about the concepts of the watershed approach	P	P	P	P	P		P	P	P	P	P	P	P
Developing or clarifying common goals and a vision to guide framework design	P	P	P	P	P	P	P		P	P	P	P	P
Developing a work plan and milestones for framework design	P	P	P	P	P	P	P		P	P	P	P	P
Planning workshops or work sessions, including developing agenda	P	P	P	P	P	P	P	P	P	P	P	P	P
Writing work session summaries/minutes to distribute to the group	P	P	P	P	P	P	P	P	P		P	P	
Documenting the outcomes of group discussion	P	P	P	P	P	P	P		P		P	P	P
Presenting alternative options or strategies for the group to consider in key decision areas	P	P	P	P	P	P	P		P	P	P	P	P
Providing <i>neutral</i> facilitation of group discussion and consensus building	P	P	P	P	P	P	P		P	P	P	P	P
Actively mediating among group members to identify areas of agreement and disagreement and to resolve differences	P	P	P	P	P	P	P		P		P	P	P
Designing detailed framework elements	P	P	P	P	P	P	P				P	P	P
Developing a watershed or basin management framework													
documentation	P	P	P	P	P	P	P	P			P	P	P
technical editing	P	P	P	P	P	P	P				P	P	P
production design	P	P		P	P	P	P				P	P	P
other	P	P		P								P	
Making the transition													
clarifying short-term actions needed (e.g., next steps)	P	P	P	P	P	P		P	P		P	P	P
developing a transition plan	P	P	P		P						P	P	
helping to set up forums	P	P	P		P								P
staff training	P	P	P						P				P
other			P										

**Kentucky:** “We were exposed to examples of facilitated statewide frameworks at an EPA Watershed Academy training session, and wanted to achieve similar results in Kentucky. Additionally, our previous experience indicated that facilitated multi-stakeholder initiatives have been much more successful than non-facilitated efforts.”

**Nebraska:** “Our staff had very little previous experience with watershed approaches, and no additional time to manage framework development and document the results ourselves. We needed to learn from others’ experiences, and the support to design and document our statewide framework.”

**New Jersey:** “We [Office of Environmental Planning] had been promoting the idea of a statewide watershed management framework for years, and were frustrated at the lack of buy-in by other agency program heads. We needed to bring in an outside party who could demonstrate to our department’s managers that a statewide framework is a valid idea, and that other states have overcome issues similar to ours and are already implementing frameworks.”

**North Carolina** (first state to use facilitation to define and document a framework): “In North Carolina we had a diverse set of water quality agency staff with a wide range of ideas and concerns regarding a watershed approach. We knew that we needed a skilled consensus-builder to help us clarify and document our vision of a statewide framework.”

**Tennessee:** “We [Water Pollution Control Division] were in the midst of developing our framework, and management was asking for more detail on how the agency could continue to build its watershed approach. We wanted someone with experience to share ideas on what other states were doing and to help us think through useful next steps.”

**Texas:** “We had been developing components of a watershed approach for a considerable amount of time, and we knew we needed assistance to help us focus our efforts and expedite the preparation of a written framework document that could pull all of the pieces together into a coherent, user-friendly reference.”

**Utah:** “In the beginning, I was the only person advocating a watershed approach. Also, I was not in an administrative or management position to make the decision to develop a watershed approach. I needed a more substantive presence to help educate staff and to help develop a common vision for a watershed approach.”

**Washington:** “Facilitation was offered as part of a lawsuit settlement agreement between plaintiffs and USEPA Region 10. We [Washington Department of Ecology] had already begun a design process for a watershed approach. Initially, our water quality programs were not enthusiastic about outside assistance. However, after several facilitated work group meetings, most participants fully supported the facilitation assistance.”

**West Virginia:** “As discussion of the concept of the watershed approach progressed [in the Office of Water Resources], it was clear that one agency didn’t have adequate authority to address the multiple issues that needed

to be considered. OWR assumed leadership, but knew that outside assistance was needed to enhance the process of consensus building.”

## Benefits of Facilitation

So how did the facilitation efforts turn out? Perspectives from states are provided below, along with some additional observations from the facilitators. (Note: More detailed descriptions of accomplishments and progress in states are provided in Part 2.)

## Reflections from States

**Alaska:** “Facilitation has given us the capability to have a statewide watershed framework that can develop without relying on a single agency as the sponsor. The exchange of ideas between work group partners during the framework development process has raised the level of trust and cooperation among many of those involved and affected by resource management decisions in Alaska.”

**Arizona:** “Facilitation led to a watershed approach that was better thought out and had a higher degree of buy-in from participating programs, agencies, and citizen watershed organizations. Facilitation allowed the agency to take the necessary time for head scratching and soul searching all through periods of uncertainty within the agency. Facilitation enabled us to take the brainstorming during the two-year development period and turn it into a coherent strategy.”

**Delaware:** “The process of developing a coordinated basin approach helped to address other long standing issues between agency Divisions, and led to improved teamwork and communication within the agency.”

**Georgia:** “The knowledge and experiences of the facilitator provided a base of ideas to work from and tailor to Georgia’s needs. Importantly, facilitation kept us moving forward and on schedule. Framework components were completed during work group meetings, and the facilitator quickly turned around written results. We simply didn’t have the resources to do this by ourselves. In the end, a more thorough framework was designed and documented, and the facilitation process really helped enhance working relationships among the framework development work group members.”

**Kentucky:** “Facilitation helped neutralize’ our agency’s leadership role in developing the framework and we achieved much greater partner participation than we anticipated at the beginning. The facilitator’s knowledge of experiences in other states provided the diverse work group building the framework with helpful insights and ideas. Facilitation also kept the agenda moving and forced answers to questions we may have overlooked or minimized. The end result was a very professional and complete framework.”

**Nebraska:** “Educating staff and other stakeholders about watershed approaches by an expert gave credibility to our framework development process. Neutral facilitation ensured that this was an open’ process and not perceived as a surface water effort. Planning work group sessions, documenting outcomes of group discussions, and preparing the framework document were the most helpful services. Without the assistance in developing activity schedules and synchronizing permit reissuance, it is



likely that less coordination and extended deadlines would have occurred.”

**New Jersey:** “Information provided by the facilitator helped us move forward by giving specific examples of how our management processes and activities could be more efficient and effective through a statewide watershed approach. Several of our framework’s components were modeled after ideas and materials shared by the facilitator.”

**North Carolina:** “Neutral facilitation helped us to focus collectively on what we wanted to achieve through a basinwide planning approach, and on defining a coordinated approach to implement that vision. The process led to greater understanding of one another’s roles among participating programs, and helped us to establish a management cycle of activities that improved efficiency and generated products such as monitoring plans, assessments, modeling analyses, and management plans to meet key milestone dates on time.”

**Tennessee:** “Providing more in-depth information on the principles and elements of a statewide watershed approach helped us to better understand the approach, and produced more internal and external support to continue enhancing a watershed approach for Tennessee. In essence, we believe the facilitation validated and expedited the process that we used to develop our watershed initiative.”

**Texas:** “The facilitator helped keep work sessions focused and promoted innovative thinking. He also helped our staff articulate fairly complex aspects of synchronizing individual program activities with the overall statewide basin management cycle. This resulted in a higher quality framework document than we originally anticipated, in a shorter amount of time than we could have accomplished on our own, and with greater buy-in by the programs participating in the framework.”

**Utah:** “It made the process happen. Without the education, consensus building, mediation, and physical support (e.g., documentation) the watershed approach framework development process would not have occurred in Utah. Facilitation definitely made our watershed approach framework more comprehensive and inclusive.”

**Washington:** “Facilitation helped us maintain the operational focus of the agency during a process of change and transition to the watershed approach. Facilitation allowed us to develop a realistic plan for integrating other agency program areas for example: permits, loan/grant, 303(d), 305(b), 303(e), NPS, water quantity, waste, toxics. These included adaptations to the watershed approach to accommodate current agency philosophy, guidance, and policies.”

**West Virginia:** “The process of neutral facilitation was designed to encourage multi-agency participation, not aimed at or driven by one agency. The facilitator helped us develop a work plan and milestones, and directed discussion toward achievable outcomes without being bogged down with discussion. Some issues did require discussion and argument, and the facilitator’s mediation was helpful in resolving them. As the

process matured, it was clear that facilitation was essential to maintaining and increasing involvement, interest, and ultimate commitment of the multiple agencies. Now, the framework is statewide, includes more than just the original players, has support from administration [from office chiefs to agency directors to the Governor], and other agencies are lined up to join.”

## More Observations From Facilitators

Most of the benefits that we have witnessed in the states where facilitation services have been provided are well covered by the reflections provided by the state representatives. Clearly, the sharing and scrutinizing of ideas among states has helped to refine and evolve good ideas into more effective frameworks. From the facilitators’ perspectives, some of the key benefits of the process include:

- Providing types of technical support not typically available within resource management agencies and organizations.
- Creating an open, focused, creative, productive, and challenging environment where working relationships and partnerships that will carry over into framework implementation can develop.
- Identifying concrete and common goals and objectives for framework design. (“What’s in this for my program, agency, or organization?”)
- Presenting or generating alternative options for framework development groups to consider in key decision areas.
- Helping to create a sense of group momentum and accomplishment.

## 2.0 Common Components of Facilitation: What's Involved?

States use facilitation services to meet different needs. Some states, such as Tennessee and New Jersey, bring facilitators in for short-term, targeted assistance. Other states use facilitation for the entire process from organizing the initiative to implementing the watershed management framework. Regardless of how comprehensive any one state's use of facilitation is, the components of facilitation generally fall into one of five areas: scoping, work group formation, framework design and development, framework documentation, and transition planning. This section describes each of these areas in more detail.

### Scoping

The term *scoping* is used to describe facilitation services that help a state to learn more about a statewide watershed management approach and to examine whether such an approach would be beneficial. It often involves gathering agency and organization leaders together to share presentations on components and benefits of management frameworks in other states, and to discuss whether some or all of the management challenges they're facing can be addressed better through a watershed approach. Facilitated dialogue can help to identify common goals and objectives and to establish the scope and magnitude of interest for developing a framework. For example, in Texas, the scoping process resulted in a decision to build the first version of the framework internally within the Texas Natural Resources Conservation Commission. In contrast, the scoping process in Kentucky led a Division of Water internal work group to expand the framework development team to include more than 30 agencies and private organizations representing local, state, and federal interests.

The value of the scoping step should not be underestimated. In Washington state scoping was preempted by the conditions and schedule dictated by a court ordered settlement agreement. Many of the logical partners for the Washington framework were not included in the planning process. The Department of Ecology and the Governor's office is currently working to reopen the framework design process to better incorporate missing partners into the framework.

In West Virginia, scoping produced a multiagency approach that linked framework development with other initiatives, including strategic planning, permit reengineering, a performance partnership agreement with EPA, and a TMDL lawsuit settlement.

The facilitator's role in the scoping process varies, but typically includes services such as the following:

- Providing written and oral background information on watershed management and statewide approaches through informal discussions and formal presentations.
- Working with a sponsor to plan and conduct seminars or workshops on the approach.
- Facilitating identification of common goals and objectives to guide framework development, and evaluation of current methods for managing watershed resources for their effectiveness and potential gaps.
- Facilitating discussion at seminars or workshops to examine whether framework development or refinement should be further pursued.
- Documenting discussions and group consensus. (Is there a common vision?)

## Work Group Formation

Most states have used a work group method to design and develop their frameworks. As its name suggests, this method involves assembling a work group from interested participants who are willing and able to spend their time developing the framework.

In Alaska, scoping led to formation of a work group that included state-wide partners from several federal, state, and local agencies, trade organizations, environmental groups, and community-based citizen organizations. Shared leadership among work group members has been vital to the survival of the Alaska Watershed Partnerships framework.

In Utah, a work group was formed within the Division of Water Quality. The work group included staff from all affected programs representing a wide range of department experience and several grade levels (e.g., project staff, middle managers, and senior managers). In this sense, the Utah Framework development workgroup resembled a typical Total Quality Management Team that is designed to incorporate/represent as many perspectives in the production process as possible. The facilitator and work group ground rules encouraged the use of this diversity to create a balanced and integrated framework.

Factors to consider when forming a work group include:

- Given the common vision of the framework, who should be in the work group to develop an approach that meets expectations?
- How will the work group operate and what will be expected of its members?
- Who can handle work group meeting logistics such as finding meeting space, maintaining mailing lists and communicating meeting times, taking meeting notes, and so forth?
- How can a work group that's inclusive and of manageable size be formed?

- How can a work group be initiated without seeming to encroach on others' "turf"?

Facilitation is not required for this task, but can be used to assist in some or all of these areas. For example, facilitators have:

- Helped leaders to develop a strategy for work group formation, including advice on membership and methods for achieving participation.
- Helped prospective work group members understand what the framework development process will entail and what will be expected of them (roles, time commitments, etc.).
- Assisted interested groups in brainstorming whether they have "at the table" everyone who needs to be involved for an effective framework.
- Provided examples of organizational structure and ground rules for work group operation that have worked in other states, and tailored them if needed.
- Helped to establish a work plan to initiate and guide the work group through the framework development process.

## Framework Design and Development

In the framework development phase, facilitation is used to help participants reach a series of milestones established in their work plan. Typically, meeting agendas focus on specific framework components such that by the end of the session the work group has completed its design or reached an understanding of what needs to be completed at the next meeting or through between-meeting assignments.

Facilitators frequently assist states by planning and preparing the agenda for these meetings or workshops in accordance with the overall work plan. Facilitators are often looked to by states to provide neutral leadership or mediation of framework design work sessions. A variety of facilitation techniques (e.g., round robin discussion, break-out groups, large-group critique of "strawman" ideas) can be used to ensure opportunities for all group members to stay actively involved and provide input to the framework design. It is the role of the facilitator to make sure work group members understand what outcome they're working toward, pose key questions for the group to answer, and provide examples from other states to aid in understanding and provide possible models to follow as needed. In short, facilitators make it easier for the group to design and build its framework, sometimes sharing options for how components could be designed, but not "telling" them how components "should" be designed. Occasionally, experienced facilitators are asked to play a strong advisory role in the technical design of components because of their background in a given area and their ability to share what has worked well or not worked well elsewhere.

Sometimes state work groups use smaller subcommittees with experts who work out framework component details for the larger group's consideration. This can be effective where the work group is fairly large. For

example, Kentucky's work group was composed of more than 30 agencies and organizations. It used five subcommittees to design the bulk of its framework, using a shorter period of time than that needed by states where one work group designed all of the components.

One challenge posed by the multiple subcommittee approach, however, is maintaining communication among subcommittees such that linkages between components are understood or worked through. The facilitator plays a strong role in ensuring that communication is maintained and linkages are identified. Also, it is possible that the larger work group will not agree with everything recommended by a subcommittee and sometimes components need further design work. West Virginia established issue-oriented subcommittees on an as-needed basis. The subcommittees reported progress or recommendations on a monthly basis to the full work group.

Texas, which focused initial framework development within the state water quality agency, used a facilitator and watershed coordinator team for part of its development process to move around to each individual program to work out their roles and responsibilities in the management cycle. This method was combined with periodic meetings of a larger work group, which focused on designing the overarching framework components that supported coordination among the agency's programs.

Initial emphasis in the design stage is often placed on defining the primary coordinating elements of the framework geographic management units for coordinating over space, a watershed management cycle and statewide schedule for coordinating over time, and forums for different levels of stakeholder involvement (e.g., statewide steering committees, river basin teams, local watershed task forces or associations, and partner networks). Consensus in these areas is essential because they form the basis for integrating efforts and drive the location and timing of daily operations for several types of activities. Facilitation can help build consensus by helping group members establish and apply criteria for making their decisions. Where experience among group members making these decisions is lacking, facilitators can provide examples of criteria and methods used elsewhere.

Once the primary coordinating elements of the framework have been designed, emphasis usually turns to detailing roles and responsibilities for operating the framework and carrying out the cycle of management activities. There are several types of roles to define including technical, policy-making, coordination, communication, and support (e.g., information management and administrative) roles. Experienced facilitators can be used to provide examples of roles defined in other states for entities such as basin coordinators, public information coordinators, statewide steering committees, technical basin teams, local advisory groups, and others. Additionally, some states (Georgia, Kentucky, Texas, Utah, and West Virginia) have used facilitation to map out detailed activity guides that communicate what each responsible entity will try to achieve at each step in the management cycle. In this process, each participating agency, organization, or program is asked to think through its actions, desired outcomes, and timing for each step in the cycle. The facilitator helps the groups think through the process, and then compiles the results into a

common reference guide so that each partner can see its own role and how its efforts integrate with those of the other partners.

Throughout the design process, a trained facilitator can assist state work groups by identifying issues or apparent gaps in the design that the group should address, or implications of design decisions such as the need for additional support or coordination to implement the design. In Nebraska, for example, facilitation helped to identify and rectify workload imbalances for certain key programs in the initial design of the statewide basin management schedule. In Kentucky, where partners didn't want to create another new coordination and communication forum to add to the many that already exist, facilitation led to the idea for a partner network that connected existing forums.

As is the case in any process where more than one person is involved, framework design team members might not always see eye-to-eye on how the approach should take place. Indeed, constructive debate often helps work groups to think through framework components completely and results in a stronger design.

Occasionally, however, there are issues where the work group can get stuck because of lack of consensus. Facilitation is useful in these circumstances to mediate among the group members to identify areas of agreement and disagreement, and to work to resolve differences by looking for common ground and a win-win outcome or a satisfactory compromise. Sometimes this process requires negotiations outside a group meeting.

## Transition Planning

Implementing a statewide framework involves more than reaching a consensus on coordinating elements and a framework design. The greatest challenge, perhaps, lies in translating the design concepts into routine daily operations. Practical considerations include assembling technical teams and advisory groups, hiring or appointing coordinators, maintaining adequate funding of key activities, maintaining communication and coordination, managing information, supporting and conducting outreach and public participation, and monitoring implementation of the framework and corresponding levels of success in meeting environmental goals and objectives. As the saying goes, "this is where the rubber hits the road," and good planning can help avoid pitfalls along the way.

Facilitation can play a significant role in helping partners plan for and begin the transition from current operations to those under a statewide watershed management framework. For example, experienced facilitators can help framework partners to:

- Identify areas where standard operating procedures should be updated or new guidance developed to support implementation (including areas where revisions could capitalize on the framework structure to improve efficiency or effectiveness).
- Clarify resource needs for implementation (including how leveraging among partner resource bases will contribute to implementation).

- Establish outreach and training plans to see that participants and the public are oriented to the new framework and understand procedures, expectations, and opportunities.
- Identify legal or institutional barriers that could inhibit or block implementation of any design components, and determine next steps to address them.
- Outline keys to success and indicators to monitor to ensure that efforts stay on the right track.

In West Virginia, the facilitator helped in the transition by planning and conducting a kick-off meeting for the Interagency Steering Committee that oriented new members to the new framework. She also helped finalize a schedule for synchronizing all National Pollutant Discharge Elimination System (NPDES) permits with the watershed cycle and developed a job description for the new basin coordinator position.

In Georgia, facilitation was used to guide basin team members through the first set of basin plans for the Chattahoochee and Flint River basins. The facilitators helped members identify and compile available information on basin features and condition, clarify management priorities, and prepare initial action plans to address priority issues. The process helped team members establish their procedures to make it easier in the next basin groups.

A facilitated transition planning workshop was used in Utah to develop an activity guide for implementation of the watershed management steps for a pilot watershed (Jordan River). Participants were asked to provide their program's or organization's objectives, needs, and outputs for each step of the watershed planning and management cycle. The workshop identified many areas of redundant activity and opportunities for increased levels of collaboration. It also helped to clarify specific roles and responsibilities. This included an improved understanding of how local conditions will influence changes in each program's roles and responsibilities from one watershed management unit to the next. The results of the workshop were used to initiate activities within the Jordan River watershed.

## Framework Documentation

Documenting the progress and outcome of the framework development process is a valuable service that can be provided by facilitation. Frequently, the agencies or organizations participating in the framework development process are limited in the amount of resources available for documenting efforts. Staff are usually pressed for time, and writing meeting summaries or framework component descriptions falls to the bottom of the "to-do" list. Additionally, writing for a broad audience is not always the strong point of the scientists and engineers who frequently compose much of the framework development group. Facilitation can therefore expedite the process by providing quick turnaround on meeting summaries and offering strong writing skills that produce documents that can communicate with a broad audience. When efforts are documented along the way, work groups are often better able to see their progress.



Many states are compiling written summaries of their efforts into a single *framework document* that can serve as a common reference for all involved. The document can help participants understand and communicate the framework by summarizing its vision, goals and objectives, core components, and key roles and responsibilities, and the transition plan to implement the framework. Some states use the framework document like a memorandum of understanding among partners. Utah has included specific framework evaluation procedures in its document to describe how it intends to measure progress toward achieving its watershed approach goals.

In addition to helping to write and prepare framework documents, facilitators can play a key role in preparing states to use the documents. For example, facilitation can be used to help determine the purpose of a framework document. In Kentucky, facilitators helped the framework development work group reach the conclusion that it needed a document that not only would provide a reference for partners, but also would help sell the idea. This affected the organization of the document (making sure benefits were up front to achieve quick buy-in) and the format (designing a document that people would want to pick up and would find easy to read). In the end, the facilitators for Kentucky helped develop a brief flyer for the public, an executive summary for directors and others who needed a strong overview, and a detailed framework document for the practitioners charged with carrying out the framework.

In Alaska, the Watershed Partnerships framework is currently being documented in a series of short volumes. Each volume is focused on a different set of topics related to the use of the Alaska Watershed Partnerships Framework. For example, a local organization may not have an interest in working with agencies to develop a comprehensive watershed management strategy. These groups would not have a need for the agency maps and procedures that are described in Volume 4. However, they may have use for a description for establishing a volunteer monitoring program or a local information management and communication support network that are described in Volume 3.

To signal their support for coordinating watershed management efforts in West Virginia, 10 state and federal agencies and the Governor signed a Resolution of Mutual Intent to carry out their roles and responsibilities detailed in the West Virginia Watershed Management Framework Partners' Guidance Manual and Program Activity Guide. Through this, the document provided a commitment to and authority for implementing the framework. To help publicize the state's new approach, partners hosted an information session and signing ceremony in the Governor's office.

The Arizona framework document will be used for a series of agency wide training workshops to promote the transition to and implementation of the statewide watershed approach. Arizona, like several other states, produced its framework document in a notebook format that will be easy to update on a regular basis.

## 3.0 Considering a Facilitated Approach: How Do We Define Our Needs?

How do you know when or if you need facilitation assistance and the skills required to meet those needs? This section summarizes common themes from all states that have used facilitation, as well as special considerations or key questions to ask in tailoring the facilitation process to meet your needs.

### Common Themes

All states surveyed indicated that they used facilitation to:

- Learn from other states and spur innovative thinking. The states were undertaking something new. They believed they could build a stronger framework through learning about other states' successes, failures, and approaches.
- Remove or prevent the perception that the process is driven by one program, section, or agency. The staff believed they could maximize buy-in through using a neutral facilitator to minimize the sense of bias, control, or crossing onto others' "turf."
- Expedite the process. Some states were just getting started and already felt overwhelmed by existing responsibilities or tight framework development deadlines. Others had made progress in framework development, but had reached an impasse and stalled. All states said they used facilitation assistance to jump-start the process and move it along more quickly.

What are the basic attributes you should look for in a facilitator? All agreed that the person should be able to:

- Understand and effectively communicate the issues involved in statewide watershed management.
- Encourage open discussion and consensus building.
- Provide structure for the group's efforts and keep the group focused.
- Offer ideas and solutions that are based on the experience of other states and that weave together points of work group members.
- Adapt facilitation styles from structured to flexible, formal to informal depending on the work session objectives and participants, timing constraints, and other factors. For example, facilitators might need to use a structured, formal style in working with

senior managers and policy makers during the scoping process and briefing work sessions, but might need to use a blend of structured and flexible, formal and informal styles in facilitating the monthly meetings of the staff workgroup.

## Special Considerations/Key Questions to Ask

Do we have a basin coordinator on staff who can assist in the framework development process?

**Yes.** A basin coordinator can assist in the framework development process by organizing efforts, including planning the facilitation process, recruiting work group participants, and helping outline milestones to achieve; helping educate staff about the concepts of statewide watershed management; planning work sessions and documenting their outcomes; compiling or writing components of the framework document; and helping to keep framework development on track, including helping to achieve meeting objectives and making progress between meetings.

Having a basin coordinator might allow a state to have a smaller facilitation budget, targeting its facilitation assistance to specific issues or phases of framework development. Or, through leveraging the hours of the basin coordinator, the state could choose to redirect dollars otherwise spent on administrative services (e.g., writing meeting summaries) to give more in-depth attention to issues or to provide a more comprehensive range of assistance.

**No.** If a staff person does not have assigned responsibilities in his or her work plan for the tasks outlined above, the work will probably not be done without outside facilitation assistance. In such a case, the facilitator's key skills and attributes are (1) being organized and able to keep the group organized, (2) being able to keep efforts focused, (3) having experience with statewide watershed framework design, and (4) having the ability to effectively communicate key concepts and issues to the group and to communicate the group's framework design. These skills are helpful when a facilitator is working in tandem with a basin coordinator; they are crucial when he or she is operating without one.

Are we designing a multi-agency or single-agency framework?

**Multiagency.** States designing a multiagency framework face some unique challenges:

Since *how a multiagency process is initiated can greatly influence its outcome*, thoughtful planning up front with experienced facilitators can be critical in answering sensitive questions such as "Who should be at the table? How do we establish a common vision? How do we establish a workgroup that has authority and direction?"

Although one agency might be able to initiate and help lead the process, *that agency lacks the authority to manage the discussion and activities covering multiple resource management issues* outside its jurisdiction. Neutral facilitation is needed not only to build consensus but also to design and manage a process that neutralizes the issue of control and authority and provides a catalyst for partnership. This means the framework development process originally envisioned might evolve or change as new partners become active in the process.

- *Multiple agencies have multiple missions, perspectives, and priorities.* Active mediation is needed to find common ground and resolve differences.
- Multiagency frameworks add more opportunity for leveraging expertise and resources to address common problems. At the same time, *establishing complementary roles and responsibilities within an agreed-upon time line for multiple partners is more complex* than if operating within a single agency or section.
- *Multiagency initiatives often require a larger, more diverse group and involve a more complex group dynamic.* This requires that a facilitator use multiple large and small group techniques to help maintain and increase partner involvement, interest, and commitment. The tone that is set, and the way the group is managed during framework development can determine the success of framework implementation.

In short, if you are interested in designing a multiagency framework, you should consider using an experienced facilitator to assist in developing an outreach strategy, to resolve differences and find common ground through neutral facilitation and mediation, and to manage complex group dynamics.

**Single-agency.** States that have developed single-agency (or single-section) watershed management frameworks have had a more straightforward or predictable framework development process. These states indicated that facilitation did not change the process that would otherwise have been used to develop their watershed approach, but it did expedite the process. Most important to these states was a facilitator's ability to:

- Share experience from other states that have embarked on statewide watershed management.
- Ensure that programs are adequately coordinating efforts.
- Develop realistic time schedules for watershed management activities.
- Advise on synchronizing various program activities (e.g., NPDES permit renewal) with the watershed management cycle.

Do we want (or need) to link framework development to other initiatives?

Water resource agency staff often feel overwhelmed by existing duties and pulled in many directions by government mandates or internal management initiatives. Where this is the case, staff might view watershed framework development as just one more initiative or trend. In recent years, some states have directed facilitators to link framework development to initiatives or mandates such as the following:

- Internal strategic planning
- Permit reengineering
- Performance partnership agreements with EPA
- TMDL legal settlements

In fact, some states have used framework development as an “umbrella” process to ensure that initiatives complement one another and keep the big picture in mind. It is important to clarify the need for these linkages up front during the design of the facilitation process.

### What is the time frame for designing our framework?

Setting a deadline for completing your framework is crucial to making progress. Factors that influence that deadline will vary from state to state, but could include:

- The scope of your watershed approach and how many partners are involved. (Although wider scope and more partners might lengthen the time required to develop the framework, they don’t necessarily have to lengthen the time frame; i.e., more work can be compressed into the same time frame.)
- TMDL legal agreements, or other linkages listed above.
- Overall resources (staff time and support funds) available to pay for facilitation services, including any time frame for grants.
- Degree to which a common vision for the framework already exists.
- Current infrastructure. (Do some of the components of the framework fully or partially exist already?)

### How much will facilitation cost and how will we pay for it?

States embarking on facilitation will need to commit significant staff time to framework development as well as securing funds to pay for facilitation services. Generally, the work group that is designing framework components meets monthly over a 2-day period with the facilitator. Between monthly work sessions, the staff will likely have four or more hours of tasks to complete individually or in subcommittees. In other words, staff that you assign to the workgroup will likely devote 20 or more hours a month (or approximately 15 percent of their time) to framework development. Depending on the scope of the framework design, the work group might meet from 6 months to 2 years, with most processes taking 15 to 18 months. To signal commitment to the process, senior managers should not only make appointments to the work group but also adjust responsibilities of work group members and other staff to allow for meaningful participation in framework development.

The cost of facilitation services also depends on the scope of effort. To date, facilitation services provided to states have ranged in cost from about \$15,000 to \$125,000. States have funded facilitation services through:

- USEPA Office of Water contractor support (made available through the Office of Wetlands, Oceans, and Watersheds’ Assessment and Watershed Protection Division and the Office of Wastewater Management’s Permits Division)
- USEPA Office of Policy, Planning, and Evaluation

- Federal Clean Water Act Section 104(b)(3) grants issued by EPA
- State appropriation and grant funds

Do we have the executive support to see the process through?

Are the chief decision makers supportive of framework development? Efforts in some states have bogged down from lack of support by key executives. Where efforts are initiated by staff other than the agency head, staff should plan effective ways to explain the potential benefits of the watershed approach and the importance of manager support and leadership in other states that have developed frameworks. Scoping services from an experienced facilitator can be used to help inform key executives and to answer questions related to framework development and implementation based on experiences in other states.

How are we going to prepare ourselves to implement the framework?

In addition to designing framework elements, it takes considerable effort to plan for and make the transition to the new approach. Making the transition involves conducting outreach and training on the new approach to increase staff and stakeholder awareness and understanding, updating work plans to synchronize activities with a management cycle where appropriate, updating standard operating procedures and guidance to reflect the new approach, organizing forums that will be used to coordinate activities, and targeting resources to administer and implement the framework. This equates to a change in the work paradigm for many agencies and organizations, which can be intimidating and confusing for some, especially the first time through the management cycle.

You might want to consider using facilitation services to help smooth this transition. Experienced facilitators can offer tips to keep implementation on course and can provide support in navigating through previously uncharted waters.

## Summary

Many of the considerations described above are interrelated, and hinge on the degree of experience and resources that a state has at its disposal. Those agencies and organizations that can devote significant staff time to organizing, planning, mediating, and documenting the tasks involved might choose not to rely as heavily on facilitation. On the other hand, states with less available staff time and experience may find facilitation services vital to making progress in developing or enhancing their approach.

## Part 2 State Experiences

*The remainder of the document contains summaries for 13 states that have used facilitation services to varying degrees to help develop and implement a statewide watershed management framework. Each summary includes a description of how framework development was initiated, a timeline for development and implementation, and a summary of progress and accomplishments to date.*





# Alaska



The Alaska Watershed Partnerships framework has not been finalized. Several pilot projects that are using the elements described in the draft framework document are under way. The vastness of the Alaskan landscape and the patterns of human settlement have been a significant test of the flexibility of the common watershed elements in the framework development process. The Alaska watershed framework is distinguished by the commitment of a wide range of stakeholders to a process that does not rely on any single agency as its primary sponsor.

## Scoping

**Spring 1994.** The USEPA Region 10 Nonpoint Source Program sponsored a meeting in Juneau, Alaska, to propose the use of a statewide watershed approach as a framework for improved coordination among state and federal agencies. The outcome of the 3-day convening meeting, which included several state and federal natural resource management agencies, was a general agreement that a watershed approach should receive further consideration.

**June 1995.** The Alaska Department of Environmental Conservation (DEC) and USEPA Region 10 sponsored the “Alaska Statewide Resource Management Coordination Workshop” in Anchorage, Alaska. The workshop used a contracted facilitator to conduct the meetings. The purpose of the workshop was to include a wider range of stakeholders in evaluating the use of a statewide watershed approach for Alaska. In addition to DEC and USEPA, participants also included representatives of local governments, tribal corporations, industry groups, environmental organizations, and other state and federal agencies. The workshop was composed of several sessions designed to provide a common understanding of the common elements of the watershed approach, identify challenges and opportunities for an Alaska watershed approach, agree on a process to develop the framework, and define a work plan for framework development. Participants strongly supported the development of a statewide watershed framework.

A core work group for proceeding with the development process was identified. Many in attendance chose not to participate directly in the work group, but those organizations were included in a communication strategy that allowed them to continue to have input into the design process. Participants also agreed on the use of a contracted facilitator to support the core work group.

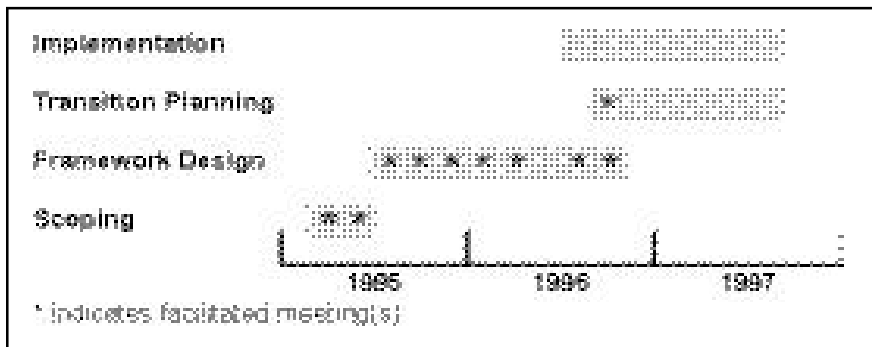


Figure 5. Alaska Framework Development and Implementation Timeline (thru August 1997)

## Framework Design

**July 1995 to August 1996.** The framework design process included seven facilitated sessions of the Statewide Watershed Work Group. The work group meetings were 2 days long and addressed a series of decision topics agreed on by the work group. The purpose of the facilitated discussion was to define the consensus position on the decision topic under consideration (e.g., geographic management units, watershed plans format and content, components of the planning and implementation process in individual watersheds). For several decision topics the work group decided to form task groups to develop more substantive recommendations for review and approval by the entire work group. The task groups included representatives from several different stakeholder groups, and they addressed Mission Statement, Watershed/Environmental Indicators, Partnership Communications, Information Management, and Statewide Cycle and Targeting Criteria. Progress was evaluated at each work group meeting, and each task group disbanded once it had reached consensus on proposed recommendations.

The Statewide Watershed Strategy Work Group remained intact throughout the entire design process with one exception. An industry association decided after several work group meetings that its membership did not support a watershed approach that included the coordinated activities of regulatory agencies. Its concern was that the framework would subject the association's constituency to another layer of regulatory approval in the permitting process. The association expressed concern that the framework would provide any watershed partner the opportunity to review, comment, and potentially object to a permit application made by one of its members. Other industry associations and regulated members of the work group did not share this view and remain active in the design and implementation of Alaska Watershed Partnerships.

Alaska Watershed Partnerships was selected as the title for the emerging framework. DEC was initially the primary sponsor for framework development and implementation. Over time, however, other partners have increased their level of commitment, and the framework is widely recognized to exist outside any individual agency's jurisdiction. Alaska Watershed Partnerships does not include a statewide cycle for rotation through the hydrological management units that were identified by the work group. Rather, partner agencies working in close conjunction with local agencies and stakeholders evaluate a specific set of criteria to determine if a particular location would benefit from the participation of the Alaska Watershed Partnerships (i.e., comprehensive watershed coordination of agency and stakeholder activities). The partnership has adopted a common series of components to guide activities within designated watersheds. However, these components are tailored in response to progress already made by local stakeholders.

## Transition Planning

**Fall 1996.** The final watershed work group meeting was held in October 1996 to adopt the compiled recommendations for the Alaska Watershed Partnerships. Each member had circulated the recommendations within its agency or organization for review and comment. Most participating agencies agreed to use the forums and procedures described in the draft framework document. The work group issued a request for candidate watersheds to all participating organizations.

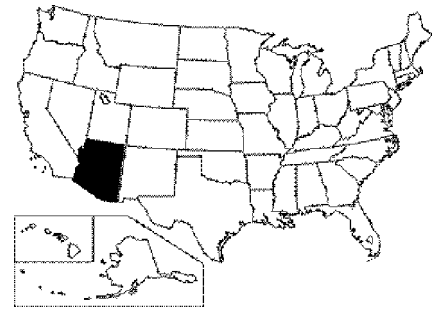
**Winter 1997.** The draft Alaska Watershed Partnerships summary framework document was released to the public. Formal adoption of the framework document is still pending for some of the participating agencies, most notably DEC. The final framework document, expected to be completed before January 1998, will be composed of a series of volumes that address different aspects of the Alaska Watershed Partnerships program:

- *Volume 1: Alaska's Watershed Framework - Summary Document* (completed).
- *Volume 2: Alaska's Watershed Framework - Tools to Support Watershed Partners.* Tools include integrated monitoring, watershed education activities, watershed analysis, information management and communication support, watershed teams, agency maps, and training for watershed partners.
- *Volume 3: Alaska Watershed Framework - Making Partnerships Work at the Local Level.* Creating stakeholder involvement forums (public participation); volunteer monitoring; citizen actions; working with the media; working with public officials; Water Watch program guide; EPA citizen Monitoring Guide; and guide to local, state, and federal agency contacts for environmental and natural resource management issues/questions/suggestions.
- *Volume 4: Alaska Watershed Framework - Watershed Approach Procedures for Partners.* Procedures for working with local watershed teams, defining and assigning agency watershed teams, watershed team planning and implementation process, key elements of written watershed agreements, organizational capabilities to respond to watershed objectives, performance criteria for watershed teams, priority setting and targeting tools, and others.

## Implementation (Post-Facilitation)

**July 1997–October 1997.** DEC has not yet given formal approval to the draft framework document. Partial implementation of the framework is occurring within DEC. The Nonpoint Source Program (NPS) is using the framework to develop and implement the statewide strategy for NPS controls. The U.S. Geological Survey (USGS) hydrological basins are used to define sectors for outreach and priority setting. DEC has undertaken three major pilot projects to evaluate the value of conducting its operations in a watershed framework. The three projects (Lower Chena River, Mendenhall Valley, and Kenai River) are located in the major USGS hydrological basins adopted by the watershed work group. The other watershed partners represented in the work group have adopted Cook Inlet as a pilot for the Watershed Partnerships framework. The Cook Inlet project will be a featured component of "Watersheds 97: Water, People, and Wildlife", a combined fair, conference, and symposium. One objective of the Cook Inlet Symposium component of Watersheds 97 is to consolidate DEC's experience with its pilot projects and the experience of other partners with the Cook Inlet project into a unified framework. Consideration will then be given to other candidate partnership watersheds.

# Arizona



In 1994, as the Arizona Department of Environmental Quality (ADEQ) began reorganizing its staff functions according to environmental media, several members of its Division of Water Quality (DWQ) suggested exploring the watershed approach as a means to integrate across both function and media.

## Scoping

**May 1995 Session.** DWQ hosted a briefing for the ADEQ Directors' office to secure approval for setting up a DWQ watershed strategy work group. The Directors approved the formation of a work group to organize DWQ's (and, in limited cases, the Air and Hazardous Waste Divisions') activities on a watershed basis. The Directors allowed for communication with outside stakeholders but limited any direct involvement of other agencies in the process. The objective of the limited mandate was to make clear that ADEQ DWQ would welcome the voluntary participation of any stakeholder in the watershed framework, but was not assuming responsibility for directing comprehensive resource management for Arizona.

Following up on this briefing, the facilitation team conducted a series of small focus groups to both present educational materials regarding the watershed approach and gather input on opportunities and barriers that the approach should address. Through careful consideration of assignments, the DWQ Director ensured that all programs and staff levels were represented on the watershed strategy work group.

## Framework Design

As described below, the work group met monthly to consider prearranged decision topics.

**June, July, and August 1995 Sessions.** The work group first settled its operating rules, procedures, and membership. It agreed to an aggressive communication strategy that included broad distribution of meeting notes and briefings with many other organizations to solicit input. The statewide Natural Resources Coordinating Committee proved to be an important forum for communication with federal, state, and local agencies.

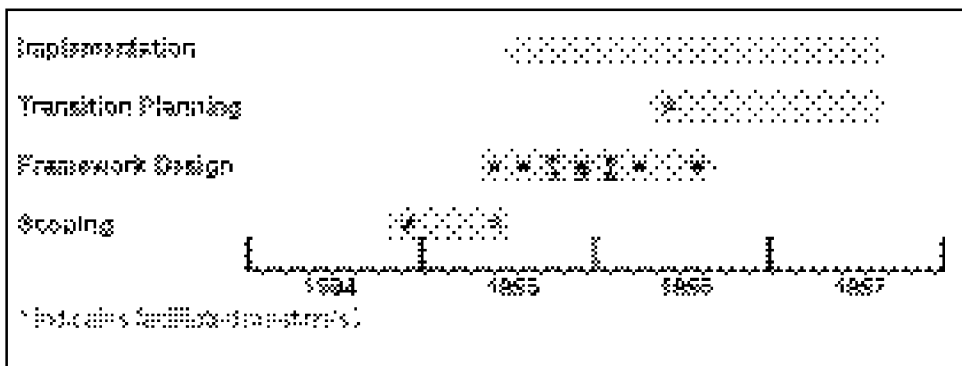


Figure 6. Arizona Framework Development and Implementation Timeline (thru August 1997)

This first series of meetings focused on development of a mission statement, delineation of watershed management zones, definition of procedures and mechanisms for stakeholder involvement, and description of the written product of the watershed management cycle (watershed management zone plans).

**September, October, November, December 1995 Sessions.** Work group meetings were used to define specific steps and procedures for organizing ADEQ activities and stakeholder involvement within individual watershed management zones. These included strategic monitoring and assessment, setting priorities, and synchronizing NPDES permits.

**January, February 1996 Sessions.** The work group focused on the roles and responsibilities of specific programs within ADEQ, including identifying many areas of potential collaboration, redundancies that could be eliminated, and potential gaps to be filled by other watershed partners. It proposed an outline for the statewide framework document.

## Transition Planning

**March, April, May 1996.** The work group continued to refine steps and procedures and to add definition to the framework document outline. However, the most important work group activity during this period was active outreach to potential watershed partners, including local agencies, existing watershed associations, and state and federal agencies. Many changes and refinements were made to the work group's watershed strategy in response to the comments and needs of the potential watershed partners contacted as part of the outreach efforts.

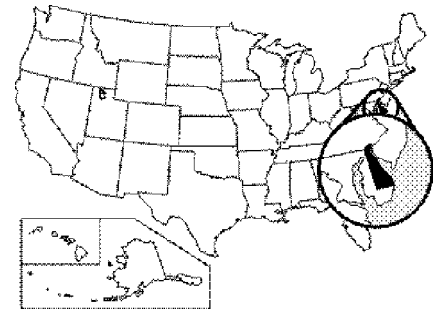
**August 1996–May 1997.** A draft watershed document was completed and went through three stages of review—internal work group, internal to DWQ, and all watershed partners.

## Implementation

ADEQ is phasing the watershed approach into its activities. It is planning a series of staff training and partnership-building workshops in September/October 1997 and is initiating a "roundtable" of ADEQ Section Managers to make decisions on ADEQ staff assignments and budgets based on the output of watershed management zone advisory committees.

The watershed approach strategy directs ADEQ to support existing partners where they are fulfilling community involvement objectives, and to serve as a catalyst or sponsor where there is no existing watershed group. ADEQ is using the watershed framework as a tool to integrate its activities with the Verde River Watershed efforts, which were ongoing before the watershed framework was established. The framework is also being used to help an Upper Gila River community-based advisory group to identify nonpoint sources of pollution and to develop a broader watershed protection strategy that includes point-source, water supply, and infrastructure needs. ADEQ is developing a community profile for a third watershed management zone for the San Pedro-Wilcox Playa-Rio Yaqui. ADEQ anticipates that the pace of implementation efforts for the remaining seven watershed management zones will increase after the staff training and partnership workshops.

# Delaware



In spring 1992, the Delaware Department of Natural Resources and Environmental Control (DNREC), Division of Water Resources, Surface Water Management Section, began exploring the statewide watershed management approach. DNREC was spurred by a desire to improve coordination between its natural resource management divisions, to find more holistic solutions to aquatic ecosystem problems, and to improve opportunities for local involvement.

## Scoping

**September 1992 Session.** DNREC hosted a workshop attended by a broad spectrum of stakeholders, including county and city officials, local conservation district representatives, other state agencies, federal agencies, and all divisions within DNREC. Its purpose was to evaluate potential watershed approach objectives, opportunities, and concerns. The participants adopted a framework development and implementation strategy described as the “ripple approach”: DNREC would take the plunge in organizing its own activities according to basins; then, as DNREC’s watershed management activities became more established, the momentum would create waves of voluntary partnerships. DNREC then formed an internal work group with representatives from each division and outlined a work plan for framework development.

## Framework Design

**January 1993 Session.** The DNREC work group focused on the roles and responsibilities of the participating divisions. Four teams were formed to address issues not addressed at the workshop— Implementation, Coordination, and Institutional Barriers; Management Units, Data Management, and Monitoring; Public Outreach and Education; and Briefing for Department Secretary. These teams were charged with recommending how to build the capabilities to implement the elements, and how to ensure support from senior managers and stakeholders outside DNREC.

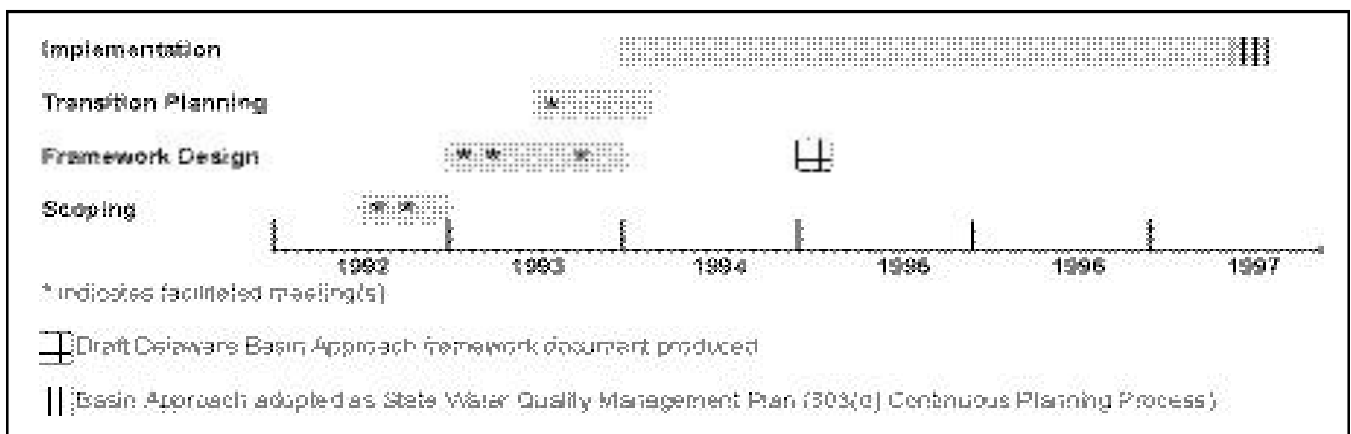


Figure 7. Delaware Framework Development and Implementation Timeline (thru August 1997)

**April 1993 Session.** The teams presented progress reports at a facilitated meeting that was open to all DNREC staff and other stakeholders. The Management Unit Review Team had delineated five planning basins based on ecosystem characteristics as well as hydrological boundaries. The Monitoring Review Team reported its progress in resolving problems with the distribution of monitoring resources between DNREC's fixed station network and the strategic monitoring needs of the basin approach. The Implementation, Coordination, and Institutional Barriers Review Team recommended forming basin teams with a cross section of program representatives. One institutional issue highlighted as needing attention was the impact of the basin team approach on the traditional in-line management structure that defined supervision, evaluation, and pay scale.

A new Secretary for DNREC was appointed as a result of the November elections. He requested a review of the basin approach initiative before proceeding with its development. This review process took approximately 5 months.

**October 1993 Session.** The workgroup developed a statewide schedule for the basins, defined specific planning steps within a management cycle, and recommended priority setting criteria. It also compiled a general guide regarding Division and program roles and responsibilities. The work group also described the format and content for integrated basin plans.

## Transition Planning

**July 1993–October 1993.** The work group prepared the Nanticoke River Watershed Pilot Project Plan. The pilot analysis addressed questions such as what tasks needed to be accomplished and by whom, what would be produced, and the cost for each division/program for accomplishing each task in the basin cycle. One purpose of the pilot plan was to refine thinking about how the framework would be implemented; another was to demonstrate to senior managers that there was an adequate level of understanding and support for the basin approach to proceed with implementation.

**January 1995.** A general, draft Delaware Basin Approach framework document was produced.

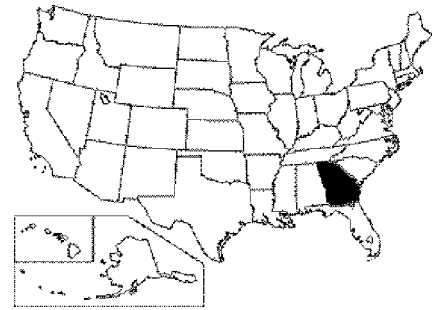
**December 1996.** DNREC developed a more detailed draft framework document. It plans to formally adopt the draft framework by incorporating it into the Continuing Planning Process (CPP) Statewide Water Quality Management Plan. The document is used as an internal reference guide for DNREC and has been a valuable tool in communicating agency operations and procedures to the public.

## Implementation (Post-Facilitation)

Basin teams have been formed for the four planning units, as well as an overall coordinating team that works on a statewide basis. Strategic monitoring and information collection plans were not developed for the first basin, but are now being developed for upcoming basins. An integrated assessment involving all agency partners was completed for the first basin and served as the basis for collaborative priority setting and targeting. However, the coordinated assessment and priority setting have not been documented in integrated management plans. DNREC continues to hold the basin plans described in the framework document as a goal, but has not achieved them in practice. DNREC believes that integrated management plans will be realized in the near future.



# Georgia



The Georgia General Assembly adopted legislation in 1992 requiring the state's Environmental Protection Division (EPD) to oversee development of river basin management plans for the state's 14 major river basins. The law mandates that plans be completed by the end of 1997 for the Chattahoochee and Flint River basins, by the end of 1998 for the Coosa and Oconee River basins, and one per year thereafter for the remaining basins. Plans must include a description of the basin including land use inventories, a description of plan goals, and a description of the strategies and measures necessary to accomplish the goals. The law also requires that a seven-person local advisory committee be appointed to provide advice and council to EPD during the plan development.

## Scoping

In response to this law, EPD has adopted a River Basin Management Planning (RBMP) approach to watershed protection. Local advisory committees in the Chattahoochee, Flint, Coosa, and Oconee basins were convened in 1993 to begin discussing the approach. In January 1994, the four basin committees worked together in a facilitated meeting to finalize the vision, mission, goals, and objectives for the RBMP framework. A small EPD committee then outlined initial ideas for the framework design. In October 1994, a larger work group, consisting of representatives of the Water Protection and Water Resources Branches of EPD and the state's Wildlife Resources Division, was convened to expedite framework design and achieve broader buy-in by various program staff.

## Framework Design and Transition Planning

The framework development work group met seven times in 2-day workshops between October 1994 and July 1995. Accomplishments for these facilitated meetings are summarized below:

**October 13–14, 1994.** After reviewing frameworks established in other states, the work group assessed framework needs and building blocks in

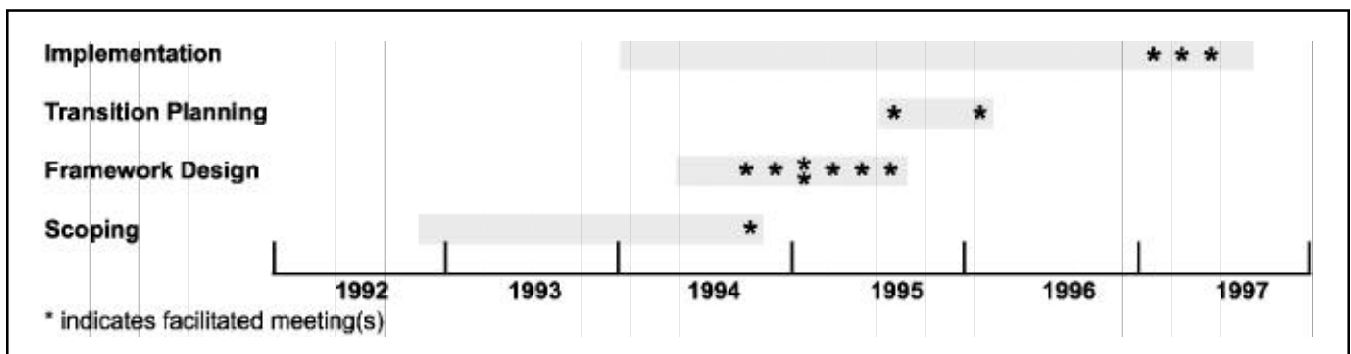


Figure 8. Georgia Framework Development and Implementation Timeline (thru August 1997)

Georgia. Specific tasks and barriers to address were identified, and a preliminary work plan for framework development was developed.

**November 16–17, 1994.** The work group reached consensus on the intended audiences, purposes, and contents for the basin plans and developed a cycle of activities that would lead to basin plan development and implementation, and updates every 5 years. Options for grouping basins were established, along with an initial statewide schedule for implementing the cycle of activities. Key roles and responsibilities were outlined for EPD programs, and consensus was reached on how to approach partners outside the work group to seek their support and participation.

**January 11–12, 1995.** The work group hosted a meeting attended by 49 separate local, state, and federal agencies throughout Georgia and from adjacent states to discuss the developing RBMP approach and opportunities for partnerships and complementary efforts. Additionally, the work group evaluated detailed options for basin sequencing and scheduling, and identified technical and administrative issues that remained to be resolved.

**February 27–28, 1995.** The work group reached consensus on a revised basin sequence and detailed statewide schedule for implementation. Strategic monitoring plan components and format were outlined. An organizational structure including basin teams, basin coordinators, and the local advisory committees was established, and corresponding roles and linkages were identified. An overall activity reference guide was developed to map out specific actions, desired outcomes or products, responsible parties, and timing for each step of the basin cycle.

**April 19–20, 1995.** Methods and criteria for setting priorities within the RBMP framework were conceptualized. Detailed technical and administrative work plans were developed for EPD's Water Protection and Water Resources Branches, synchronizing their program activities with the basin cycle where determined to be more effective and efficient.

**May 30–31, 1995.** The work group continued developing methods and criteria for the prioritization component of the framework. Additionally, members established an inventory of key watershed management implementation tools including regulatory authorities and technical assistance programs. Components of a transition plan for implementing the new framework were outlined.

**July 18–19, 1995.** The work group continued developing the prioritization component and outlining the transition plan. One day was spent reviewing and planning a process for development of an information management system to enhance framework implementation.

**August–December 1995.** The facilitator worked with EPD to draft a framework document describing the RBMP mission, goals, objectives, framework components, roles and responsibilities, and transition plan.

## Implementation

Because of the mandated deadlines for completing basin plans, Georgia EPD began implementing framework components prior to completion of the entire framework design and framework document. Early implementation efforts began in 1994 with conducting stakeholder and local

advisory committee meetings to discuss current management issues and identify additional monitoring needs. Basin monitoring plans were developed and implemented for the Chattahoochee and Flint basins in 1994; the Coosa, Oconee, and Tallapoosa basins in 1995, the Savannah and Ogeechee basins in 1996, and the four basins in group 4 in 1997.

Assessments of the basin information for the Chattahoochee and Flint were completed in 1996, along with a priority ranking for addressing waters contained on the state's updated 303(d) list. Staffing resource shortages resulted in a delay in convening technical basin teams for development of the basin plans for the Chattahoochee and Flint. Beginning in January of 1997, EPD used a facilitated basin team process to expedite development of these plans. Draft basin plans were completed in July 1997 and will undergo public review and comment during August and September, using stakeholder and local advisory committee meetings. Final plans for these basins are scheduled for approval by the state's Natural Resources Board in October or November 1997.

Currently, EPD is assembling basin teams for the remaining four basin groups. As framework implementation continues, EPD plans to enhance opportunities for additional and stronger partnerships to design and carry out watershed management action plans and strategies in every basin. Working with local governments and regional development centers, as well as other partners at the local level, EPD hopes to achieve increased commitment and action to enhance and protect the waters of the state.

# Kentucky



Kentucky's effort to build a statewide watershed management approach began in 1995 as the result of a permit program reengineering initiative. As a part of its goals to improve agency effectiveness and efficiency, the state's Division of Water (DOW) committed to the development of a statewide watershed management approach. DOW hired a Watershed Coordinator in February 1996 to lead its effort. An internal watershed framework development work group was formed immediately, and it began to study approaches in other states for potential application in Kentucky. Additionally, a dialogue began with the Kentucky River Authority to consider the Kentucky River Basin for a pilot watershed approach application.

## Scoping

**March–May 1996.** DOW hosted an EPA-sponsored workshop, *An Executive Short Course in Statewide Watershed Management*, in March 1996 for a large group of DOW managers and executives from approximately 25 other resource management-related agencies. Discussion during the workshop led to the idea for an expanded, multiagency framework that would coordinate much more than DOW water quality permit-related activities. In May 1996, representatives of 12 state and federal agencies met to define their shared mission. A facilitated series of discussions helped to outline the opportunities and needs to be addressed by the framework, identify existing efforts to build on and potential partner contributions, and design a framework development process including work group organization and operating rules.

## Framework Design

**July–November 1996.** The newly constituted framework development work group met in July and August 1996 and reached consensus on the use of the state's 12 major river basins for organizing management activities. A general sequence of management steps was developed for a

5-year management cycle, along with an overall statewide schedule for administering the cycle across all 12 major basins and tributaries to the Ohio River. By this time, interest was increasing in the approach and work group membership had increased to over 30 people representing more than 20 agencies and organizations. To increase focus and expedite design, the work group formed five subcommittees that would clarify the actions and support needed

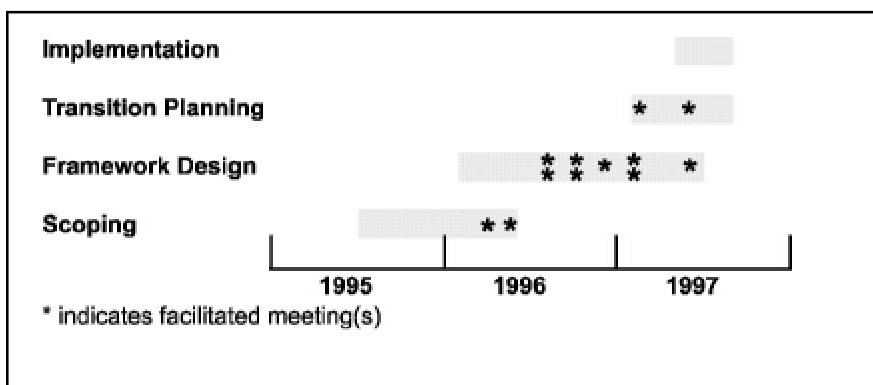


Figure 9. Kentucky Framework Development and Implementation Timeline (thru August 1997)

throughout the management cycle for the following areas: monitoring and assessment; prioritization, planning, and implementation; public participation; data management; and funding.

A total of 12 subcommittee meetings were facilitated between August and November 1996, with participation from more than 30 agencies and organizations. The Public Participation subcommittee contributed by identifying key audiences to involve in the framework, developing the idea for a Partner Network that is built on existing associations and forums, and establishing the need for a formal role in coordinating public information material development and dissemination, along with means for obtaining public input. The Monitoring and Assessment subcommittee produced an extensive inventory of existing resources and capabilities to draw on, and refined the steps and responsibilities for developing and implementing strategic data collection plans and carrying out information assessment. The Prioritization, Planning, and Implementation subcommittee developed a methodology for ranking watersheds for priority in developing management action plans, outlined the purposes and components of basin and watershed action plans, and designed the administrative structure for operating the framework. The data management subcommittee clarified framework support needs and outlined how existing or developing capabilities would address those needs. The Funding subcommittee did not meet during this period.

## Transition Planning

**December 1996–June 1997.** The facilitators compiled all of the work group and subcommittee design ideas and recommendations into a rough draft framework document that was distributed to and reviewed by the entire work group in January 1997. Refinements in the framework design were made over the next few months.

**February 1997–June 1997.** The framework development work group met in February and May 1997 to plan for the transition to the new approach. Obtaining funding to support Basin Coordinator and Public Information Coordinator functions became a key concern, and the Funding Subcommittee met with budgeting experts from the executive and legislative branches of state government to identify feasible options. The work group also discussed methods and timing for achieving buy-in and commitment to implement the framework, fulfilling outreach and training needs, and establishing the *Statewide Steering Committee* and *River Basin Teams* to oversee and coordinate implementation. The work group determined that a polished, easy-to-use and easy-to-read framework document was a must for achieving buy-in, conducting outreach, and guiding implementation. Efforts through June 1997 focused on completing the polished framework document, and on developing specialized education and guidance materials.

## Implementation (Post-Facilitation)

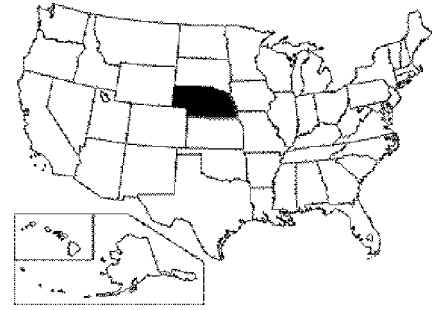
Full implementation will begin after all partner agencies and organizations have had sufficient opportunity to review the June 30, 1997, version of the framework document and sign a Resolution of Intent to support and implement the framework design. A formal signing ceremony is planned for September 1998. In the interim, the framework development work group will continue to meet in lieu of a Statewide Steering Committee. Basin coordination functions were assigned to two people for the Kentucky

River Basin, and work group members have provided technical staff support to complete a Basin Status Report for partner and public review this fall. Once the official Steering Committee is in place, a Kentucky River Basin Team will be officially assembled to carry out the basin management cycle activities with facilitation and administration by the basin coordinators.

Partnerships and more integrated management are already becoming stronger in the Kentucky River Basin. The Kentucky Water Watch program, an association of volunteers for more informed participation in watershed management, is working with the Kentucky River Authority, Kentucky Waterways Alliance, and DOW to conduct extensive stream surveys and data collection. With the help of a scientific advisory team and training workshops, volunteers will gather information to update the status of water quality throughout the basin and help identify problem or special protection areas. Roundtable meetings in the fall to discuss their findings will occur at the same time that framework partners are soliciting public feedback on their Basin Status Report and input on issues for additional management action or study. The efforts are ensuring public participation from the onset of the 5-year management cycle for the basin.

The Kentucky Watershed Management Framework's statewide schedule calls for efforts in the next group of basins (Salt and Licking Rivers) to begin in July 1998, and the remaining three basin groups in July 1999, 2000, and 2001, respectively.

# Nebraska



The Nebraska statewide watershed management approach was initiated in 1992 by the state’s Water Quality Division, during its strategic budget and long-term planning process. The Division had experienced significant budget cuts and was searching for ways to make the most efficient and effective use of its available resources. Exposure to a statewide basin approach through presentations at a national association meeting led to strong interest in exploring its applicability to Nebraska. After several internal scoping sessions, the agency began a 9-month facilitation process in August 1993 to bring in additional expertise and expedite the process of developing a written framework document.

Nebraska used a work group composed of the Division of Water’s Sections for Surface Water, Ground Water, Permits and Compliance, Wastewater Facilities, and Emergency Response. Facilitated meetings included one 2-day workshop and six half-day work sessions. Facilitators also provided off-site support in developing a permit renewal schedule synchronized with a statewide basin management cycle, preparing for meetings and documenting results, and producing a written framework document.

## Scoping

**1992.** The Department of Environmental Quality developed goals for integrating and prioritizing activities and optimizing use of available agency resources through comprehensive watershed management for the FY1993 Strategic Budget Plan and Water Quality Division 5-year Strategic Plan.

**January–July 1993.** The Surface Water Section hosted discussions exploring the watershed approach for organizing agency water quality monitoring. The Surface Water, and Permits and Compliance Sections reached consensus to establish a framework grouping the state’s 13 major river basins into five groups that would operate on a 5-year management cycle.

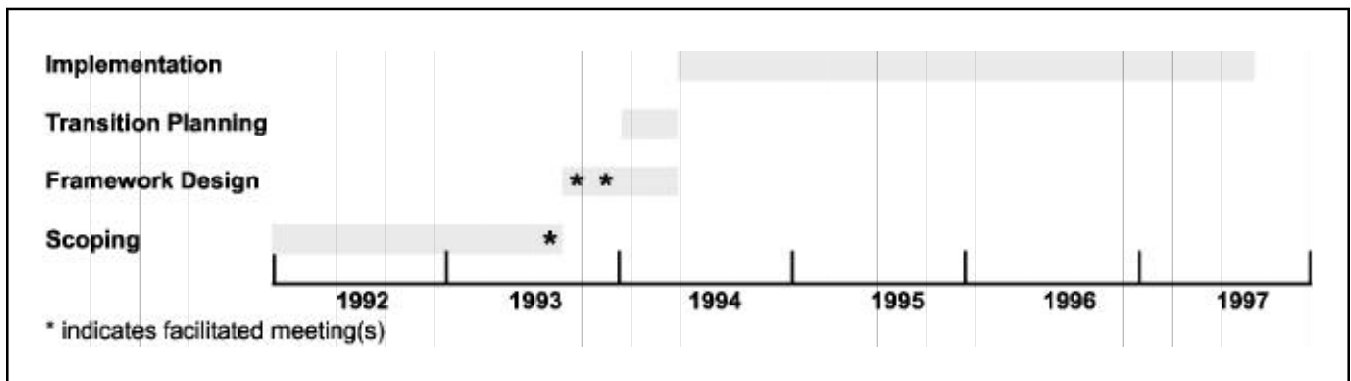


Figure 10. Nebraska Framework Development and Implementation Timeline (thru August 1997)

**August 1993.** The Division of Water held a 2-day workshop to educate staff on statewide watershed management approaches taken by other states, and to begin the facilitated work group framework development process. The group documented its vision for the framework, along with concerns that should be addressed, and established a work group process and work plan.

## Framework Design

**October 1993–January 1994.** The facilitator and work group conducted six half-day work sessions to design statewide watershed framework components. Accomplishments included establishing a detailed basin management cycle and statewide schedule, defining a basin plan format, developing criteria for setting management priorities and targeting agency efforts, and documenting program roles and responsibilities.

## Transition Planning

**January 1994.** The schedule for synchronizing NPDES permit renewal with the proposed statewide basin management schedule was completed.

**January–April 1994.** A facilitator worked with work group members to establish keys to success and important next steps for implementing the framework. A framework document was completed to provide a long-term reference of the Division's vision, framework components, roles and responsibilities, and considerations for transition and implementation.

## Implementation (Post-Facilitation)

Implementation of the new approach by the Nebraska Division of Water Quality began in May 1994 with the completion and implementation of a strategic monitoring plan for the Lower Platte and Nemaha River basins. The Division has developed partnerships with several agencies and organizations, including the university system and USGS, to leverage monitoring efforts.

In October of 1994, the Surface Water Section obtained the services of a technical staff person from the Natural Resources Conservation Service through an Intergovernmental Personnel Act (IPA) agreement. This led to better coordination of nonpoint source management activities under the statewide framework.

Another framework enhancement occurred with the development of Stream Management Teams under the leadership of the Nebraska Game and Parks Commission. The teams provide expertise to establish management needs and strategies at a local level, complementing and expanding the basin management plans established by the Division of Water.

Overall, the state is a little behind in carrying out its rotating basin schedule. The statewide schedule calls for basin plans to be completed for the Lower Platte and Nemaha Basins in February and June 1997, respectively. The final plan for the Lower Platte is now scheduled for September 1997 (a draft was distributed in June), and a schedule for completing the Nemaha plan is still being worked out. Part of the reason for the delay was a substantial change in the format for the plan (reducing it from a 300-page inventory to a 60-page user-friendly document). The new format will serve as a template, and its simplified form will help to expedite efforts in other basins, which the Division hopes to have back on schedule within the next year. Expectations are to have completed the first iteration of the basin cycle for all 13 basins by early 2002.



# New Jersey



As early as 1991, the Office of Environmental Planning (OEP) within the New Jersey Department of Environmental Protection (DEP) began examining use of a watershed approach to achieve agency goals more cost-effectively. In March of 1993, OEP published a “Working Paper on Water Quality Management Planning Reform,” which promoted a watershed approach to integrate and coordinate existing water resources programs. Public support was strong, but many program managers within DEP were concerned about the changes that would be brought about by the approach, and whether barriers to building and implementing such a framework could be overcome. To make further progress, DEP initiated the Whippany River Watershed Project. The project helped to begin a partnership among a very diverse group of stakeholders within the watershed and to pilot a management planning process.

## Scoping

**July 1994.** After learning that several other states had overcome similar challenges successfully to implement statewide watershed management frameworks, the OEP Administrator decided to bring in an experienced facilitator to brief other office directors and the DEP Commissioner’s Office. The briefing provided DEP with specific examples of how to design statewide framework elements, adding validation to the ideas being promoted by OEP. Several of the elements covered later became templates for components of New Jersey’s framework.

**Fall 1994–Summer 1995.** OEP staff worked closely with several other DEP offices to examine specific agency operations for opportunities for integrated efforts under a watershed approach. Simultaneously, DEP worked with the Governor’s office to find ways of carrying out operations more effectively and efficiently. The watershed approach was viewed as the key to more cost-effective, environmentally sound management.

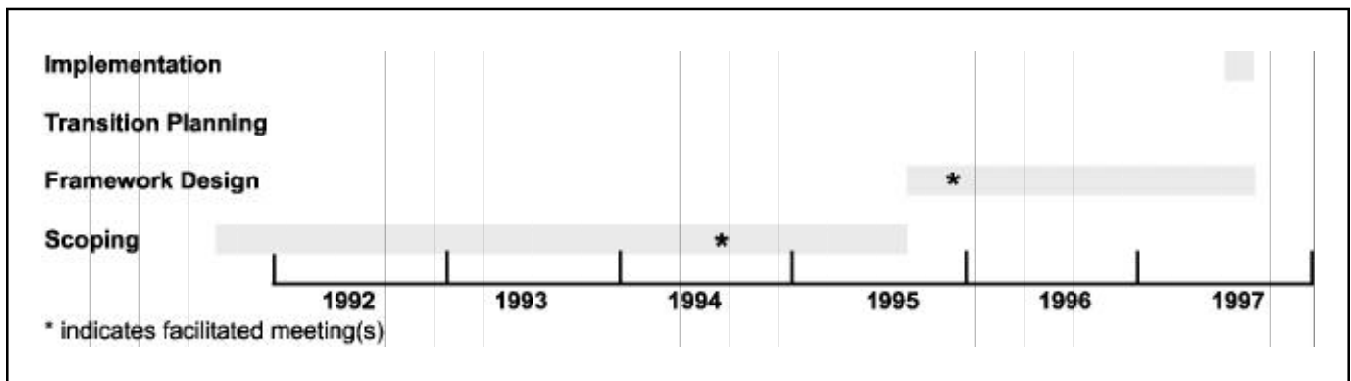


Figure 11. New Jersey Framework Development and Implementation Timeline (thru August 1997)

**Fall 1995.** A new Administrator was appointed to OEP with the specific directive to develop a statewide watershed management framework.

## Framework Design

**Fall 1995–September 1996.** Numerous forums were held to obtain input on and discuss ideas and issues related to framework design. The experienced facilitator was brought in again to a task force workshop to cover statewide approach development in more detail. Materials provided by the facilitator, including draft framework documents from other states, helped add focus and provide templates that DEP tailored and added to for framework design.

A Watershed Steering Committee was formed to oversee framework design and development. The Committee, with technical input from a Statewide Watershed Characterization and Assessment Team, designed key components, including watershed management areas and a watershed management cycle. Actions for each step were outlined, along with roles and responsibilities for key programs within DEP. Public outreach was conducted between May and August 1996 to raise awareness of preliminary designs and obtain input on refining the framework design. A draft framework document was completed in September 1996 and was widely distributed for review and comment.

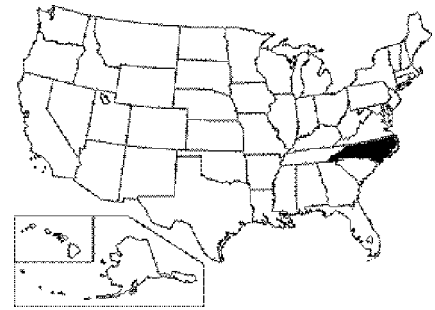
**April 1997.** More than 240 stakeholders attended a DEP meeting to discuss revisions to the draft framework. Based on public input, activities and forums within the framework will be expanded beyond DEP programs to include other stakeholder efforts.

**July 1997.** A revised framework document was completed incorporating stakeholder input.

## Transition Planning

New Jersey is currently in the transition phase. Staff are working on updates to the state rules to reflect the new framework. Additionally, the agency is overhauling its information management system to better support watershed analysis. Fourteen new positions are being added to the agency to conduct watershed monitoring, modeling, and TMDL development. Some staff have already begun to develop preliminary watershed characterizations to support early steps within the watershed management cycle. A unique funding mechanism should be in place within the next year to support watershed efforts. A 4 percent corporate income tax has been levied by the state to fund environmental management. This will translate to approximately \$5 million per year for watershed management. The first watershed management area plans are scheduled to be drafted by 1999, and the entire state should have initial plans by the year 2004.

# North Carolina



The idea for a statewide watershed management framework was first conceived within the North Carolina Water Quality Section in the late 1980s. The approach initially focused on organizing the Section’s surface water quality modeling and NPDES permitting programs. At the time, many of the agency activities for these programs were driven primarily by permit renewal applications. Because the permit expiration dates were not organized by geographic area, staff believed that agency resources were not being used as effectively and efficiently as possible. The effort to streamline a few agency activities eventually turned into the first statewide watershed management approach.

## Scoping

**1987–1990.** A plan for organizing permit expiration dates by basin and subbasin was developed, but implementation of the plan was stymied temporarily by several barriers. Chief among these barriers was finding a way to change permit expiration dates without imposing unbearable workloads on the permit writing staff while meeting all legal mandates. While negotiations on methods were carried out with the EPA Regional Office, North Carolina spent considerable time and funds on automating its permit writing process. By 1990, an approach had been worked out for synchronizing permit renewal by basin.

**Early 1990.** About that same time, however, focus in North Carolina and around the nation was turning to management of nonpoint sources of pollution and development of Total Maximum Daily Loads (TMDLs). Agency staff began to see promise in organizing several more of its management activities within basin management units, including monitoring, assessment, and the nonpoint source program. Many different ideas were put forth, and with the help of EPA, North Carolina obtained the services of a facilitator to help clarify and document the evolving framework.

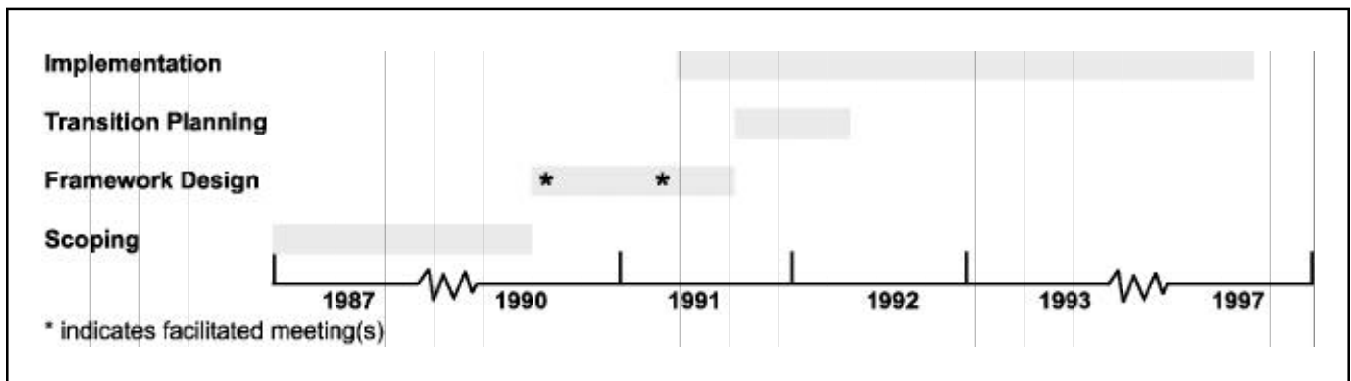


Figure 12. North Carolina Framework Development and Implementation Timeline (thru August 1997)

## Framework Design

**Summer 1990–Summer 1991.** Two workshops and several smaller meetings with representatives from all four branches within the Water Quality Section were facilitated to design the framework. Using the statewide schedule developed for basin-synchronized permitting, staff developed a cycle of watershed activities that would produce a management plan for each basin that would guide implementation activities, including development of NPDES permit wasteload allocations and permit limitations and targeting of nonpoint source control project grants and assistance. Basin management plans would include descriptions of basin resources and ongoing management efforts, assessments of water quality conditions and sources of stress, summaries of key management concerns, TMDLs, and management recommendations.

Section staff and the facilitator spent considerable time clarifying what each branch's roles and responsibilities would be within the framework. It soon became clear that the framework would evolve over time, and the agency distinguished near-term from long-term objectives. Data management, in particular, was identified as an area where continued technological advancements and process improvements by the Section would enhance framework implementation and effectiveness. These and other technical and administrative support needs were outlined in the framework document completed in August 1991.

## Transition Planning

**Fall 1991–Spring 1992.** The Water Quality Section hired a Basin Coordinator to conduct the bulk of public outreach on the approach and manage the development of the basin plans. The Coordinator worked with each participating program to develop more detailed work schedules that mapped out when specific activities would need to occur in each basin to stay on schedule for development and implementation of plans. This allowed staff to work out timing of activities where efforts of one program depended on the results of another program activity. Standard operating procedures were also updated for a number of programs. One of the most challenging tasks was deciding who would write each section of the basin plan, and how the individual sections would be compiled into a single document that would communicate effectively with agency staff and other stakeholders. Additionally, the Section began to develop base maps and other templates for items that would be routinely used and where consistency from program to program was needed. Efforts were set in motion to improve data management systems and computerized watershed analysis capability (e.g., GIS and computer modeling).

## Implementation

Implementation efforts began in 1991 with basin-oriented monitoring in the Tar-Pamlico and Lumber River Basins, and basinwide assessment of the Neuse River Basin. The Neuse was selected for development of the first basin plan because of the high degree of attention it was receiving over several water quality issues. The relatively large amount of monitoring and analysis already conducted in the preceding few years allowed staff to jump immediately into the year 2 assessment phase. Although North Carolina's basin management cycle is 5 years in length, with the draft basin plan scheduled for completion about 3.5 years into the cycle, proceeding with assessment allowed the state to complete the Neuse Plan one year early.

Since the first Neuse River Basin plan was finalized in March 1993, North Carolina has systematically followed its statewide schedule and produced initial plans in 14 other basins. Plans in the remaining two basins are scheduled for 1998, which marks the end of the first complete iteration of the management cycle for all basins throughout the state. State agency staff indicate, however, that implementation has not been without its challenges. Increasing workload demands for basin coordination have led to creation of two additional Basin Coordinator positions. More resources have also been devoted to data management and computer-based watershed analysis, and the nonpoint source program. The agency is now administering nonpoint source teams to develop integrated action plans for controlling nonpoint source contamination in areas designated for restoration or special protection.

The establishment of several large basin and watershed associations is another outgrowth of the basin approach in North Carolina. Some are associations of NPDES dischargers, some are associations of local governments, and others include significant citizen participation. These associations are helping to define management issues and objectives at the local level, often providing substantial amounts of monitoring information to supplement the Water Quality Section's databases. These bridges between the Water Quality Section's statewide basin planning and local watershed management will likely constitute the next generation of the watershed management framework for North Carolina.

# Tennessee



In 1995, the Division of Water Pollution Control (WPC) formed a core group of program managers to develop a statewide watershed approach to monitoring, assessment, and NPDES permitting. The group visited Georgia and reviewed the North and South Carolina statewide watershed approaches to share lessons learned and glean ideas to use in Tennessee. Since regional offices of WPC would play a strong role, the group delineated watershed boundaries and groupings of watersheds that would balance regional workloads. Next, it designed a schedule for monitoring and assessing water quality and issuing NPDES permits on a watershed basis. To help implement this watershed approach, the Division reorganized its structure to create a new Watershed Management Section with five staff. The staff included three Basin Coordinators (each covering a region of the state), a GIS staff person, and a supervisor who was also in charge of TMDL development.

## Scoping

**February 5–6, 1996 Session.** Facilitators met individually and as a group with WPC staff who had designed the watershed approach and the staff of the Watershed Management Section. They discussed facilitation needs and staff concerns about implementing a more comprehensive watershed approach. The next day a Statewide Watershed Management Workshop was held for program and senior managers in WPC to review the functions and components of a comprehensive statewide watershed management framework; to assist staff in defining short- and long-term management objectives, as well as important activities and partners needed to meet those objectives; and to identify important next steps in implementing Tennessee’s watershed approach.

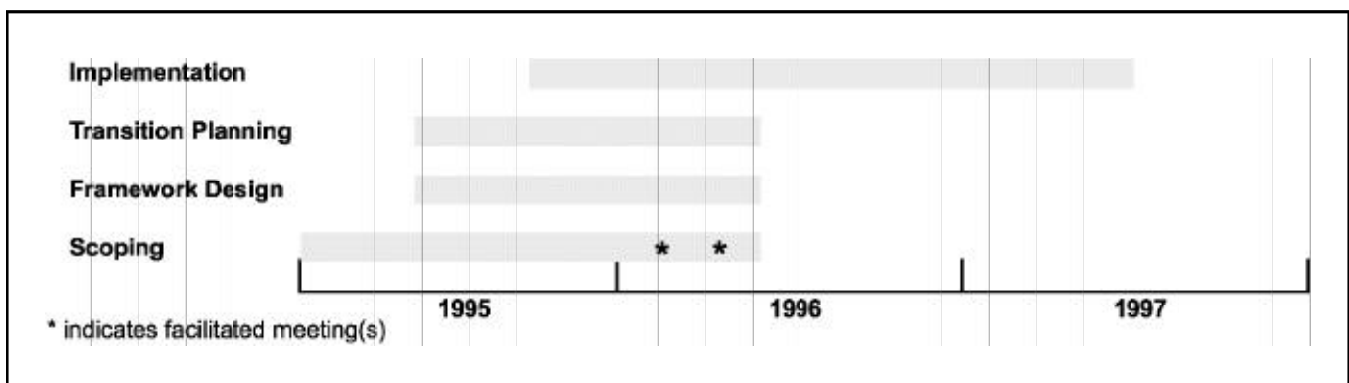


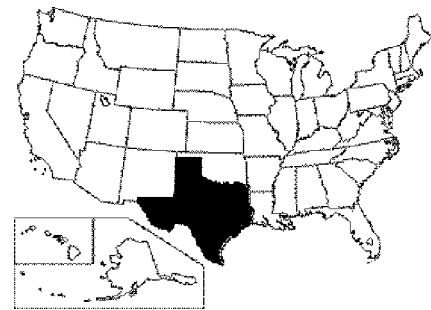
Figure 13. Tennessee Framework Development and Implementation Timeline (thru August 1997)

**May 9–10, 1996 Session.** The facilitators met with WPC staff to share information about how other states incorporate public involvement and coordinate partner activities in their watershed management cycles to enable WPC to gauge its approach with other state approaches. The second day, approximately 30 representatives from state and federal agencies attended a WPC Watershed Initiative Workshop, primarily to learn more about WPC's current watershed approach and to explore new opportunities for coordinating efforts. WPC staff agreed to follow up the workshop with calls to participants to discuss cooperative efforts in more detail.

## Implementation

WPC plans to initiate its watershed management activities in all watersheds across the state by the year 2000. It has begun synchronizing municipal and industrial permits, and it is on schedule in conducting public outreach and strategic monitoring in its group 1 and group 2 watersheds. In the coming year (1998), it is scheduled to conduct integrated assessment and begin TMDL development for its group 1 watersheds.

# Texas



Serious consideration for developing a comprehensive statewide watershed management framework in Texas began in 1993. The state was already using a basin approach for monitoring and assessment based on the Clean Rivers Act adopted in 1991. Agency directors within the Texas Natural Resource Conservation Commission (TNRCC) were interested in how a statewide approach would help them to coordinate management decision-making and implementation activities with the basin monitoring and assessment efforts.

## Scoping

**1993–1994.** In early 1993, TNRCC invited a representative of North Carolina to come and give a presentation on North Carolina’s statewide basin management approach. As interest increased, the Commission hired a facilitator to help the agency further explore application potential for Texas. After a series of internal discussion meetings, TNRCC held a 2-day workshop in July 1993 for a large portion of its staff. The concerns of some of the staff led to identification of key issues to be resolved and formation of several work groups to resolve the issues before moving ahead. The work groups met on their own (i.e., without a facilitator) throughout 1994 and addressed most of the outstanding concerns. In late 1994, TNRCC established a Watershed Coordinator position to help expedite development of a comprehensive statewide framework.

## Framework Design

**1995.** During the early part of 1995, the Watershed Coordinator compiled the results of the scoping work groups and met with key staff to determine next steps. In May 1995, TNRCC contracted an experienced facilitator to assist the Watershed Coordinator in identifying gaps in the state’s proposed approach and preparing a framework document that the agency could use as guidance for implementation. An internal work group was formed and an initial vision for the framework was established, including the idea that the framework would be developed and supported by a broad range of agencies and organizations involved in water quantity and quality management. Preliminary designs of the core framework elements were documented to provide a basis for discussion with potential partners.

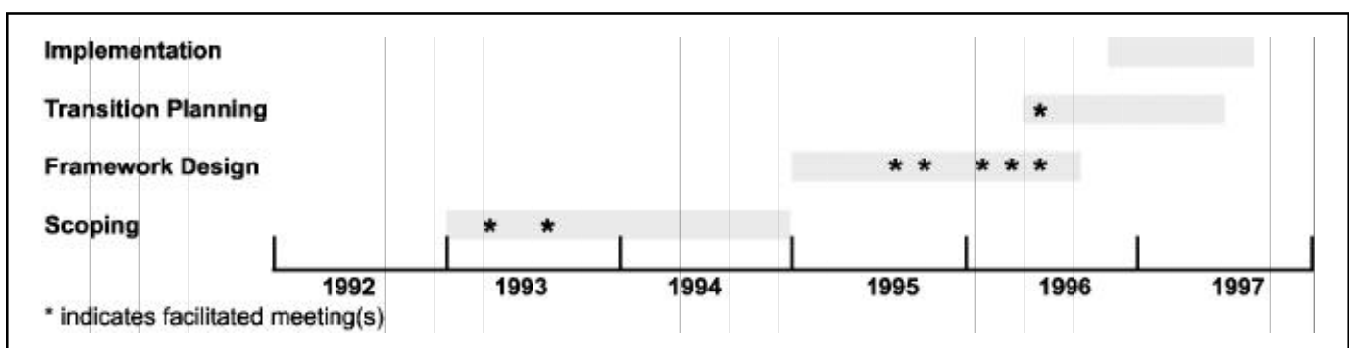


Figure 14. Texas Framework Development and Implementation Timeline (thru August 1997)



Representatives of the TNRCC work group hosted a meeting in September 1995 with potential partners from many different agencies and organizations. The degree of interest in a multipartner watershed framework was not at the level hoped for by TNRCC. Some attendees were concerned that the approach would constitute a new bureaucratic layer and were skeptical that an integrated effort of the magnitude envisioned could be accomplished. At approximately the same time, changes in the Executive Director and Commissioner positions occurred. After discussion with the new leadership, TNRCC decided to complete design of its framework at a reduced scale.

**January–August 1996.** The Watershed Coordinator and facilitator used a team approach to complete framework design and documentation. Meeting with individuals and groups within TNRCC's Office of Water Resource Management, they worked out detailed activity guides for each participating program and designed a combination of organizational forums for conducting coordinated efforts at three scales—local watershed, river basin, and statewide. With the help of the facilitator, TNRCC completed a draft framework document in August 1996.

## Transition Planning

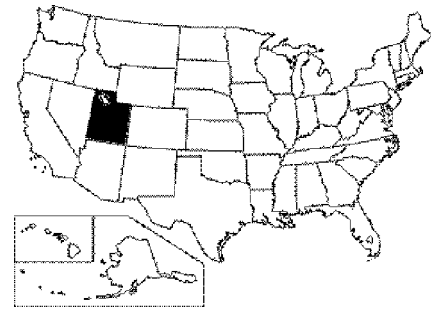
**May–August 1996.** The facilitator helped TNRCC identify next steps that should be taken to support implementation and incorporated these recommendations into the draft framework document.

**September 1996–June 1997.** The Watershed Coordinator produced and distributed the draft framework document among agency staff, and then managed the review and refinement process. Simultaneously, the Watershed Coordinator helped key program staff and managers to begin developing work plans and budgets that reflected the new framework design. A refined framework document was published and distributed both inside and outside TNRCC in March 1997. Work continued with the Coordinator and key program staff to develop work plans, budgets, and supplemental guidance, and to update standard operating procedures as needed. Renewal of the Clean Rivers Programs with continuing appropriations by the state legislature, also resulted in agency staff's working with River Authorities and other program contractors in updating operational agreements and guidance.

## Implementation

TNRCC's framework calls for phased implementation, beginning in fiscal year 1997, with scoping and data collection plan development in two of the state's five basin groups. The Surface Water Quality Monitoring Team worked with the River Authorities and other Clean Rivers Program contractors to successfully scope priority issues and develop strategic data collection plans for these basin groups. Continually increasing pressures for TMDL development is having a strong influence on where data collection and strategy development efforts are targeted. Consequently, the first set of priority watershed action plans, with accompanying TMDLs, is scheduled for the year 2000 in Basin Group E. For the remaining four basin groups (A, B, C, D), action plans for the first set of priority watersheds are scheduled for 2001, 2002, 2003, and 2004, respectively. In the interim, TNRCC is encouraging stakeholders within each basin to maintain ongoing management efforts and initiatives to add to the foundation for future integrated efforts.

# Utah



While working on the Bear River Project with colleagues from several federal natural resource management agencies, state agencies from three states (Utah, Idaho, and Wyoming), local agencies and stakeholder groups, a staff person from Utah's Division of Water Quality (DWQ) recognized the potential for providing stability and long-term support for this successful effort through the watershed approach. He also saw the potential for replicating this success statewide.

## Scoping

**May 1994.** At the USEPA Region 8 Denver watershed workshop, participating DWQ staff members identified three primary objectives that a watershed approach could address in Utah. The staff provided a briefing for the DWQ Director on the watershed approach.

**November 1994 Session.** The DWQ Director approved the formation of a watershed approach work group that included members of all participating programs within DWQ. The mandate was for a watershed framework to organize DWQ activities only and to include only DWQ staff. However, DWQ staff were directed to develop a framework that allowed voluntary participation of other agencies and citizen stakeholders and included a comprehensive communication strategy to identify and address issues raised by potential partners.

The purposes of the first work group meeting were to educate participants on the statewide watershed approach, to establish a common mission statement, and to define the process for developing Utah's watershed approach. The work group chose to adopt the nine common elements of the watershed approach as design tools for the framework development process. The work group used the elements to identify milestones for the framework development process and to establish a schedule.

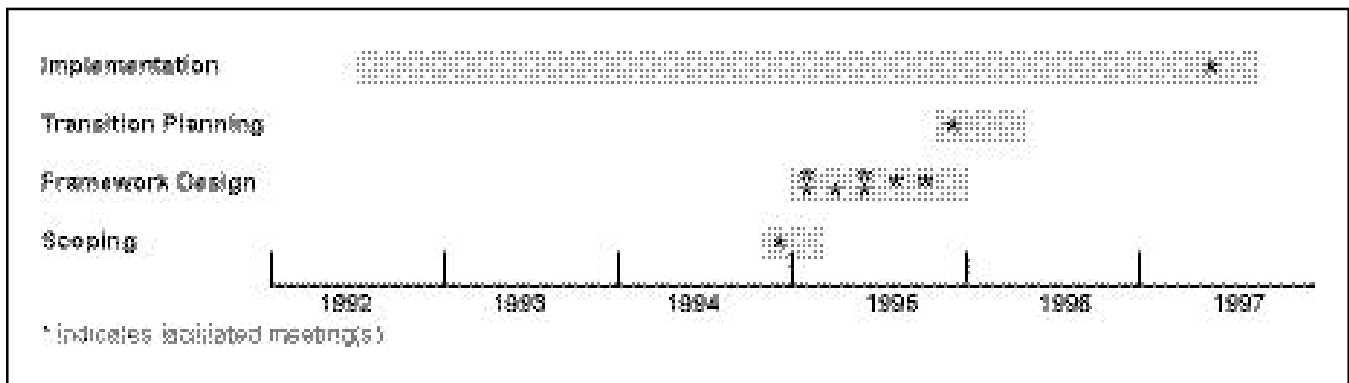


Figure 15. Utah Framework Development and Implementation Timeline (thru August 1997)

## Framework Design

**January–September 1995 Sessions.** Approximately six facilitated work group sessions were held during this time period to design the statewide watershed approach. In addition to the facilitated work sessions, assignments were given to individual work group members. Example assignments included:

- Developing a description of statewide monitoring procedures for conducting the strategic monitoring component for the watershed management units.
- Serving as liaison with partner agencies to present the watershed management unit delineation decisions and to compile partner comments for further consideration by the work group.
- Compiling a permit map and schedule to use as criteria for sequencing the watershed management units.
- Preparing a description of program outputs for each step in the watershed management cycle.

The work group used a pilot watershed (Jordan River) management plan to develop watershed management cycle steps, length of schedule, roles and responsibilities, and priority setting and targeting criteria. Also, the work group developed an annotated framework document outline.

**October 1995–May 1996.** The facilitator used the annotated outline and the meeting notes to compile a draft watershed management framework document. A review draft of the framework document was completed in February 1996. The final draft included guidance on DWQ job performance criteria for watershed teams and individual staff. The job performance criteria are keyed to the watershed management cycle steps and help to clarify how program managers can track assignments within the watershed approach matrix.

## Transition Planning

**May–July 1996.** USEPA's Office of Water sponsored a Watershed Academy - Executive Short Course to provide training to the Jordan River Watershed Team for assessment, priority setting, and targeting procedures. DWQ staff and watershed partners have identified additional transition and training support as an ongoing area of need.

## Implementation (Post-Facilitation)

Six of the ten watershed management units have begun the watershed management cycle. The first step for each of the six units was the completion of a strategic information collection and monitoring plan. Collaborative information collection and monitoring are being guided through these strategic plans. Each of the six active watershed management units is using the stakeholder involvement forums (Stakeholder and Technical Advisory Committees) and procedures described in the framework document. The remaining four watershed management unit cycles will be initiated in the next 2 years.

The only component lagging in the implementation of the approach is the development of integrated management plans. Those interviewed for this background analysis describe the status of integrated plans as pending. DWQ staff expect that some form of documentation of watershed conditions and management strategies will be undertaken in the near future.

# Washington



Two outside factors drove the Department of Ecology - Water Quality Program (WQP) to develop a watershed approach. First, the state legislature sponsored a review of the Department's efficiency within permitting programs. Second, a settlement agreement between USEPA Region 10 and Northwest Environmental Advocates called for the development of a "North Carolina" style basin approach with third-party facilitation and a 6-month deadline for completion. Because of the tight deadline and the need to have a product to satisfy these outside parties, Washington's original initiative focused on completing a framework *document* addressing only permitting functions; it gave less attention to internal team building and external partnerships than had characterized other framework development projects.

## Scoping

**August 1992 Session.** The scoping meetings with WQP staff were, at the outset, greatly constrained by conditions of the settlement agreement. For example, although many participants wanted to make the process more inclusive of other programs and agencies, the agreement made this problematic. Therefore, during scoping, short- and long-term visions were developed with a strategy for phased implementation that allowed for including a broader range of programs and issues at a later time.

The facilitation team met with small groups, and with individuals both in headquarters (Olympia) and in the regional offices to review the North Carolina Basin Approach framework and determine how it could be applied to increase efficiency within the WQP program.

## Framework Design

**October 1992 Session.** The work group delineated 32 Water Quality Management Areas (WQMAs) divided approximately equally among the four regional offices. Water quality management activities were organized into four steps (Scoping, Data Collection/Analysis, Technical Report, and

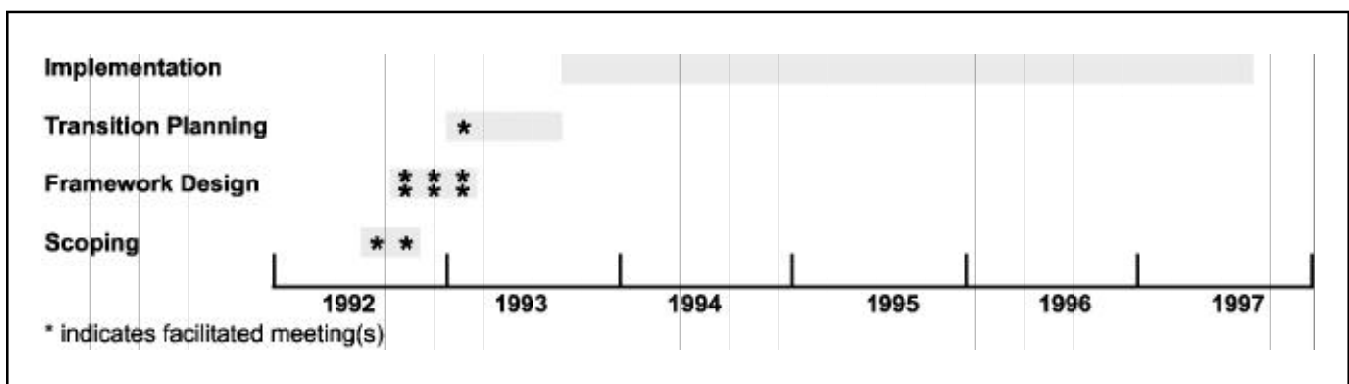


Figure 16. Washington Framework Development and Implementation Timeline (thru August 1997)

Implementation) completed on a repeating 5-year cycle. The group developed a strategic monitoring program that could address the initial permitting focus of the program as well as the more substantial monitoring requirements for TMDLs and the storm water program.

**November 1992–March 1993 Sessions.** The work group developed the framework document outline. The first internal review draft framework was distributed in January 1993 and reviewed by Ecology staff at a workshop that month. The draft framework was distributed to regional offices in February. The work group responded to comments on the internal review draft and completed the public review draft in early March.

## Transition Planning

**January–July 1993 Sessions.** A workshop was held for internal review of the draft framework document. It was the first opportunity for many of the staff to participate in development of the framework; and, while there was general support for the initiative and the draft framework, many staff felt that the scope was too narrow. Following the workshop, the work group assumed responsibility for many small group meetings (e.g., brown bag lunch information sessions) to explain the framework and to receive additional comment. The draft final framework was produced in July 1993.

## Implementation (Post-Facilitation)

The WQP has used the watershed framework since 1993 to geographically coordinate the activities of its permitting teams for NPDES, the State Water Pollution Control Act (Chapter 90.48.RCW), and the State Waste Discharge Permitting Program (Chapter 173-216 WAC). A Watershed Coordinator position has been added to track the implementation of the watershed framework statewide and to recruit the involvement of other programs and agencies. More recently, the activities of the nonpoint source planning team and others have been added to the framework. The approach now encompasses most of Ecology's Clean Water Act planning and implementation activities.

The Governor's office and senior Ecology management have recently decided that the WQP 5-year cycle (i.e., Scoping, Data Collection/Analysis, Technical Report, and Implementation) and the WQMAs can provide the basis for integrating and coordinating other watershed initiatives within the state. An example of the expanded scope includes coordination of the Water Resources program with WQMA teams to conduct watershed-level water allocation assessments before issuing new or revised water rights permits. Several agencies are using the framework to begin coordinating efforts in response to Endangered Species Act concerns. To date the Technical Report has not followed the format and content recommendations presented in the framework document. However, the increased involvement of other programs and agencies is likely to lead to more substantive watershed documents. The focus of many watershed partnerships within the WQMA framework has been on the development of information management and communication support clearinghouses (e.g., Yakima, Nooksack). It appears that the WQMA clearinghouse will be an increasingly common feature of the Washington watershed approach.

# West Virginia



In early 1996, the West Virginia Office of Water Resources (OWR) was in the midst of four major initiatives that would significantly shape its way of doing business for years to come. Three *internal* initiatives—strategic planning, permit reengineering, and statewide watershed monitoring and assessment—were driven by the Office’s desire to become more effective and efficient in protecting water quality and to strengthen its working relationship with citizens, businesses, and other stakeholders. The fourth initiative—outlining how Total Maximum Daily Loads (TMDLs) would be developed in a sound and timely way—was to provide an integral part of a legal settlement between EPA and various environmental groups. As the TMDL settlement was being crafted, it was clear that OWR had regulatory purview over only a small percentage of the waters that would need a TMDL and that any legal settlement and its implementation would have major implications for other state and federal agencies. These four initiatives converged on the need for a more integrated approach to water quality management, including connecting the efforts of the various internal initiatives as well as building partnerships with numerous external offices and agencies.

## Scoping

**April 30, 1996, Session.** To help meet this need for integration, program directors and executive managers within West Virginia Division of Environmental Protection (DEP) met to begin scoping the benefits of developing a statewide watershed management framework. The DEP Secretary expressed strong support for the watershed approach and indicated his intent to use it to coordinate the water quality protection activities of multiple offices in DEP. DEP’s Office of Water Resources assumed the lead role.

**May 29–30, 1996, Session.** Thirty state and federal agency and division directors attended a *Statewide Watershed Management Workshop*

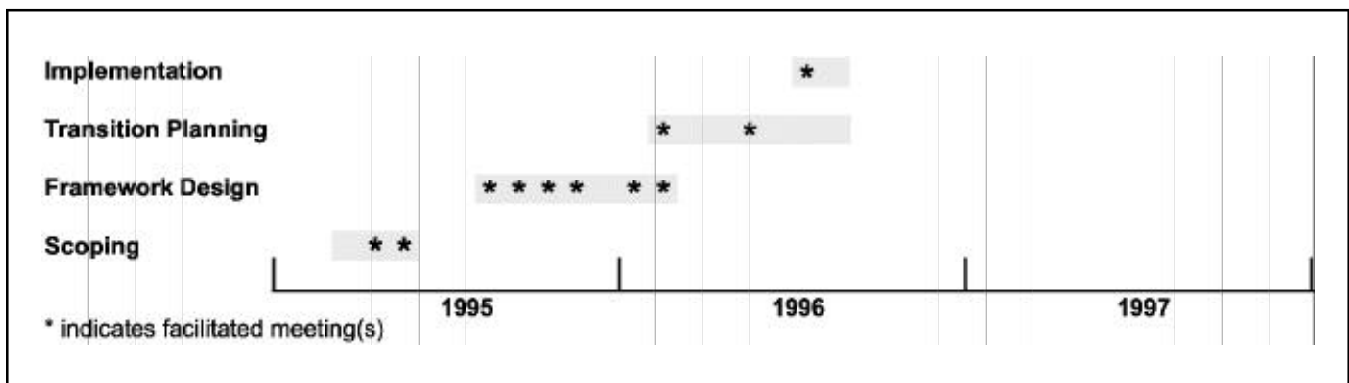


Figure 17. West Virginia Framework Development and Implementation Timeline (thru August 1997)

to learn about the statewide watershed approach and discuss how it could address future challenges they faced. They agreed to explore developing an interagency management framework. The following day, 50 DEP Office of Water Resources staff attended a workshop, *Implementing a Statewide Watershed Framework for West Virginia*, where they learned about and discussed the watershed approach, opportunities and concerns it poses, how staff should be involved in designing the framework, and who should be in the workgroup. OWR asked the facilitators to coordinate and integrate a number of initiatives with watershed framework development—internal strategic planning, permit reengineering, performance partnership agreement, and the TMDL lawsuit.

## Framework Design

**August 15–16, 1996, Session.** Formal appointments were made to an interagency work group charged with designing the watershed framework. The group agreed to a work plan and key milestones to reach in building a watershed management framework by February 1997, goals and objectives for the framework, and main activities that should be included in a management cycle. It discussed how activities could be synchronized within hydrologic regions to balance workloads and reviewed a draft grouping of West Virginia's 32 hydrologic regions.

**September 24–25, 1996, Session.** The work group developed components for a program activity guide, identifying which partner programs and agencies are needed for each of the 10 watershed management activities, lead and support roles, products produced, and time requirements. The group set a 4-week deadline for members to get feedback from their program staff on proposed roles and responsibilities.

**October 31–November 1, 1996, Session.** The work group reviewed and discussed the *Draft Watershed Management Program Activity Guide*. It outlined ways to promote and support stakeholder involvement (including partner agencies, interest groups, and citizens) and developed a recommended organizational structure to support coordinated watershed management. It identified additional workload needs and recommendations for meeting these needs. A subcommittee presented a draft template/outline for future Hydrologic Region Status Reports and Priority Watershed Management Plans. The work group set a target date of November 15 for all members to brief their senior managers regarding the progress of framework development and its management implications. A new Governor was elected.

**January 13–14, 1997, Session.** A subcommittee presented draft strategic monitoring and assessment plan outlines. The primary focus was on the presentation and discussion of alternative prioritization methods and criteria that should guide development of West Virginia's prioritization and targeting approaches. A subcommittee was formed to refine the method outlined by the work group. The group reviewed and revised a draft outline for the *West Virginia Watershed Management Framework* document. It finalized the *Watershed Management Program Activity Guide*, the recommended administrative structure, and the grouping of hydrologic regions. The work group proposed that partner agencies sign a Resolution of Mutual Intent to implement the watershed management framework. Members agreed to float the idea with senior managers before the next meeting.

**February 20–21, 1997, Session.** The work group reviewed the municipal and industrial NPDES permit synchronization schedule; the Office of Mining and Reclamation indicated a desire to synchronize its permits if hydrologic groupings can be refined to balance the workload of all programs. The group reviewed and discussed the subcommittee's draft proposed prioritization method and outlined revisions that would be needed before sending its out for review by TMDL litigants. A major focus was detailed review and revision of the *West Virginia Watershed Management Framework* document. The work group reviewed and discussed the draft *Resolution of Mutual Intent*; all members said their managers indicated support of such a resolution. The work group set a target date for briefing agency directors and senior managers on latest draft of the *West Virginia Watershed Management Framework* and the *Draft Resolution of Mutual Intent*. It planned a signing ceremony for watershed management partners (targeted for mid-April).

## Transition

**February 21, 1997, Session.** The group discussed key next steps in implementation. Two partner agencies dedicated funding for a new Basin Coordinator position.

**March–April Briefings and Finalizing Framework Document.** Work group members briefed senior managers. The new DEP Secretary was appointed and briefed on framework development; he indicated strong support. The new Governor, after being briefed on the watershed management framework document, expressed strong support and a desire to host the signing ceremony in the Governor's office. Legislative committees were also briefed. Three new agencies, who had indicated earlier they did not wish to be part of the framework design, said they would like to be signature parties to the *Resolution of Mutual Intent*. The Workgroup finalized groupings of hydrologic regions and the schedule for synchronizing all municipal, industrial, and mining NPDES permits. The *Framework* document and *Resolution* were finalized.

**May 29–30, 1997, Session.** The *Partners' Information Session* provided an overview of the Watershed Management Framework, the responsibilities of the Interagency Steering Committee, and anticipated benefits of this partnership. Those invited to the session included senior agency management, members of the staff work group that had designed the framework, media representatives, and environmental and business associations. After a reception, the group attended a ceremony at the Governor's office where partner agencies and the Governor signed the *Partnership for Statewide Watershed Management Resolution of Mutual Intent*. Signatory agencies included the West Virginia Division of Environmental Protection, West Virginia Soil Conservation Agency, West Virginia Division of Forestry, West Virginia Bureau of Public Health, West Virginia Bureau of Commerce, U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Office of Surface Mining, U.S. Forest Service–Monongahela National Forest, and the Natural Resources Conservation Service. On May 30, transition issues were discussed.

**June 1997.** Members of the Interagency Steering Committee were appointed by the agency directors. An orientation work session was held for new Steering Committee members. A draft job description for the Basin Coordinator position was developed, along with a schedule for hiring the Coordinator.



## Implementation

**July 1, 1997, Session.** The Interagency Steering Committee held a kick-off meeting to assign responsibilities for completing the first hydrologic region status report for the Upper Ohio and to plan coordinated public outreach for the first grouping of watersheds. The Office of Water Resources began synchronizing all NPDES permits.

West Virginia has five groupings of watersheds across the state, with five to six watersheds per grouping. Over the next 6 months, the watershed partners will complete the Upper Ohio pilot project status report. They will also initiate public outreach and screening-level monitoring and write watershed status reports in the remaining five watersheds of group 1. Partners plan to initiate watershed planning and management in all five groupings by the year 2000.