



Moving from Plan to Action

Roles and Responsibilities

The direction has been set for improving water resource management, now it's time for action. Roles and responsibilities will become clearer once specific management strategies, based on regional and local priorities, have been set. All governmental agencies, private and non-profit organizations, and individuals — have a role to play and responsibilities.

Government: Many of the actions needed to meet the Goals and Objectives of this Plan can be taken under the authority of the myriad federal, state, regional and local agencies, authorities and commissions that operate within the Basin and its watersheds. These entities are responsible for:

- Water quality
- Water supply planning and management
- Wastewater planning and management
- Stormwater management
- Environmental resource protection
- Public health
- Flood control
- Economic development
- Transportation network planning
- Construction and maintenance
- Oversight of development and construction standards
- Land use planning and growth management
- Research and data management
- Education, outreach and training

Federal Government: There are many federal agencies with authority in water resource related issues. These include: Environmental Protection Agency; National Park Service and U.S. Geological Survey within the Department of the Interior; Forest Service and the Natural Resources Conservation Service within the Department of Agriculture; Army Corps of Engineers in the Department of Defense; National Oceanic and Atmospheric Administration within the Department of Commerce; and the Federal Emergency Management Agency within the Department of Homeland Security. Suggested actions for these agencies are:

- Supply data and information to improve regional water resource management
- Fund cooperative efforts among state and regional agencies to secure agreement and unified action to protect and improve water quality and critical habitat, and to plan for sustainable water use and supply
- Promote cooperation and communication among federal government agencies with shared jurisdiction and authority for water resources
- Eliminate redundancy; streamline federal agency decision-making and funding where considerable federal, regional and state cooperation is currently demonstrated



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Man — despite his artistic pretensions, his sophistication, and his many accomplishments — owes his existence to a six inch layer of topsoil and the fact that it rains.

Author Unknown

State Government: State agency mandates, responsibilities, and names differ among the four Basin states. State agencies, departments, commissions, boards or programs that have responsibility and authority for one or more areas related to water resources, as noted in the general government section, should work to fulfill the following duties:

- Collect and supply data and information to improve water resource management at the basin, regional and watershed scales
- Support educational and outreach efforts to improve water resource stewardship
- Maximize use of existing linkages, such as those of the Cooperative State, Research, Education, and Extension Service, to enhance outreach, communication and information flow
- Fund cooperative efforts among state and regional agencies and the private sector to secure agreement and unified action to protect and improve water quality and critical habitat, and to plan for sustainable water use and supply
- Enable and support growth management efforts and water resource planning and management by state agencies, counties and municipal authorities on a watershed basis
- Coordinate efforts among state agencies responsible for water resource related programs, regulations and oversight

Regional government — counties, commissions, councils, districts, etc. The Delaware River Basin Commission plays an essential role in improving coordination and collaboration among these entities. The 1961 Compact granted the Commission broad planning and regulatory powers in the areas of water supply, pollution control, flood protection, watershed management (including soil conservation and fish and wildlife habitats), recreation, hydroelectric power, and surface and ground water allocations and diversions. These powers should be used to educate as well as to regulate; to demonstrate the principles of integrated water resource management; and to foster partnerships with and among other public and private entities to achieve the outcomes articulated in this Plan and the collective stewardship of shared resources. A principal role of the Commission is to coordinate policy and actions among the state and federal agencies involved with water resource protection and management within the river basin. The Commission's implementation of the Basin Plan occurs through modifications to its Comprehensive Water Resources Plan and the exercise of its planning and regulatory authority.

There is a wide variety of other regional organizations within the Basin that develop and implement policy, plan and manage, or have oversight responsibility for water or related resources. Examples include, but are not limited to: the Delaware Estuary Program, Soil Conservation Districts throughout the Basin, and the Delaware Valley Regional Planning Commission, fostering regional cooperation among nine counties in the greater Philadelphia-Camden-Trenton area. Consortia like the Schuylkill Action Network, formed to coordinate actions to protect the integrity of the Schuylkill River as a drinking water source, are other examples of regional cooperation. There is also, the Upper Delaware Council, a oversight body responsible for overseeing the coordinated implementation of the "River Management Plan for the Upper Delaware Scenic and Recreational River." While

each regional organization has a unique mission and membership, they serve a common function of improving communication and cooperation within their area.

Actions that regional entities should be involved in include:

- Coordinate with states and other regional entities
- Collect, analyze and supply information and data to improve water resource management at the basin, regional and watershed scales
- Lead and support watershed-based water resource planning and management at local and regional level

Municipal government — the authority and responsibility of minor civil divisions, including boroughs, towns, townships, cities, etc., varies among the Basin states, but land use planning, zoning and development permitting is generally the concern of local governments. The Basin Plan advocates the full use of authority vested in local governments to improve water resource planning and management and improve the outcomes of development projects and water resource use and protection. Examples include:

- Use supplied water resource information to improve water resource management and land use decision-making in communities and watersheds
- Collect and supply data to appraise progress toward water resource goals as necessary
- Lead and support growth management efforts
- Engage in multi-municipal planning and include water resource considerations in local planning and development regulations
- Exercise vested authority, including adopting the official map, to incorporate resource protection into local planning
- Work with down-stream and up-stream neighbors for the improved management of stormwater, water supply and wastewater, waterway corridors, habitat, recreation and protection of landscapes critical to water resources.

Private and non-profit sectors and individuals. A host of non-governmental organizations are stakeholders in the Basin, and their actions complement those of the governmental sector. These include, but are not limited to: providers and users of water resources; engineering, planning and technical consultants; watershed associations; civic associations and citizen action groups; foundations that support water resource research and protection; academic and research institutions; professional associations; and associations of municipal leaders.

The private and non-profit sectors. The private for-profit and non-profit sectors bring another dimension of interests and resources to forge strong and effective partnerships for improved water resource management. Organizations such as the League of Women Voters, the Riverkeeper Network, and the Partnership for the Delaware Estuary, keep water resource issues in the news and gain public support and private resources for protection and management efforts. Others groups, including the Pennsylvania Environmental Council, the Association of New Jersey Environmental Commissions, the Delaware Nature Society, and the Bayshore Discovery Project focus efforts on education, outreach and improved



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In rivers, the water that you touch is the last of what has passed and the first of that which comes; so with present time.

Leonardo da Vinci

decision-making. Conservancy organizations like the Rancocas Conservancy, the Heritage Conservancy, the Trust for Public Lands, and the Nature Conservancy work to protect or restore the function and integrity of environmentally significant landscapes. Private for-profit and non-profit agencies can:

- Forge regional and local private-public partnerships to collectively improve water resource management
- Work with partners to select, collect and report on appropriate indicators

For example, for-profit corporations can engage in partnerships with governmental and non-profit groups to restore and protect significant landscapes and mitigate environmental impacts from projects that provide power or other necessary public goods. Industry professionals that develop or use cutting-edge, water-friendly practices can serve as examples, leading to the faster transfer of new techniques and technologies. The Delaware River Water Resources Association and regional chapters of the American Water Works Association, and similar organizations, are integral to the transfer of technology and data through their meetings, publications and annual conferences. They also contribute significantly to the development of policy through their involvement in government agency advisory committees. In addition, associations and partnerships between and among the governmental and non-governmental sectors are a powerful way to gain and keep momentum for improving water resource planning and management, and an important element for institutionalizing coordination and cooperation.

Individuals: Individuals who work, raise families, and enjoy the Basin’s recreational opportunities are the ultimate stewards and users of the Basin’s water resources. Their actions are important. Each small action, has a cumulative effect. Individuals are encouraged to make a positive difference:

- Participate in regional and local decision-making and governance
- Volunteer in local efforts to monitor, assess, protect, and restore local resources
- Learn about water resources and share that knowledge
- Consider the water resource consequences of actions and choices
- Play a leadership role in local resource protection
- Lead by example and foster a sense of stewardship in future generations

Measuring Progress

Assessing a baseline condition means determining the status or condition of a resource attribute using a measure or indicator. In the context of the Basin Plan, a baseline is the condition or set of conditions at one point in time; the starting point against which conditions in succeeding years can be measured.

A target or reference condition is aspired to, a condition which actions are intended to produce. For example, a degraded wetland might undergo restoration efforts to return it to a better or *target* condition, one closer to that of a “reference” or unimpaired wetland.

Much has been accomplished since the initial passage of national and state pollution control and environmental legislation in the second half of the last century. States have established environmental protection and conservation agencies, adopted rules and standards to govern withdrawals from and discharge

to their streams and rivers, and begun developing criteria for the protection of human and aquatic ecosystem health. Each state has developed programs and set priorities, making varied progress across an array of water resource issues. This Plan sets a structure for taking stock of these achievements and for identifying areas still needing action.

Existing programs and plans form the foundation of progress already made in the water resource arena. We will build on this foundation, and measure progress from this baseline. Measuring progress toward achieving the Basin Plan's Goals and Objectives rests on the ability to:

- Assess baseline conditions
- Monitor and report on those critical indicators when combined signal the improvement or deterioration of conditions in the Basin's watersheds

The item or thing selected for measurement is called an *indicator* and relates to the condition of the resource or system or the efficacy of a program. An indicator can be selected to measure the actual *condition*, such as the amount of dissolved oxygen in a river; a *pressure* on the resource, such as additional water users per year; or an *outcome*, such as the number of waterways no longer listed as impaired. Programmatic measures may be less obviously linked to actual water resource conditions, but are important to assess the efficiency and efficacy of regulatory, planning and grant programs. For example, the amount of flood insurance claims could be tracked to determine the effect of community flood mitigation planning. Grant programs might track the number of projects and associated improvements, such as miles of stream buffer planted in new vegetation, as well as the dollars spent. In many cases, an indicator needs to measure a pressure, condition or outcome on a Basin-wide basis. In other cases, the most appropriate indicators may assess conditions on a smaller regional, watershed or community scale.

Ideally, indicators selected will be relevant, sensitive to change, easy to measure with low measurement error, and cost effective.

Capturing a comprehensive set of indicators requires the participation of federal, state, regional and local representatives. It requires a commitment to monitoring and reporting within agreed timeframes so that the abundance of water resource-related information collected across the Basin can be collated, assessed and presented in a *State of the Basin* report issued via the Delaware River Basin Commission. Developing the most meaningful and appropriate indicators for measuring progress, and setting realistic time frames for accomplishing Objectives is a critical next step. It requires continued, careful assessment of conditions and the identification of strategies appropriate to physical, political and fiscal circumstances. It also requires the coordinated effort of all partners.

The Basin and its watersheds are the focus of our efforts. Positive outcomes will be measured and failures will be felt most acutely. Our quality of life depends on our success.

