



U.S. House of Representatives
Committee on Transportation and Infrastructure

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SUMMARY OF SUBJECT MATTER:

TO: Members of the Subcommittee on Water Resources and Environment
FROM: Subcommittee on Water Resources and Environment Staff
SUBJECT: Hearing on Comprehensive Watershed Management and Planning

PURPOSE OF HEARING

The Subcommittee on Water Resources and Environment is scheduled to meet on Tuesday, June 24, 2008, at 2:00 p.m. in 2167 RHOB, to receive testimony on Comprehensive Watershed Management and Planning efforts. Testimony is expected from Steve Stockton, Army Corps of Engineers; Gerald Galloway, University of Maryland; Larry Larson, Association of State Floodplain Managers; William Mullican, Texas Water Development Board; Carol Collier, Delaware River Basin Commission; Brian Richter, The Nature Conservancy; Paul Freedman, Water Environment Federation.

BACKGROUND

While there have been varying levels of watershed planning over the past century, the focus has primarily been on isolated water resource issues such as water quality, stormwater runoff, flood control, fish and wildlife habitat, and water supply. Historically, this planning has been typically led by a single state/federal agency, or a unit of local government, with little or no outside/public involvement addressing a narrow legal mandate. The resulting plans frequently failed to capture the full needs of watershed resources and have not had public buy-in on the resulting recommendations.

In recent years, watershed planning has faced increased criticism for the limited bureaucratic approach and focus on limited water resources issues. This has resulted in call for greater public involvement and study of a broader array of watershed concerns. In response, watershed planning has begun to evolve beyond the tight focus into a more comprehensive process with greater public engagement.

Most states and federal agencies have watershed programs or support levels of watershed planning. While many of the federal watershed programs have become more open to public participation, all have many of the historic limitations and continue to be limited in focus, addressing agency missions and not looking at comprehensive watershed concerns e.g Army Corps of Engineers primarily focus on flood control, navigation, and ecosystem restoration; EPA programs address water quality concerns related to Clean Water Act concerns; and NRCS programs typically address agricultural non-point source runoff and sediment loss. This hearing will explore the experiences of different experts, reviewing what efforts have been successful, what roles federal agencies play, and factors to include in watershed planning.

There are widely diverse water conditions around the United States and all are managed differently and often independently of other water areas and projects. There are many federal and state agencies with management responsibilities in addition to the very different water laws of the various states. Generally this has resulted in local and narrowly focused project objectives with little consideration of the broader watersheds that surround these projects. In addition, there have been increased demands for water resources, in part due to increased population and an increased recognition of the need to reserve water for aquatic ecosystems, as well as consumptive uses. Watershed planning brings a recognition of the trade offs involved in water resources management and will assist in making the complex management decisions that will be faced in coming years.

What is a Watershed?

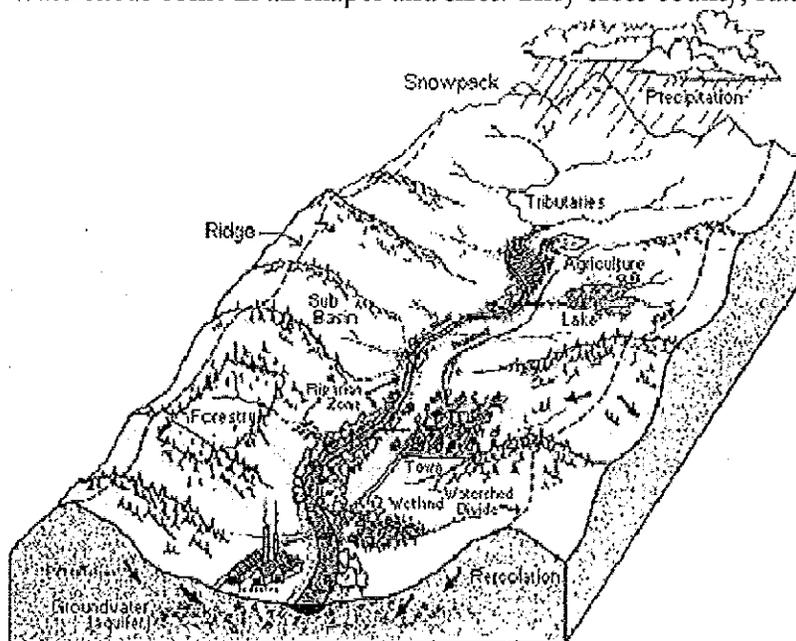
EPA defines a watershed as:

“A watershed refers to a geographic area in which water drains to a common outlet. A watershed includes not only all water resources, such as lakes and rivers, but also the land that drains into these resources. The watershed approach is a strategy for achieving clean water that relies on decentralized decision making and stakeholder involvement to effectively protect and restore aquatic ecosystems.”

John Wesley Powell, scientist geographer, put it best when he said that a watershed is:

"that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community."

Watersheds come in all shapes and sizes. They cross county, state, and national boundaries.



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What is Watershed Planning?

Watershed-based planning provides the framework to coordinate comprehensive water resources planning in the region. Watershed planning and management includes all of the activities associated with conservation of natural resources including preserving, protecting and restoring the streams, wetlands, forests and other natural resources within a watershed. As part of the process for developing watershed restoration plans, information must be collected about existing water quality, quantity, hydrology, habitat conditions, geology, land use, demographics, economics and other factors. Large amounts of data must be collected and good models are needed. As competition for water increases within watersheds, local and regional planners will need comprehensive data and models to help identify the trade offs involved in water resource management decisions.

The State of Texas recently completed a comprehensive state-wide watershed planning exercise. The Texas experience demonstrates that a comprehensive watershed approach requires a significant, long-term commitment to a resource-intensive process, complete with a wide range of skills and experience. As Texas demonstrates, comprehensive watershed planning is no longer carried out solely by a team of hydrologists. The Texas approach requires a team that includes individuals skilled and trained in not only hydrology, but also in geology, biology, socio-economics, engineering, public policy, agriculture, and energy. Additionally, Texas' study sought to understand how rivers and lakes interact with underlying aquifers.

Another critical element of the Texas experience was the need and use of extensive data. Data is the foundation on which all steps in any planning process rests. Texas invested approximately \$36 million in the regional water planning process and another \$20 million to collect and analyze basic surface and groundwater data. These data allow Texas to calculate current water

¹ From EPA website <http://www.epa.gov/owow/watershed/whatis.html>

supplies and make projections for the availability of future supplies to meet needs over the next 50 years.

The Corps and EPA each now try to apply a more comprehensive watershed approach but continue to focus on narrower water resource/quality issues.

For EPA, "A Watershed Approach²:

- Is hydrologically defined
 - geographically focused
 - includes all stressors (air and water)
- Involves all stakeholders
 - includes public (federal, state, local) and private sector
 - is community based
 - includes a coordinating framework
- Strategically addresses priority water resource goals (e.g. water quality, habitat)
 - integrates multiple programs (regulatory and voluntary)
 - based on sound science
 - aided by strategic watershed plans
 - uses adaptive management"

As the Corps of Engineers now applies watershed planning, "the Watershed Approach is based on:

1. Seeking sustainable water resources management,
2. Integrating water and related land management,
3. Considering future water demands,
4. Coordinating planning and management,
5. Promoting cooperation among government agencies at all levels,
6. Encouraging public participation,
7. Evaluating monetary and non-monetary trade-offs,
8. Establishing interdisciplinary teams, and
9. Applying adaptive management as changing conditions or objectives warrant."

Why Watershed Planning:

Because of the increasing competition for water, a watershed approach is the most effective framework to address today's water resource challenges. Watersheds supply drinking water, provide recreation and respite, and sustain life. More than \$450 billion in food and fiber, manufactured goods, and tourism depends on clean water and healthy watersheds.

The watershed approach can result in cost savings by leveraging and building upon the financial resources and the willingness of the people with interests in the watershed to take action. Through improved communication and coordination the watershed approach can reduce costly duplication of efforts and conflicting actions. Regarding actions that require permits, specific actions taken within a watershed context (for example the establishment of pollutant trading schemes or wetlands mitigation banks and related streamlined permit review) enhances predictability that future

² From EPA Website at <http://www.epa.gov/owow/watershed/approach.html>

actions will be permitted and reduces costs for the private sector. As a result, the watershed approach can help enhance local and regional economic viability in ways that meet local water resource development needs, are environmentally sound, and consistent with watershed objectives.

A comprehensive watershed management plan can help avoid regional conflicts by identifying early the impacts of potential water resources development decisions. Developing such plans is data intensive and involves complex models. Once in place, a watershed management plan can be used to evaluate local water resource development impacts and identify alternatives.