

PROSPECTS FOR COMPREHENSIVE, INTEGRATED WATERSHED MANAGEMENT UNDER EXISTING LAW

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I. Introduction

Watershed management is an elastic concept. It is not mandated by federal statute nor subject to a single agency's jurisdiction. Accordingly, watershed management programs are usually created at the local level, often with federal financial and technical assistance, on an ad hoc basis under existing laws to address local or regional water resource concerns or to comply with federal regulatory mandates. These efforts are hindered because rivers flow from one political (local, county, state, and national) and/or agency jurisdiction into another. In addition, they are convenient political boundaries; with opposite banks falling in different jurisdictions (Platt, 1989). Finally, most of a comprehensive, integrated watershed management plan's elements (i.e., water use, wetlands, flood control, land use, fish and wildlife management, etc.) are managed or regulated by a specific statute. In fact, although many laws such as the Clean Water Act's non-point source pollution programs must be applied on an "area-wide" or watershed basis to be effective, other laws could be applied on such a basis. Numerous agencies have watershed management initiatives to encourage the application of these laws on a watershed basis. Similarly, federal resource management agencies are exploring quasi-watershed programs such as riverbasin, ecosystem, or landscape management to better meet their goals. Thus the challenge is to identify and use legal mechanisms and water based institutions to integrate this diverse authority into coordinated, comprehensive watershed management and planning. This paper will briefly discuss what watershed management is, which federal agencies oversee important components of it, and offer some suggestions to enhance these efforts using existing laws and institutions.

II. Integrated Watershed Management Described

Holistic management concepts, most notably ecosystem management, have come to represent a panacea to a variety of people ranging from multiple-use supporters to wilderness proponents. As a 1993 Congressional Research Service Report states, "there is not enough agreement on the meaning of [ecosystem management] to hinder its popularity" (quoted in U.S. GAO 1994 at 38). Similarly, watershed management lacks a statutory or even a generally accepted definition and is often used as if it were synonymous with river-basin, ecosystem, or

landscape management (See Coggins 1991). Still, watersheds offer a promising basis for holistic management because watershed boundaries: 1) are relatively well defined, 2) can have major ecological importance, 3) are systematically related to one another hierarchically and thus include smaller ecosystems, 4) are already used in some water management efforts, and 5) are easily understood by the public (U.S. GAO 1994). This is juxtaposed against conflicting agency ecosystem delineation criteria exemplified by the U.S. Fish and Wildlife Service's watershed system and the Forest Service's ecoregional approach (U.S. GAO 1994). As used here, integrated watershed management represents a method to encompass and coordinate all of a watershed's potential uses, services, and values in management decisions and regulatory activities rather than attempting to maximize selected resources or regulate individual pollutants.

III. Federal Authority for Watershed Management

Federal agencies are created and authorized by statute to perform specific missions. Congress has enacted numerous laws to protect the environment and to protect or manage individual natural resources (i.e., air, water, soils, plants, animals, forests, rangelands, wetlands, and wilderness areas). These statutes designate an agency to regulate a pollutant or manage a resource and may outline procedures the agency must follow in implementing this authority. While there is considerable overlap, statutes relevant to watershed management may be roughly characterized as: 1) procedural, 2) regulatory, 3) development (i.e., authorize construction of a water resource project), or 4) management. Integration and coordination of this assortment of authority among federal agencies within a watershed is hampered by disparate agency missions and lengthy, often distinct, federal agency planning requirements prior to implementing a management plan or approving some activity within a watershed. To explain this labyrinth, the primary federal agencies involved in watershed management and the statutory basis of their authority are discussed below. To facilitate this understanding, after discussing the EPA and its vital role in environmental issues, other agencies with a significant function in watershed management will be discussed. Based on their primary missions, these "action" agencies are categorized as either development or management.

A. The Environmental Protection Agency

The EPA has broad authority to review the actions of other federal agencies to ensure that they comply with certain environmental procedural laws and to promulgate rules and enforce environmental regulatory laws. The National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. is the major procedural law concerning the EPA and watershed management. NEPA requires that through a public process all federal agencies, in accordance with the Council on Environmental Quality's (CEQ) regulations and the agencies' own regulations, prepare detailed Environmental Impact Statements (EIS) for major federal actions that may significantly affect the quality of the human environment (42 U.S.C. § 4332(C)). EISs are detailed, interdisciplinary documents that could support watershed management. Still, although the EPA reviews EISs and can refer unsatisfactory ones to the CEQ for review, the acting agency retains considerable discretion in scoping and writing the EIS. Furthermore, the Clean Water Act (CWA), 33 U.S.C. §§ 1251 et seq., grants the EPA considerable authority to regulate water pollution and contains procedures mandating a public process prior to the issuance of wetlands dredge and fill permits.

The two principal regulatory laws governing the EPA's role in watershed management are the CWA and the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq. These statutes give the EPA broad permitting authority over a variety of point and non-point sources of water pollution and public water facilities, respectively. The EPA can "certify" States environmental agencies to carry out the permitting but retains authority to reclaim jurisdiction if a state fails to adequately administer and enforce the program.

These activities could be effectively incorporated into or provide a basis for watershed management programs. For example, the CWA authorizes regional, areawide efforts to control nonpoint source water pollution; however, these programs suffer from a lack of intergovernmental cooperation and a lack of local or state support for federal mandates (Mandelker 1989). The EPA is attempting to rectify this situation through numerous watershed programs, represented by the Watershed Protection Approach (WPA). The EPA (1992) describes the WPA as "an integrated, holistic strategy for more effectively restoring and protecting aquatic ecosystems and protecting human health (e.g., drinking water supplies and fish consumption)" containing three elements:

1. Problem Identification - Identify the primary threats to human and ecosystem health within the watershed.

2. Stakeholder Involvement - Involve the people most likely to be concerned or most able to take action.

3. Integrated Actions - Take corrective actions in a comprehensive, integrated manner once solutions are determined. Evaluate success and refine actions, as necessary.

B. Development Agencies

Considerable federal activity is based on federal authority over interstate navigable waters (See CWA § 404). The Rivers and Harbors Act, 33 U.S.C. 401 et seq., and various Water Resources Development Acts authorize the U.S. Army Corps of Engineers and the Bureau of Reclamation to undertake flood control, navigation and other water development projects on navigable waters and their tributaries. Many of these projects are initiated by local interests, through their Congressional delegation, and are subject to local cost sharing requirements. Furthermore, because of the importance of water and waterbodies, a variety of regional, waterbased entities exist to coordinate with federal agencies in the planning and operation and maintenance of water resource projects (i.e., levee districts, water and irrigation districts) (Robinson and Marks 1994).

1. Development Projects

Many federal and state authorities have jurisdiction for dam and impoundment planning, building and administering for flood control, navigation, irrigation, hydroelectric power and other purposes (Adams 1993). These activities are often planned and built by the Corps of Engineers or the Bureau of Reclamation, as authorized by specific legislation. During the planning stage, watershed management concerns could be discussed and, using the new project as the impetus, initiated. Local sponsors may operate and maintain the project and continue the watershed focus; alternatively the federal design and construction agency may administer the project. Even if a local sponsor or private entity administers the project, federal agencies such as the Federal Energy Regulatory Agency (FERC) may be involved in monitoring and relicensing the project.

The authorizing legislation dictates, to a large extent, how these projects may be incorporated into a watershed management program. Still, a variety of opportunities exist during the planning process to incorporate these diverse projects into a watershed programs. The Corps operation and maintenance budget appropriation is one vehicle. In addition, the Corps' approach to flood control and flood plain management has undergone a senior, federal interagency review (Interagency Floodplain Management Review 1994). Any legislation to implement the report's suggestions should provide new

avenues for watershed management. Also, hydroelectric projects regularly face the FERC for relicensing. The Federal Power Act, 16 U.S.C. §§ 791 et seq., requires the FERC, in addition to considering power and development, to give equal consideration to energy conservation, fish and wildlife protection, the protection of recreational opportunities, and the preservation of other environmental aspects (16 U.S.C. § 797(e) emphasis added). Furthermore, all licenses must be in accordance with a comprehensive plan for improving or developing a waterway that considers: commerce, the improvement and utilization of water power development, the adequate protection, mitigation, and enhancement of fish and wildlife, and other beneficial public uses (16 U.S.C. § 803(a)).

2. Agricultural Activities

Agricultural practices have long been associated with watershed issues such as wetlands impacts and soil erosion (U.S. Department of the Interior 1994). The Department of Agriculture has been active in helping farmers to minimize these impacts through the Soil Conservation Service and the Agricultural Stabilization and Conservation Service now combined in the Natural Resources Conservation Service (NRCS). Although agricultural practices are for most part exempt from the CWA's wetlands permitting scheme, Congress addressed wetlands issues in the Food Security Act of 1985 (FSA), 16 U.S.C. §§ 3801 et seq. The FSA authorized three conservation measures to minimize or avoid adverse water impacts by agriculture -- sodbuster (protects highly erodible land), swampbuster (protects wetlands) and the conservation reserve (a stipulation that for 10 to 15 years, land will not be used for agriculture but put to less intensive uses and conservation measures applied) (Tabb & Malone 1992). In the 1990 reauthorization of the Food Security Act, Congress expanded the scope of the conservation reserve while expanding the exemptions in and weakening enforcement of sodbuster and swampbuster (Hildreth 1992).

The NRCS has jurisdiction over many other programs that are extremely significant to watershed management in the farm states. For instance, the Watershed Protection and Management Act, 16 U.S.C. §§ 1001-1009, allows the NRCS to provide local sponsors with technical and financial assistance for planning and carrying out watershed projects in watersheds under 250,000 acres in size. These projects are intended limited to watershed protection from sedimentation and erosion, flood prevention and agricultural and nonagricultural water management. The NRCS also administers the Rural Clean Water Programs to install and maintain measures incorporating best management practices to control nonpoint source pollution (33 U.S.C. § 1288(j)(1)). The

NRCS also administers the Rural Clean Water Programs to install and maintain measures incorporating best management practices to control nonpoint source pollution (33 U.S.C. § 1288(j)(1)).

C. Management Agencies

There are four primary federal management agencies: 1) the Forest Service (FS), 2) the Bureau of Land Management (BLM), 3) the Park Service (PS), and 4) the U.S. Fish and Wildlife Service (FWS). Two significant legal obstacles exist to effective watershed management by these agencies: 1) land- ownership patterns within a watershed, and 2) the nature of federal statutes. Regarding landownership, even in the public land states in the western U.S., different federal agencies control large tracts of public land within the same watershed, and there are often private "inholdings" that can frustrate management. Coordinated public land management is also hindered because each agency has a distinct management goal, and federal law can impose a vertical, hierarchy of management restrictions on agency land. For example, a national forest may contain wilderness areas, wild and scenic rivers and mining claims.

1. Multiple Use Sustained Yield

The two major land management agencies are the FS and the BLM; each have a distinct mission. The National Forest Management Act, 16 U.S.C. §§ 1600 et seq., furnishes a comprehensive management framework for national forests. Similarly, the Federal Land Policy and Management Act, 43 U.S.C. § 1701 et seq., dictates the BLM's programs for grazing, mining, logging and other resource uses (Hildreth 1993). Still, the Multiple-Use, Sustained Yield Act (MUSY), 16 U.S.C. §§528 et seq., provides a central theme for federal land management. The MUSY's central concept is to allow for multiple uses of federal lands while managing for a sustained yield from those lands. MUSY designated the "watershed" resource" as coequal with the other surface uses that agencies were charged with managing for a sustained yield: outdoor recreation, range, timber, wildlife and fish (Coggins 1991).

2. U.S. Fish and Wildlife Service

The FWS has identified over 100 federal statutes and 40 interstate compacts relevant to its mission related to the management of fish and wildlife resources and wildlife refuges (Department of the Interior 1992). Space allows the discussion of three of the many laws of particular importance to watershed management: the Fish and Wildlife Coordination Act (FWCA), 16 U.S.C. §§ 661 et seq., the Interjurisdictional Fisheries Act (IJF), 16 U.S.C.

§§ 4101 et seq., and the Endangered Species Act (ESA), 16 U.S.C. §§ 1531 et seq. The FWCA is a procedural statute mandating that when a waterbody is altered by a federal agency, that agency must consult with the FWS or the National Marine Fisheries Service (NMFS) and the appropriate state fish and game department regarding how to prevent loss or damage to fish and wildlife resources (16 U.S.C. § 662(a)). The IJF authorizes the Secretary of Commerce to distribute grants to states to coordinate the interjurisdictional management of commercial fisheries. Finally, the ESA has considerable regulatory authority, subject to complicated procedural requirements, giving the FWS and the NMFS authority to delineate and protect critical habitat for threatened and endangered species. Recovery plans may impose binding restrictions on both public and private property and allow the FWS and NMFS to engage other federal agencies in consultations if a proposed federal agency action would adversely impact a threatened or endangered species or its habitat.

3. Park Service

The PS was created by the National Park Service Organic Act of 1916, 16 U.S.C. §§ 1 et seq., and charged with preserving the wildlife and scenery of congressionally designated park areas for present and future enjoyment of those characteristics. Despite a principal preservation mission, national parks do not correspond with watersheds. The PS has considerable discretion to regulate mining claims, grazing rights, recreation and other land uses within park boundaries, but this authority remains disputable in public and private land adjacent to park lands.

IV. CONCLUSION

As shown above, there is a multitude of assorted, often conflicting, federal authority for watershed management. State and local governments also retain a significant role in implementing some regulatory authority, subject to EPA certification. Similarly, for water resource development projects, the active participation and cost sharing of local sponsors is vital. Procedural laws afford a similar, but less significant state and local voice in management decisions. Yet there is no statutory mandate requiring agencies to engage in watershed management. Furthermore, agencies have considerable discretion in how they use their statutory authority. In addition, courts are extremely reluctant to force agencies to use their authority in a specific manner (i.e., to promote watershed management) (See Doppelt 1993).

Federal agencies have a variety of watershed programs to aid state and local governments in establishing watershed management programs. Still, there is a need to integrate

a broader range of authority and take greater advantage of existing, water based, institutions such as: soil and water conservation districts, levee boards, irrigation districts, and regional interstate bodies. Federal agencies have this authority. As Justice Scalia (1987) observed regarding federal environmental regulatory actions:

the overwhelming majority of judicial reversals of agency rulemaking action -- including, of course, all of those resting upon the most frequently used basis for judicial review in the environmental field, the National Environmental Policy Act -- are reversals on procedural grounds. It was not that the agency could not do what it did, but that it could not do what it did in the manner that it did (e.g., without a NEPA statement) or for the particular reasons that it gave. (page 98, emphasis in original).

Similarly, the White House Office of Environmental Policy (1993) has identified constraints to wetlands issues that are also appropriate for watershed management:

1. Regulatory programs must be fair, flexible, and predictable, and be administered to avoid unnecessary impacts upon private property and the regulated public. Duplication must be avoided and the public must have a clear understanding of regulatory requirements and various agency roles;

2. Non-regulatory programs, such as advance planning, restoration, inventory, and research; and cooperative efforts must be encouraged to reduce the Federal government's reliance upon regulatory programs as the primary means to protect watersheds;

3. The Federal government should expand partnerships to promote watershed management.

In closing, the 104th Congress is reauthorizing and proposing significant amendments to many laws vital to watershed management such as the Farm Bill, the Endangered Species and the Clean Water Act. Agencies, groups and individuals interested in watershed management must be prepared to maximize whatever regulatory and planning authority is available to promote watershed management and avoid unnecessary duplication. Finally, as Dickey (1993) observes, an effective watershed management policy ought to provide:

1. A holistic systematic watershed approach (i.e., a disciplined planning process considering alternatives of scale related to the next larger scale),
2. Decentralize administration to the lowest responsible level,
3. Utilize a flexible, responsible and adaptive policy framework and continually involve the public in the planning process, and
4. Use extensive partnerships in policy development

including interstate bodies where possible.

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