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Author(s): Andrea K. Gerlak

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Federalism and U.S. Water Policy: Lessons for the Twenty-First Century

Andrea K. Gerlak*

This article traces five historical streams of water policy in the United States, revealing the strain and stresses of intergovernmental relations pertaining to water resource management. It finds that water policy is increasingly characterized by pragmatic federalism emphasizing collaborative partnerships, adaptable management strategies, and problem and process orientation. The evolving nature of federal-state relations, characterized by expanding federal authorities and increased state capacity, coupled with a rise of local watershed groups and greater ecological concern, calls for improved coordination. Yet challenges resulting from policy fragmentation and ecosystem complexity remain. Continued calls for greater integration will likely be heard as federal-state relations continue to evolve.

Water policy is increasingly complex today, with multiple decision forums, institutional arrangements, policy tools—and an ever-increasing number of stakeholders. There is no real national water policy in the United States but rather fragmented, incremental crisis-driven policy. The federal-state relationship is at the heart of this conflict. A struggle between national supremacy and local autonomy pervades water management.

For well over fifty years, scientific and legal experts alike have called for a comprehensive national water policy.¹ But any attempt to develop a cohesive and fair water policy for the twenty-first century without a clear understanding of the history of U.S. water policy would be folly. A study of the past 250 years of U.S. water policy reveals important patterns, themes, and behaviors. Lessons from the past can and should inform the future and guide policymakers today. To presume a *tabula rasa* and ignore the layers of history from which the current flawed U.S. water policy has been built only dooms us to repeat the same mistakes.

One such way to view the past is through the lens of federalism. As in many political arenas, the historical role that the federal government has played with regard to water policy is at once informative, fascinating, and schizophrenic. Analogous to a river or stream, the relationship of the federal government to other interested parties,

*University of Arizona

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especially states, has alternately ebbed, flowed, dried up, and overflowed. This relationship has at times produced great good but more often has created policies that are disjointed, reactionary, and at odds with a system of coordinated water management. Navigation of these historical streams is the first task for those who seek a healthy national water policy for the twenty-first century. Certainly it is not an easy task. Water attorney Charles E. Corker discussed “two of the most difficult problems with which people in the United States must live. One is water, the other is federalism. Both are subjects of fiercely-held emotional attitudes.”²

This paper aims to meet three goals. First, it outlines five major historical streams of water policy in the United States, revealing a dynamic, fluid federal-state relationship. Second, it reveals an increasing emphasis on pragmatic federalism, characterized by collaborative partnerships, adaptable management strategies, and a focus that is problem and process oriented. Third, it reveals challenges and obstacles for future management of water resources in the United States.

Federalism and Streams of U.S. Water Policy

Federal-state relations have evolved dramatically over U.S. history. There has been a movement from a layered cake to marble cake to a spider web.³ Notable federalism scholars such as Elazar and Kincaid have well described the eras and patterns of federalism in the United States.⁴ Today, there is a broad recognition that the late twentieth century became increasingly intergovernmental.⁵ It also became increasingly ambiguous. The 1990s have been described as a period of incoherence and ambiguity on questions of federalism.⁶ David Walker argues today’s federalism is “overloaded, unbalanced, ambivalent, and conflicted.”⁷ Some question whether the modern federal system is beginning to exact too high a price for state and localities.⁸

Many environmental policy scholars have traced the development of environmental policy in the United States, describing different epochs or eras in policy history.⁹ Rosenbaum has documented the rising discontent with regulatory federalism that has come to characterize environmental and natural resource policy and the “uneasy collaboration” occurring today between levels of government.¹⁰ McKinney and Harmon well describe the conflict over natural resources today, with particular attention to western resources and collaborative efforts to resolve such conflicts.¹¹ Others tell of the new pragmatic, third-way approach to environmental governance:

A sometimes inchoate, always evolving, and decidedly pragmatic “third way” approach to environmental governance, one that focuses on building a results-based (or outcomes-based) sense of common purpose as an antidote to the shortcomings of conventional bureaucratic, command-and-control, procedure-based, and adversarial approaches to ENR [environmental and natural resources] protection.¹²

Scheberle calls particular attention to policy implementation and intergovernmental relationships in the environmental policy arena.¹³

The analysis provided here builds on the work of both federalism and environmental policy scholars in an attempt to better understand the development of U.S. water policy. It traces federal-state relations and finds that intergovernmental relations related to water policy have evolved into a pragmatic federalism. It argues that streams of water policy closely follow eras of federalism: from state-based federalism to centralized federalism to cooperative federalism to pragmatic federalism. Glendening and Reeves's (1984) pragmatic federalism is our launching point. They point to "a constantly evolving, problem-solving attempt to work out solutions to major problems on an issue-by-issue basis, resulting in modifications of the federal and intergovernmental systems."¹⁴

No one event or piece of legislation captures the pragmatic federalism of today's water policy. It does not have an overarching framework or philosophical bent. It is not a one-size-fits-all approach. Rather, it is place based, collaborative, and experimental. Process, as opposed to division of authority, reigns supreme. Relying on a diverse set of approaches and tools, it strives to be more accessible with improved processes and greater coordination. Today's water policy is highlighted by pragmatic federalism that (1) emphasizes collaborative partnerships, (2) relies on adaptable management strategies, and (3) is problem and process oriented.

Given the perceived crisis in water management and the general lack of a national policy today, it is important to examine intergovernmental relations pertaining to water policy. Such an exploration will contribute to our understanding of water policy and may serve to inform future water resources decision making. The history of the federal government's relationship to the individual states with regard to water policy can be divided into five streams. The first stream, which encompasses the birth of the United States in 1776 to Theodore Roosevelt's presidency in the early twentieth century, is characterized by state-based federalism, where the issues of the day, mainly canal building and flood control, were dealt with by the states with the federal government playing a minor role. The Reclamation Act of 1902 begins the second stream. During this era of centralized federalism, the federal government increased its role in water management. The third stream occurred between 1960 and 1980. During this time cooperative federalism, or shared federal-state authority, characterized water policy in the United States. The new federalism of the Reagan era ushered in the fourth stream, which is characterized by an emphasis on increasing state responsibilities, such as cost sharing in water projects, and which marked a reduction in federal funding. This devolution, with an increased focus on collaboration and restoration, continued through the Clinton years, with a greater emphasis on restoration and collaboration, and has evolved into the more pragmatic federalism of today.

First Stream: State Ingenuity and Independence (Late 1700s to Early 1900s)

During the nation's infancy and early years, the federal government was slow to develop and manage water resources. State-based federalism characterized the day as states led the canal-building era of the nineteenth century and flood control on the Ohio and Mississippi rivers.¹⁵ Federal activities focused on discovery, as illustrated by Lewis and Clark's expeditions along the Columbia and John Wesley Powell's journeys along the Colorado River. As water resource issues developed, they were resolved primarily at the state or local level.¹⁶

The federal government began to assert itself during the Civil War and post-Civil War era in multiple areas. With the Swamp Land Act of the 1850s, the creation of the Mississippi River Commission in 1879, and the Rivers and Harbors Act in 1890, the federal government expanded its role in flood control and water development. Federal interests in the West began with the Mississippi River and moved progressively westward with the U.S. Army Corps of Engineers (Corps) expanding their interests in river and canal development, navigation, and flood control.

Yet the federal government continued to defer to states in areas of water allocation. The practice of prior appropriation, or "first in time, first in right," adopted in western mining camps became custom and would eventually find its way into the territorial and state codes in the west. With the General Mining Act of 1866, Congress officially deferred to local customs, allowing prior appropriation to extend to other areas of economic development and production, including factories, farming, and sawmills. Historian Roderick Walston describes it as a "sweeping declaration of national water policy."¹⁷

Second Stream: Federal Development and Dominance (1900–1960)

By the end of the nineteenth century, the most easily dammed and diverted small streams had been utilized. Westerners soon realized the limits of their local efforts and sought government assistance in constructing large storage projects on western rivers. Bankrolled primarily by railroad and mining interests, California water rights lawyer George H. Maxwell organized the National Irrigation Association in 1899 to pressure for federal construction of reservoirs in the West. As part of the West's reclamation crusade, western congressmen showed their strength and unity by filibustering the rivers and harbors bill in 1901 as a protest against congressional neglect of the West, marking the "age of the new West."¹⁸ With President Theodore Roosevelt's support, Congress passed the Reclamation Act of 1902. This statute authorized federal funds and constructed reservoirs and water distribution facilitation in sixteen western states, with federal loans being paid by the farmers. Despite this great assertion of federal power, Section 8 of the act protected state water rights; accordingly, the priority dates of water rights for reclamation projects are set in accordance with the law of the state where the waters are diverted for the project.¹⁹

The federal government took an interest in hydroelectric power after World War I as it confronted the need for nitrates to manufacture ammunition. With the Federal Power Act of 1920 the Federal Power Commission was charged with responsibility for licensing nonfederal power developments on navigable waters in the public domain and managing the sale of surplus power generated from federal dams. Adding hydropower generation as a major feature of federal investment would ultimately result in further fragmentation of the watershed. With the Rivers and Harbors Act of 1925, the Corps was authorized to survey all navigable waters and formulate general plans for irrigation, navigation, power production, and flood control. By combining water, power, flood control, and irrigation needs, Congress endorsed multipurpose planning.

Federal water resource development reached its zenith in the New Deal era.²⁰ The New Deal's momentum, combined with the Great Depression and climatic events, including the drought and then flooding of Mississippi River in 1928, launched new water development projects. Comprehensive river basin development gave birth to the Tennessee Valley Authority (TVA) in 1933, marking the first time in U.S. history that a single agency had been assigned the task of developing a river for the benefit of the people.²¹ Federal agencies such as the Bureau of Reclamation and the Corps received commensurate powers to implement national water management and development goals. Federal agencies, such as the Corps, successfully romanced state and local authorities with pork projects,²² with private economic groups making the federal bureaucracy their servant.²³ Congress has also served as a barrier to improved coordination and management, preferring the distributive model of awarding projects and appropriations to constituencies deemed worthy. During this era, water policy typified pork-barrel politics, where individual members of Congress traded votes on water projects included in omnibus legislation. Moreover, "these multi-purpose dam projects, by encompassing reclamation, flood control, power generation, and recreational interests, necessarily cut across many areas of state control and state law, with the resultant federal-state conflict."²⁴

Political scientist and federalism scholar Daniel Elazar refers to this era as "crisis-oriented centralism," an era where the federal government became a dominant party in the American federal system.²⁵ Federal natural resource management was characterized by multiple-purpose endeavors, slowly shifting from single-purpose pursuits. This shift, however, multiplied jurisdictional problems in planning, timing, and operation.²⁶ Conflict intensified between federal agencies, be it in the Tennessee Valley, the Central Valley of California or the Columbia River basin. Controversy between the Bureau of Reclamation and the Corps over development of the Missouri basin characterized the growing competition between federal agencies.²⁷ In response to congressional resolutions, President Roosevelt attempted to coordinate the water plans of federal agencies. The interagency Water Resources Committee of the National Resources Committee in 1934 completed Drainage Basin Reports aimed at

coordinated federal-state efforts. The abolition of the National Resources Planning Board (the successor to the National Resources Committee) in 1943 resulted in a noticeable void in executive coordination of water resources. Iron triangles filled the void.²⁸

Concern with deteriorating water quality and drought conditions in the Northeast United States in the late 1950s prompted the federal government to emphasize river basin commissions. The Delaware River Basin Commission, designed to better coordinate and plan within the basin, marked the first time the federal government partnered with states to form such a commission. Many commissions, including the Delaware Commission, struggled to coordinate and overcome political disagreements between agencies and levels of government.²⁹ Responding to such deficiencies and lack of overall success, Congress created the Water Resources Council in 1961. An interagency data-gathering and policy body designed to provide presidents with water policy advice, the council sought to better incorporate state input and overcome the incremental, piecemeal approach that had come to characterize national water policy.

In the postwar era, tensions between the federal government and states escalated in the water resources arena as did increased interstate competition over major rivers.³⁰ Western states were concerned that the federal government was encroaching upon, if not nationalizing, western water resources.³¹ The U.S. Department of Justice's staunch federal supremacy position coupled with several federal court rulings alarmed many state representatives.³² Western states, under the leadership of Sen. Patrick McCarran (D-NV), opposed the Department of Justice regarding western water rights and succeeded in countering it with passage of the McCarran Act in 1952. By waiving sovereign immunity, the federal government consented to be joined in state general adjudication proceedings, making state courts the forum for federal water claims. The federal government continued to frustrate state efforts, however. From 1953 to 1957 in suits across the West, the federal government continued to assert sovereign immunity despite passage of the McCarran Amendment.³³

While many of these states would find themselves embroiled in interstate litigation again in the 1960s and 1970s, their experiences in interstate negotiations taught them an important lesson. States learned the value of data displaying the extent of actual use along a contested interstate stream. Many states embarked on data-gathering campaigns designed to shore up state water rights against outside threats. Fearing potential loss of water allocation or, even worse, a federal regulatory approach to determine and administrate water rights states' representatives determined to adjudicate water rights on their own.

Third Stream: Development Doubts and Environmental Concerns (1960s–1980s)

Environmental legislation of the 1960s and 1970s institutionalized environmental values in federal resource management, including water management. With numerous

pieces of legislation, such as the Wild and Scenic Rivers Act and the Endangered Species Act, attention was drawn to other values, including fish and wildlife concerns, recreation, wetland protection, and quality control. The Clean Water Act (CWA) of 1972 established a permit system for the discharge of pollutants, to be administered by U.S. Environmental Protection Agency (EPA). The CWA was the first environmental law to place heavy burdens on local government. One observer commented that this act represented the first time that state actions had ever been subject to such complete federal control.³⁴ Zimmerman labels it a “contingent preemption statute” because it threatens states with the loss of all regulatory powers over the quality of interstate waters for failing to initiate action to meet national minimum standards.³⁵ While the federal government demanded massive improvements in municipal sewage treatment from the states, it also allocated vast sums of money to pay for these improvements.³⁶ The National Environmental Policy Act (NEPA) created opportunities for greater public involvement in water and natural resource-related decision making. Increasingly, federal interests in water management came to revolve around environmental protection and recreational uses.³⁷

Cooperative federalism characterized federal-state relations with the federal government setting national environmental policies and priorities with reliance on state agencies to implement federal law. As Kincaid argues, cooperative federalism served as a workable response to the environmentalism of the 1970s. It “prevailed by accommodating political change without seeming to do violence to tradition and by compensating state and local officials for federal intrusions into their authority with fiscal assistance and with federal assumption of policy decisions too painful to be made by some state and local authorities.”³⁸ Daniel Elazar viewed it as “coercive cooperation.”³⁹

Several federally created commissions in the 1950s recommended strengthening the role of states in water resource development.⁴⁰ Congress also encouraged states to participate more actively in water resource decision making. The Water Resources Research Act of 1964 charged a college or university in each state, appointed by the state’s governor, to conduct research on water resources, initiating the creation of water research centers at universities across the United States. With the Water Resources Planning Act of 1965, Congress attempted integrated water management and planning. This legislation gave the federal government and states equal standing in the newly established river basin commissions designed to conduct comprehensive, coordinated joint plans and provided financial assistance to states to enhance planning. The Water Resources Council, a cabinet-level interagency planning and coordinating body, established with this legislation, attempted to create a coordinated framework for water management. The National Water Commission, created by Congress in 1968, foresaw a shift of focus to conservation and water quality in its 1973 report and recommended greater local control of water management and protection.⁴¹

Despite calls for greater state management of water resources, in 1963 with *Arizona v. California*,⁴² the U.S. Supreme Court extended the reserved rights doctrine to include other federal reservations, such as wildlife refuges, and maintained that the United States' intention was to reserve sufficient water to meet the needs of all reservations in the future as well as at the time they were created.⁴³ In doing so, the Supreme Court, for the first time ever, recognized federal proprietary water rights. Most disturbing to western states was the ruling that Congress has the power to dam and store a navigable river and distribute water to the states and users within each state. With such broad navigational powers, Congress could allocate to intrastate users without regard to state law.

As one of his final acts in office, President Carter signed the Pacific Northwest Electric Power Planning and Conservation Act in December 1980. Demonstrating the "vitality of cooperative federalism,"⁴⁴ this legislation created the Northwest Power Planning Council, an interstate compact agency with planning responsibilities aimed at striking a balance between energy needs and conservation of fish and wildlife in that region. Ultimately, the thrust of Carter's policy was maintained in the policies of the Reagan and Bush administrations.⁴⁵

Fourth Stream: Devolution and Penny-Pinching (1980s)

In the 1980s the Reagan administration was sympathetic to calls from industry to roll back environmental regulations and return power to states and local communities. These concerns, expressed by those in the Sagebrush Rebellion of the West, influenced Reagan's brand of "new federalism" with a marked reduction in federal government regulations and increased cost sharing with states. His approach has been critically dubbed "cooptive" federalism, or "fend-for-yourself" federalism,⁴⁶ rather than cooperative federalism, for its increasing federal mandates and preemption of state activities, resulting in increased responsibilities for states but decreased funds.⁴⁷ The 1986 Water Resources Development Act reveals the tenor of the times with new 50 percent cost-sharing requirements for Corps and Reclamation projects. By the late 1980s the federal government withdrew funds for such water resource activities as sewage treatment plants, water development projects, dam safety programs, and water data collection.⁴⁸ Reagan sought to "de-institutionalize most federally encouraged regional bodies" and weaken regional river basin planning by withdrawing federal funds and participation.⁴⁹ He quickly defunded the Water Resources Council and River Basin Commissions in 1982, suggesting that states were to go it on their own.⁵⁰

Power issues continued to plague federal-state relations in the late 1980s and early 1990s. With *California v. Federal Energy Regulatory Commission*,⁵¹ the U.S. Supreme Court addressed the question of whether an applicant before the Federal Energy Regulatory Commission needed to comply with minimum streamflow requirements imposed as conditions of a state water rights permit (in this case, designed to protect a

downstream fishery). The Supreme Court, affirming the Ninth Circuit's decision, ruled that state law cannot supplement federal flow requirements, affirming the 1946 *First Iowa* decision. Legislation was quickly introduced in Congress to try to overturn the effects of this, but to no avail.⁵²

Traditional federal water resource agencies touted environmental reform during this period. For example, the U.S. Bureau of Reclamation announced no new water projects, shifting their mission to one of management and maintenance.⁵³ Congress passed amendments to the Clean Water Act in 1987, signaling a shift in water policy at the federal level. First, the legislation phased out the construction grants program and replaced it with a state water pollution control revolving fund, commonly known as the Clean Water State Revolving Fund, a new funding strategy addressing water quality needs by building on EPA-state partnerships. Second, Congress established the National Estuary Program, a nonregulatory, collaborative watershed approach for protecting coastal water quality.⁵⁴ Under this EPA-led program, states nominate estuaries for inclusion into the program and lead a multiyear collaborative process that brings together private and public stakeholders from all levels of the federal system to outline action items for the estuary. The National Estuary Program is considered to be quite successful in building cooperation and resolving conflict on estuary restoration projects.⁵⁵

Some states and the federal government experimented with a series of basin commissions established by interstate compact in the early 1980s. Most notably, state and federal officials in 1983 signed the Chesapeake Bay Agreement, pledging cooperation to restore and protect the Bay. In doing so, they also created a regional institution, the Chesapeake Bay Commission, an advisory body of state legislators, federal agency officials, and citizen representatives. Cooperative agreements between states and the Department of the Interior for habitat restoration were reached in the Upper Colorado basin in the late 1980s. Designed to recover endangered Colorado River basin fish and provide for future water deliveries for agricultural, municipal, and hydroelectric uses, the Upper Colorado River Endangered Fish Recovery Program brings together federal and state officials with environmental and resources users to coordinate management along this segment of the river.⁵⁶

At the state level, institutional and administrative capacity has been building and improving.⁵⁷ Beginning in the 1980s some thirty states responded to growing concerns about groundwater depletion and quality, creating new programs and adopting new legislation.⁵⁸ Some efforts were quite notable. For example, Arizona's Groundwater Management Act of 1980 was designed to control overdraft of groundwater in the state. The Ford Foundation selected this law as one of the ten most innovative programs in state and local government.⁵⁹ Some states are moving toward conjunctive management, the coordinated management of surface and groundwater.⁶⁰ Many western states also actively pursued adjudication proceedings in the 1980s, eager to finalize the priority and quantity of their water rights. By the 1980s, the federal

government no longer opposed state courts as the forum for these proceedings and they progressed in the 1980s with recognition of both Indian and federal reserved rights. Campaigning for the presidency in 1988, Vice President George H. Bush announced his “No-Net-Loss” wetlands policy. No net loss, or no overall net loss of the nation’s remaining wetland base, allows development in some places in exchange for restoration of other areas. In doing so, Bush set the stage for modern wetlands policy.

Fifth Stream: Restoration and Collaboration (1990s–present)

Attention to efficiency was not lost on the Clinton administration. The watershed approach, advanced as an integrated approach to controlling pollution sources, was designed to improve coordination within and across levels of government.⁶¹ Concerns for efficiency extended to federal wetlands programs, with the Clinton administration offering a more streamlined and simplified process for landowners, building on the no-net-loss wetland strategy of the prior Bush White House. The EPA worked to improve federal-state relations with a focus on sustainability at the community level.⁶² The administration’s 1998 Clean Water Action Plan sought to better coordinate federal water quality efforts aimed at non-point sources of pollution with an emphasis on “partnering” with state, tribal, and local governments; it was supplemented with federal grants and technical assistance. States would no longer have to go it on their own.⁶³ Neither would tribes. Embracing a settlement approach initiated in the late 1970s, the Clinton administration advanced settlement negotiations with tribes as an alternative to litigation. By 1996, some fifteen settlements had been achieved in more than ten states, another nineteen in settlement negotiations.⁶⁴ While considerable debate remains over the value of these settlements, the negotiations themselves provide a sense of legitimacy to Indian claims⁶⁵ and inevitably serve as key forums for federal-state water policy discussions.

Beyond executive action, congressional legislation in the early 1990s marked a significant shift in water policy. The Reclamation Projects Authorization and Adjustment Act of 1992 decreased water flow to irrigation in California’s Central Valley Project (CVP), resulting in a 20 percent reduction in supply to agriculture and dedicating 800,000 acre-feet of CVP yield for environmental protection. In addition, this legislation changed Glen Canyon Dam’s operation from maximizing power generation during peak flows to protecting and improving Grand Canyon riparian habitat. The Water Resources Development Act of 1992 provided federal funding for restoration of Kissimmee River in Florida to its original meandering course and the Energy Power Act of 1992 includes conservation measures such as water efficiency standards for faucets, showerheads, and toilets. With amendments to the Safe Drinking Water Act in 1996, Congress gave states more funding to comply with environmental standards and flexibility to exercise authority over drinking water standards and their enforcement.⁶⁶ It provided much needed relief for small local governments that faced the choice of bankruptcy or the abandonment of their

drinking water supply systems.⁶⁷ Nonetheless, state officials argue that insufficient resources are major obstacles constraining program implementation.⁶⁸

Following the 1993 Midwest floods and the subsequent Galloway Report on Flood Control in 1994, the Corps began to move away from structural solutions signaling a shift in flood control policy. Today's congressional appropriations are slowly shifting away from multiple-purpose reservoir development projects and irrigation development toward local flood control projects and watershed efforts.⁶⁹ Over one-third of the Corps's authorization associated with the Water Resources Development Act of 1999 is for environmental mitigation and restoration, sewage discharge cleanup projects, and stormwater retention.⁷⁰ Such "green pork" demonstrates a shift in federal water policy toward greater ecological concerns and restoration as well as efficiency concerns. With a battle raging in Congress over reform of the Corps, water wars sizzling along the Missouri River, and the current Bush administration's efforts to slash its budget, today the Corps increasingly finds itself under attack on multiple political fronts.⁷¹

The Western Governor's Association and the Western States Water Council sponsored workshops in 1991 that led to the Park City Principles, a state framework for managing western water advancing a "problemshd approach," decentralization within federal standards, and increased market approaches.⁷² Several states have exhibited great innovation and creativity, as evidenced by Arizona's Water Protection Fund, California's drought water bank, Oregon's plan for salmon and watersheds, Georgia's water auctioning program for farmers, and Massachusetts's watershed program. Some forty-six states run the National Pollutant Discharge Elimination System of the CWA's permitting program for point source discharges.⁷³ Many states are making efforts at improved groundwater planning and management.⁷⁴ Some states, such as Oregon and Washington, have been key promoters in the development of local watershed councils. Every small watershed seems to have group representation from the Beaver Creek Watershed Council in Central Point, Oregon, to the Canada del Oro Citizens Group in Oracle, Arizona. A growth in the rise of grassroots groups and watershed councils has added additional place-based venues for water decision making and greater devolved management with increased attention to water quality issues.⁷⁵ Moreover, with almost every western state engaged in general stream adjudication proceedings to some degree, the states, for better or worse, provide key forums for water policy.

Both the watershed approach and the no-net-loss wetlands policy have been embraced by the George W. Bush administration. President Bush also proposed controversial new rules to streamline the administrative process for new development projects.⁷⁶ Upon receiving more than 133,000 comments opposing administrative efforts to narrow the Clean Water Act's scope following a controversial U.S. Supreme Court decision in 2001,⁷⁷ the Bush administration backed off.⁷⁸ By doing so, President Bush, like his predecessor, embraced the "No-Net-Loss" policy first promulgated by

his father in 1988. The Department of the Interior under the current Bush administration continues to advance the adaptive management approach. Negotiations with tribes move forward. The 2004 settlement with the Nez Perce Tribe over their water claims in the Snake River basin is but a recent example.⁷⁹ Following her predecessor's initiative, Secretary of the Interior Norton continues to mediate conflict along the Colorado River, pushing California toward reductions in its water usage.⁸⁰

In 2003 the Department of the Interior initiated "Water 2025," a forum to address water scarcity issues and prevent conflict in the American West. The initiative emphasizes conservation, efficiency, market approaches, collaboration, improved technology, and interagency cooperation.⁸¹ It states that the "principles of federalism and fiscal realities make it clear that these decisions cannot and should not be driven from the federal level."⁸² It promises deference to state water laws and argues that states have the maximum authority to make water allocation decisions.⁸³ One commentator noted its "scarcity of federal action items."⁸⁴ It establishes a Challenge Grant Program, a fifty-fifty cost share to irrigation and water districts for short-term projects focused on water conservation, efficiency, and water marketing in western states.

Critics charge that the Bush administration is too captive to industry.⁸⁵ Indeed, the administration has been hesitant to enforce or implement environmental regulations. For example, the Bush administration postponed implementation of a Clinton administration rule requiring states to formulate detailed plans for bringing impaired water bodies into federal compliance.⁸⁶ The Bush administration's continued deference to traditional water users is evident in its efforts in the Klamath Basin.⁸⁷ Whereas the Clinton administration can be viewed as being proactive and environmentally sensitive, the Bush administration appears more reactive. It is as though the federal government has said to the states, "Invite us to the table if you would like—but we are not requesting an invitation." Federal cuts in funding for restoration efforts, like those in the Sacramento–San Joaquin River systems, and the administration's refusal to take on a leadership role in these venues, reveals an overall lack of initiative and creativity on the administration's part.

Water Policy Today: Pragmatic Federalism

Reagan's devolution, or "go-it-alone" federalism, signaled a shift in water policy. The federal government would not play an overarching role; rather states were expected to share costs and build capacity. In the 1990s, under President Clinton, we see a marked shift in policy. The Clinton era ushered in a partnership approach highlighted by collaboration and coordination. Federalism experts find little evidence of wholesale devolution during this era but rather highlight efforts at "rebalancing federal-state relations."⁸⁸ This federalism is less regulatory, with a greater emphasis on incentives and efficiency with a focus on problem-solving. Today's federalism is characterized by working groups, task forces, cooperative agreements, and cost sharing. Although the

Bush administration is less proactive in the water resources arena, it continues to embrace many of the characteristics of today's pragmatic federalism.

No one event or piece of legislation captures the pragmatic federalism of today's water policy exclusively. It does not have an overarching framework or philosophical bent. Rather, it has evolved in response to at least four social and political trends. First, it is a response to the hyperpluralism that has come to characterize environmental and natural resource policy broadly. Today environmental groups play a significant role in water management in the United States, pressuring a system historically dominated by local economic interests.⁸⁹ With multiple and competing interests now playing a role in national water issues, the landscape has become contested and volatile.⁹⁰ Second, it is a response to the many lawsuits and legal battles that have come to characterize water issues in the United States. In many instances, the federal judiciary has been sensitive to environmental concerns, particularly concerning endangered species law enforcement, creating new conflict between the federal government and states.⁹¹ Litigation, however, is inadequate to address water management and distribution across jurisdictional boundaries.⁹² Third, it is a response to changing demographics, population shifts, and urban pressures. The transformation of a stronger environmental ethic in the American populace has forced federal natural resource agencies to shift to modify their water resource strategies.⁹³ The result has been more experimental and adaptive approaches. Fourth, it has evolved to fill the absence of any national guiding water policy. Today's federalism recognizes the piecemeal and fragmented approach that has come to characterize the water policy arena. Due to these inherent weaknesses (and the subsequent obstacles to an overarching reform), it thereby seeks reform case by case, or watershed by watershed.

Because pragmatism does not pledge allegiance to a particular principle or universal ethic, today's water policy practices do not follow a certain creed. Rather, they are place based, collaborative, and experimental. They are unique to their circumstances—geographic, ecological, political, and social. The division of authority or locus of decision making is less important under this variety of federalism. Process reigns supreme. Relying on a diverse set of approaches and tools, it strives to be more accessible, with improved processes and greater coordination. At its most extreme it is characterized by the creation of new institutional arrangements designed around a particular ecosystem. It is not a one-size-fits-all but rather a tailored, custom-made approach. Today's water policy is highlighted by pragmatic federalism that (1) emphasizes collaborative partnerships, (2) relies on adaptable management strategies, and (3) is problem and process oriented.

Collaborative Partnerships

At one extreme of the continuum we see the formation of new collaborative governance bodies that are place based and focused on integrated decision making. Institutional arrangements and processes in the Sacramento–San Joaquin River

systems, the Florida Everglades, Chesapeake Bay, and the Pacific Northwest illustrate this.⁹⁴ The design of these institutions has been guided largely by congressional legislation and is often dependent upon federal financing. In many instances, Congress has mandated more equitable cost sharing.⁹⁵ The implementation, however, occurs in a cooperative manner. For example, in the early 1990s federal parties joined state representatives in California to better coordinate water activities in the Bay-Delta region of California. The CALFED Bay-Delta Program began in 1994 as a forum in which federal and state agencies could develop a single, comprehensive plan for the region.⁹⁶ As a plan developed, CALFED evolved into a forum where agencies can coordinate their actions. Today, it is a collaborative policymaking and water management process among twenty-three state and federal agencies with responsibilities for managing water supplies and protecting natural resources.⁹⁷ The California Bay-Delta Authority, a consortium of federal and state agencies, is charged with managing water supplies and ecosystems within the Sacramento–San Joaquin Delta.

Further east, the Chesapeake Bay Commission, a decision-making entity that incorporates state and federal stakeholders, released the Chesapeake 2000 Agreement, outlining ninety-three commitments detailing protection and restoration goals for the Bay watershed, building upon a partnership that dates back almost twenty years.⁹⁸ Regional collaboration in the Chesapeake has been found to “enhance cooperation” among the parties there.⁹⁹

In the absence of these larger collaborative institutions we see the development of cooperative agreements and programs across the United States. The National Estuary Program established in 1987 well illustrates the cooperative federal-state approach. Cooperative agreements between states and the Department of the Interior for habitat restoration were reached in the Big Bend reach of the Platte River in Nebraska in 1997. The Great Lakes Water Quality Initiative is an example of a successful water initiative aimed at quality controls on a regional scale.¹⁰⁰ States have also initiated collaborative efforts for planning and management activities within a watershed, illustrated by Colorado’s efforts in the Animas River.¹⁰¹ Finally, there are countless examples of collaborative efforts occurring on a more local level, where citizens initiate collaboration.¹⁰² Collaborative management is indeed alive and well today.¹⁰³

Adaptable Management Strategies

In 1992 the National Research Council endorsed adaptive management as a valuable tool for ecosystem restoration.¹⁰⁴ With a focus on experimentation and “learning by doing,” this management strategy recognizes uncertainty and promotes flexible decision making that can be adjusted in the face of uncertainties. Central to the adaptive management model is careful monitoring and an iterative learning process. An interdisciplinary approach, adaptive management seeks action in the face of limitations on scientific knowledge and the complexities of large ecosystems.¹⁰⁵ It does not postpone decisions until enough is learned about the ecosystem.¹⁰⁶ It was first

embraced on a large scale in the management of the Columbia River in the Pacific Northwest.¹⁰⁷ Today, the Corps is following an adaptive management approach in several ecosystems across the United States, including the Florida Everglades, the Missouri Dam and reservoir system, the Upper Mississippi, coastal Louisiana, the Glen Canyon Dam, and the Colorado River ecosystem.¹⁰⁸

In Florida's Everglades, the Comprehensive Everglades Restoration Plan (CERP) embraces an adaptive management strategy. A guiding principle of CERP is that "the evaluation, implementation and assessment of CERP projects and system responses must be viewed as an open-ended learning and planning process. Definitions of overall plan success will be refined through time as new knowledge provides improved understandings of natural and human systems in south Florida."¹⁰⁹ Given the infancy of the restoration program, officials in the Everglades continue to struggle over what adaptive management means for implementation of restoration efforts there.¹¹⁰

Problem and Process Orientation

Increasingly, water policy is focused on specific problems with new integrated and coordinated processes designed to tackle a targeted problem. Institutions and processes are organized around a watershed or problem area, or the "problemshed." We see this with larger ecosystem initiatives and on a smaller scale with more localized efforts. Processes are designed to be more open and transparent. With the Grand Canyon Protection Act of 1992 (P.L. 102-575), Congress mandated a process of adaptive management for the Colorado River. Under this legislation, the effects of dam operations on downstream resources would be monitored and assessed. Under authorization of the law, Secretary of the Interior Bruce Babbitt created the Glen Canyon Adaptive Management Work Group in 1997. With representation from federal agencies, states, environmentalists, recreation interests, and contractors of the federal power from the dam, this group makes recommendations to the secretary of state on how to protect resources in the region.

In the Everglades, the South Florida Ecosystem Restoration Task Force, composed of federal, state, local, and tribal representatives, is charged with coordinating and facilitating the overall restoration effort there.¹¹¹ It includes a Florida-based working group whose mission is to support the task force's efforts to achieve the restoration, preservation, and protection of the ecosystem while promoting a sustainable South Florida.

We see similar institutional arrangements being created around other ecosystems with attention to the problem and process. For example, the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force brings together state, tribal, and federal representatives to collaborate on the design of a scientific assessment of hypoxia and a plan for reducing and mitigating it in the Gulf of Mexico. Most recently, an EPA-led initiative is moving toward more formal integration in the Great Lakes. In May 2004, President Bush signed an executive order calling for the creation of a "Regional

Collaboration of National Significance” and a cabinet-level interagency task force composed of federal agencies, states, local government, tribes, and other interests.¹¹²

Water Policy for the Twenty-First Century: A Cautionary Tale

A review of the five streams of water policy reveals that water policymaking has been conducted in multiple decision forums through a variety of policy tools. While states initially held great discretion in water management, as illustrated in the first stream of water policy, federal authority over water expanded greatly during the twentieth century, encompassing navigation, flood control, hydropower, water quality, irrigated agriculture, and public health concerns. Initially, traditional power politics helped to build support for major federal resource agencies like the Corps and Bureau of Reclamation, promoting economic development and growth at the expense of ecological values. The themes of water policy reveal a significant shift from decentralized water management with great deference to states for managing water in the nineteenth century, as illustrated by the first stream, to greater centralization efforts in the twentieth century, beginning with the second stream. River basin authorities of the 1930s, such as the TVA, marked an extreme centralized model of resource management within a particular river basin. Fearing heightened federal administrative control, Congress elected not to create similar federal river basin authorities following considerable debate in the 1940s.

Regulatory policy became the hallmark of environmental legislation in the 1970s, whereby certain behavior (i.e., water pollution) is limited or forbidden.¹¹³ Water quality regulations, such as the Clean Water Act and Safe Drinking Water Act, added a regulatory focus to federal water management in the 1970s, making the EPA a key player in water quality management. In doing so, decision makers essentially created a bifurcated policy system where states dictate water quantity issues, as they had since the beginning of the United States, with the federal government dominating quality issues. States became key implementers of policy, playing a central role in permitting and enforcement activities under the Clean Water Act. While policy tools employed by the federal government reveal significant shifts in approach over time, from distributive to regulatory, most federal action reveals a reliance on multiple policy tools, often simultaneously.¹¹⁴

Water policymaking has become highly fragmented, with multiple agencies managing narrow components or constituencies, from river preservation to water quality protection, from hydropower to flood control. There is an increasing recognition of limits of fragmentation and piecemeal approaches to resource management.¹¹⁵ At the last count, there were eighteen federal agencies and twenty-five separate water programs with some seventy separate appropriations accounts for water resources. There are twenty-three committees and subcommittees in Congress, with over 200 federal rules and regulations.¹¹⁶ Horizontal fragmentation makes it such

that one governmental entity alone cannot manage a particular river basin or watershed. For example, neither the Corps nor the EPA has authority to prepare and implement a comprehensive plan for a river basin.

With a patchwork of statutes, separate laws have been created for clean water, endangered species, and irrigated agriculture, further fragmenting the watershed. Patterns of competition between federal resource agencies give way to conflict within federal programs. For example, the federal government provides price-supported crops for irrigated agriculture on the one hand and then funds non-point pollution controls and wildlife programs on the other.¹¹⁷ With the federal government as such a large landowner in the American West, that region faces perhaps the greatest challenges to multijurisdictional cooperation. Governmental response is often reactionary: devastating floods give way to flood control policies, dramatic species declines result in restoration efforts, and severe degradation in waterways triggers pollution controls. While the nature of the federal-state dispute may vary (i.e., hydropower, federal reserved rights, groundwater management, non-point source pollution, etc.) it is unlikely it will dissipate any time soon.

New regionally based restoration efforts, along with cooperative programs and agreements, indicate movement toward greater coordination. In recent years, we have witnessed a shift toward bioregional ecosystem-scale approaches with an emphasis on collaborative governance.¹¹⁸ Such institutional arrangements are place based and multiobjective, typically embracing goals of economic efficiency, environmental protection and social equity. Coupled with watershed management they offer better integration of water quality and quantity concerns and provide greater attention to local values.¹¹⁹ These efforts are not free from criticism, however. While great attention has been afforded to the Northwest Power Planning Council's least-cost planning methodology and integrated resource planning, it has been criticized in recent years for its lack of success in developing a regionwide restoration effort.¹²⁰ Similarly, questions remain over continued funding for CALFED and future implementation.¹²¹ Intergovernmental competition even threatens to hamper progress in the Everglades.¹²² And interstate conflict is on the rise in the Chesapeake.¹²³ More broadly, some scholars and practitioners have raised concerns about the true benefits of collaboration.¹²⁴

These collaborative arrangements also signal a heightened partnership between the federal government and states. Tribes and states are increasingly finding themselves incorporated into the design and implementation of today's water-related institutions. Although the federal government can be viewed more as a "facilitator" today, it does retain powerful hammers. It is often the force of federal law, such as the Endangered Species Act and Clean Water Act, and the threat of litigation that propels restoration and collaboration efforts forward.¹²⁵

Mounting compliance costs for state and local governments represents one of the greatest challenges to intergovernmental relations today. In particular, states face high

compliance costs under the Safe Drinking Water Act and Clean Water Act. The recent arsenic and radionuclides rules alone are expected to cost some \$75 million for public water supply systems.¹²⁶ But the federal government is contributing less and less to state and local governments, who today face necessary massive improvements for wastewater treatment facilities and drinking water system infrastructure.¹²⁷ With a majority of states anticipating water shortages in the next ten years, states are demanding increased financial assistance, water data, more flexibility in complying with federal environmental laws, better coordinated federal action, and more consultation with states on federal and tribal water rights.¹²⁸

Today's federalism is pragmatic, emphasizing collaborative partnerships, relying on adaptable management strategies with a focus that is problem and process oriented. In some ways, it more closely resembles the cooperative federalism or partnership ideal of shared power and decision making. Water attorney and consultant John E. Thorson calls it the "new pragmatism" or "contingency management"—"a return to practicality—whatever works!"¹²⁹ There are potentially great benefits to pragmatic federalism. It involves a level of planning that has not existed since efforts in the 1960s. It promises greater accessibility to environmental and more local interests. It is holistic within a watershed or problem area and attempts integration of water quality and quantity concerns. Of course, pragmatic federalism is not without concern. Ultimately, its real test will be its ability to solve a particular watershed's ecological problems and better coordinate stakeholders and program activities, thereby overcoming the policy fragmentation that has become all too common in U.S. water policy.

Notes

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1. Abel Wolman, "Wanted—A National Water Policy," *State Government* 19 (September 1946); Janet C. Neuman, "Federal Water Policy: An Idea Whose Time Will (Finally) Come," *Virginia Environmental Law Journal* 20 (2001): 107–118.
2. Charles E. Corker, "Water Rights and Federalism—The Western Water Rights Settlement Bill of 1957," *California Law Review* 45 (1957): 604–637.
3. Edwin S. Corwin, "The Passing of Dual Federalism," *Virginia Law Review* 36 (February 1950): 1–24; Edwin S. Corwin, "A Constitution of Powers and Modern Federalism," *Essays in Constitutional Law*, ed. Robert G. McCloskey (New York: Knopf, 1962): 181–185; Morton Grodzins, *The American System: A New View of Government in the United States*, ed. Daniel J. Elazar (Chicago, IL: Rand McNally, 1966); Ann O'M. Bowman, "American Federalism on the Horizon," *Publius: The Journal of Federalism* 32 (April 2002): 4.

4. Daniel J. Elazar, "Opening the Third Century of American Federalism: Issues and Prospects," *American Federalism: The Third Century*, ed. John Kincaid, *The Annals of the American Academy of Political and Social Science* 509 (May 1990): 11–21; John Kincaid, "From Cooperative to Coercive Federalism," *American Federalism*, ed. Kincaid, pp. 139–152.
5. Bowman, "American Federalism," 3–22.
6. John D. Donahue and Mark A. Pollack, "Centralization and Its Discontents: The Rhythms of Federalism in the United States and the European Union," *The Federal Vision: Legitimacy and Levels of Governance in the United States and the European Union*, ed. Kalypso Nicolaidis and Robert Howse (New York: Oxford University Press, 2001), p. 90. Martha Derthick, "American Federalism: Half Full or Half-Empty?" *Brookings Review* 18 (Winter 2000): 24–27.
7. David B. Walker, *The Rebirth of Federalism: Slouching toward Washington* (Chatham, NJ: Chatham House Publishers, 2000), p. 35. He names today's federalism "a partially permissive federalism" defined by a sharing of power between states and the federal government with the states' share resting upon the permission of the national government (p. 326).
8. Paul E. Peterson, *The Price of Federalism* (Washington, DC: Brookings Institution, 1995), p. 3.
9. Daniel A. Mazmanian and Michael E. Kraft, *Toward Sustainable Communities: Transition and Transformations in Environmental Policy* (Cambridge, MA: MIT Press, 1999); Richard N. L. Andrews, *Managing the Environment, Managing Ourselves: A History of American Environmental Policy* (New Haven, CT: Yale University Press, 1999); Norman J. Vig and Michael E. Kraft, *Environmental Policy: New Directions for the Twenty-First Century* (Washington, DC: Congressional Quarterly Press, 2003) are some of the best cited examples.
10. Walter A. Rosenbaum, *Environmental Politics and Policy*, 5th ed. (Washington, DC: Congressional Quarterly Press, 2005), pp. 112 and 115.
11. Matthew McKinney and William Harmon, *Western Confluence: A Guide to Governing Natural Resources* (Washington, DC: Island Press, 2004).
12. Robert F. Durant, Rosemary O'Leary, and Daniel J. Fiorinio, "Introduction," *Environmental Governance Reconsidered: Challenges, Choices, and Opportunities* (Cambridge, MA: MIT Press, 2004), p. 2.
13. Denise Scheberle, *Federalism and Environmental Policy: Trust and the Politics of Implementation*, 2nd ed. (Washington, DC: Georgetown University Press, 2004).
14. Parris N. Glendening and Mavis Mann Reeves, *Pragmatic Federalism: An Intergovernmental View of American Government*, 2nd ed. (Pacific Palisades, CA: Palisades Publishers, 1984).
15. Albert Lepawsky, "Water Resources and American Federalism," *American Political Science Review* 44 (1950): 631–649.
16. B. H. Holmes, *A History of Federal Water Resources Programs, 1800–1960* (Washington, DC: U.S. Department of Agriculture, Economic Research Service, 1972).
17. Roderick E. Walston, "Storm in the Desert: The Great Western Water Wars," *Journal of the West* 26 (July 1987): 78–92.

18. Donald J. Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy 1848–1902* (Albuquerque: University of New Mexico Press, 1992), p. 283.
19. Section 8 reads: “Nothing in this Act shall be construed as affecting or intended to affect or in any way interfere with the laws of any State . . . relating to the control, appropriation, use, or distribution of water used in irrigation . . . the Secretary of the Interior in carrying out the provisions of this Act, shall proceed in conformity with such laws.”
20. Peter Rogers, *America’s Water: Federal Roles and Responsibilities* (Cambridge, MA: MIT Press, 1993), p. 50.
21. David E. Lilienthal, *TVA: Democracy on the March* (New York: Harper and Row, 1944).
22. Arthur Maass, *Muddy Waters: The Army Engineers and the Nation’s Rivers* (Cambridge, MA: Harvard University Press, 1951).
23. Grant McConnell, *Private Power and American Democracy* (New York: Alfred A. Knopf, 1967).
24. Dominic B. King, “Federal-State Relations in the Control of Water Resources,” *University of Detroit Law Journal* 37 (1959): 18.
25. Daniel J. Elazar, “The Shaping of Intergovernmental Relations in the Twentieth Century,” *The Annals of the American Academy of Political and Social Science* 359 (May 1965): 18–19.
26. Charles McKinley, “The Valley Authority and Its Alternatives,” *American Political Science Review* 44 (1950): 612.
27. Eventually, components of both agencies’ plans were combined to form the Pick-Sloan Plan. It was subsequently authorized by the Flood Control Act of 1944, which set into motion the construction of five major dams and related channel improvements in the Missouri River.
28. Kenneth D. Frederick, “Changing Water Resources Institutions,” *Sustaining Our Water Resources*, ed. National Research Council (Washington, DC: National Academy Press, 1993), p. 70.
29. David Lewis Feldman, *Water Resources Management: In Search of an Environmental Ethic* (Baltimore, MD: Johns Hopkins University Press, 1992), pp. 11–12.
30. John E. Thorson, Ramsey Laursoo Kropf, James Dar Crammond, and Andrea K. Gerlak, “Dividing Western Waters: A Century of Adjudicating Western Rivers,” *University of Denver Law Review* 8 (2005): 434–442.
31. Two U.S. Supreme Court decisions, *First Iowa* (328 U.S. 152 [1946]) and *Pelton Dam (Federal Power Commission v. Oregon)*, 349 U.S. 435 [1955]) alarmed westerners as they suggested that federal lands of all types could have paramount water rights that might override state-recognized appropriations.
32. Under the federal supremacy position, they claimed federal rights to be paramount to those of other water users, and in claiming superior rights, the federal government would not be required to pay damages to junior appropriators as it would under eminent domain. The federal courts appeared open to such arguments in at least five different cases: *United States v. Gerlach Live Stock Company* (339 U.S. 725 [1950]), *Rank v. Krug* (90 F. Supp. 772 [1950]), *United States v. California* (332 U.S. 19 [1947]), *United States v. Louisiana* (339 U.S. 669 [1950]), and *United States v. Texas* (339 U.S. 707 [1950]).

33. See *U.S. v. U.S. District Court* (206 F.2d 303 [9th Cir. 1953]), *Elephant Butte Irrigation District v. Gatlin* (294 P.2d 628 [N.M. 1956]), and *Texas v. New Mexico* (352 U.S. 991 [1957]).
34. Harvey Lieber, *Federalism and Clean Waters: The 1972 Pollution Control Act* (Lexington, MA: DC Heath and Company, 1975), p. 9.
35. Joseph F. Zimmerman, "The Nature and Political Significance of Preemption," *PS: Political Science and Politics* 38 (July 2005): 361.
36. Marc K. Landy, "Local Government and Environmental Policy," *Dilemma of Scale in America's Federal Democracy*, ed. Martha Derthick (Cambridge: Cambridge University Press, 1999), p. 248.
37. Patrick C. McGinley, "Federalism Lives! Reflections on the Vitality of the Federal System in the Context of Natural Resource Regulation," *Kansas Law Review* 32 (1983): 147–163.
38. John Kincaid, "From Cooperative to Coercive Federalism," p. 143.
39. Daniel J. Elazar, "Opening the Third Century," p. 13.
40. These include the President's Water Resources Policy Commission (1950), Missouri Basin Survey Commission (1953), Commission on the Executive Branch of Government (1955), the Commission on Intergovernmental Relations (1955), and the Presidential Advisory Committee on Water Resources Policy (1955).
41. *New Directions in U.S. Water Policy: Summary, Conclusions and Recommendations from the Final Report of Water Policies for the Future*. Final Report to the President and to the Congress of the United States by the National Water Commission (Washington, DC, June 1973).
42. 373 U.S. 546 (1963).
43. In doing so, the Supreme Court extended the *Winters* doctrine of 1908, which stated that Indian water rights dated back to the establishment of the reservation and had priority over intervening rights created under the state system of prior appropriation.
44. Dave Frohnmayer, "The Compact Clause, the Appointments Clause and the New Cooperative Federalism: The Accommodation of Constitutional Values in the Northwest Power Act," *Environmental Law Review* 17 (1987): 767.
45. David Getches, "The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States' Role?" *Stanford Environmental Law Journal* 20 (2001): 3–72.
46. John Shannon, "The Return to Fend-for-Yourself Federalism: The Reagan Mark," *Readings in American Federalism: Perspectives on a Decade of Change* (Washington, DC: Advisory Commission on Intergovernmental Relations, 1989), pp. 119–122.
47. Timothy Conlan, "Federalism After Reagan," *Brookings Review* 6 (Fall 1988): 23–30.
48. Craig D. Bell and Norman K. Johnson, "State Water Laws and Federal Water Uses: The History of Conflict, the Prospects for Accommodation," *Environmental Law* 21 (1991): 63–64.
49. David B. Walker, "The Federal Role in the Federal System? A Troublesome Topic," *National Civic Review* 72 (January 1983): 13.

50. Ultimately, the Water Resources Council was unsuccessful at marrying state and federal water interests. See Feldman, *Water Resources Management*, pp. 12–13.
51. 877 F. 2d 743 (9th Cir. 1989), *aff'd* 110 S. Ct. 2024 (1990).
52. 136 Cong. Reg. S9175–76 (daily ed. June 28, 1990).
53. U.S. Department of the Interior, Bureau of Reclamation, Implementation Plan, *A New Direction for the Bureau of Reclamation* (Washington, DC: Bureau of Reclamation, 1987).
54. See David M. Bearden, *National Estuary Program: A Collaborative Approach to Protecting Coastal Water Quality*. Congressional Research Service Report (12 January 2001).
55. Mark Lubell, “Resolving Conflict and Building Cooperation in the National Estuary Program,” *Environmental Management* 33 (2004): 677–691.
56. See <http://coloradoriverrecovery.fws.gov/Index.htm> (accessed 15 March 2005).
57. See J. David Aiken, “The National Water Policy Review and Western Water Rights Law Reform: An Overview,” *Nebraska Law Review* 59 (1980): 327–344; Bell and Johnson, “State Water Laws and Federal Water Uses.”
58. William Blomquist, “Exploring State Differences in Groundwater Policy Adoption, 1980–1989,” *Publius: The Journal of Federalism* 21 (Spring 1991): 101–115.
59. At <http://www.water.az.gov/adwr/Content/Publications/files/gwmgtovw.pdf> (accessed 21 March 2005).
60. William Blomquist, Edella Schlager, and Tanya Heikkila, *Common Waters, Diverging Streams: Linking Institutions and Water Management in Arizona, California, and Colorado* (Washington, DC: Resources for the Future Press, 2004).
61. See National Research Council, *New Strategies for America’s Watersheds* (Washington, DC: National Academy Press, 1999).
62. Michael E. Kraft and Denise Scheberle, “Environmental Federalism at Decade’s End: New Approaches and Strategies,” *Publius: The Journal of Federalism* 28 (Winter 1998): 131–146.
63. The Clean Water Action Plan provided some \$1.7 billion of additional funding for state and local governments.
64. Report of the Western Water Policy Review Advisory Commission, *Water in the West: Challenge for the Next Century* (June 1998), pp. 3–46.
65. Daniel McCool, “Intergovernmental Conflict and Indian Water Rights: An Assessment of Negotiated Settlements,” *Publius: The Journal of Federalism* 23 (Winter 1993): 101.
66. John Kincaid, “The Devolution Tortoise and the Centralization Hare,” *New England Economic Review* (May/June 1998): 22.
67. Zimmerman, “The Nature and Political Significance of Preemption,” 361.
68. Scheberle, *Federalism and Environmental Policy*, p. 149.
69. Bruce D. Long, “Water Resources Development at a Crossroads,” *Water Resources Administration in the United States: Policy, Practice, and Emerging Issues*, ed. Martin Reuss (East Lansing, MI: American Water Resources Association/Michigan State University Press,

- 1993), p. 261; U.S. Environmental Protection Agency, "Watershed Initiative—Encouraging Successful Watershed Partnerships to Protect and Restore Water Resources," 28 January 2002; <http://www.epa.gov/owow/watershed/initiativefs.html> (accessed 25 July 2002).
70. Robert Jerome Glennon and John E. Thorson, "Federal Environmental Restoration Initiatives: An Analysis of Agency Performance and the Capacity for Change," *Arizona Law Review* 42 (2000): 512.
71. See Eric Pianin, "Water War Engulfs the Missouri River: Bid to Divert Flow for Barges Under Fire," *Washington Post*, 20 May 2002, p. A3; Michael Grunwald, "Army Corps Aims to Mend Itself: Civil Works Boss Calls for Better Planning," *Washington Post*, 18 July 2002, p. A27.
72. D. Craig Bell, Jo S. Clark, Julia Doermann, and Norman K. Johnson, "Retooling Western Water Management: The Park City Principles," *Land and Water Law Review* 31 (1996): 303–312. The Enlibra Principles echo similar calls for collaborative and market forces. See Western Governor's Association, "Enlibra"; <http://www.westgov.org/wga/initiatives/enlibra/default.htm>.
73. See Environmental Protection Agency Web site; <http://cfpub.epa.gov/npdes/statestats.cfm> (accessed 5 July 2005).
74. Jeffrey S. Ashley and Zachary A. Smith, *Groundwater Management in the West* (Lincoln: University of Nebraska Press, 1999).
75. See Douglas S. Kenney, Sean T. McAllister, William H. Caile, and Jason S. Peckham, *The New Watershed Source Book* (Boulder: Natural Resources Law Center, University of Colorado School of Law, April 2000) for a directory and description of watershed initiatives in the western United States.
76. Michael Grunwald, "Interior's Silence on Corps Plan Questioned," *Washington Post*, 14 January 2002, p. A05; Michael Grunwald, "White House Relaxes Rules on Protection of Wetlands," *Washington Post*, 15 January 2004, p. A02.
77. With *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (121 S.Ct. 675, also known as the SWANCC decision), the Supreme Court ruled that the Corps could no longer use the Migratory Bird Rule to regulate isolated, non-navigable, intrastate ponds.
78. Eric Pianin, "Administration Establishes New Wetlands Guidelines," *Washington Post*, 11 January 2003, p. A05.
79. U.S. Department of the Interior, "Nez Perce Water Rights Settlement Benefits Tribe, Idaho, Pacific Northwest" (press release, 15 May 2004); <http://www.doi.gov/news/040515a> (accessed 2 April 2005). See Daniel McCool, *Native Waters: Contemporary Indian Water Settlements and the Second Treaty Era* (Tucson: University of Arizona Press, 2002) for a more thorough exploration of recent settlements with tribes.
80. Dean E. Murphy, "In a First, U.S. Officials Put Limits on California's Thirst," *New York Times*, 5 January 2003, p. A1.
81. Department of the Interior, *Water 2025: Preventing Crises and Conflict in the West*; <http://www.doi.gov/water2025/Water2025-Exec.htm> (accessed 2 April 2005).

82. As reported by Reed Benson, "The Interior Department's Water 2025: Blueprint for Balance or Just Better Business as Usual?" 33 *Environmental Law Reporter* 10, 837 (2003).
83. Benson, "The Interior Department's Water 2025."
84. Ibid.
85. John D. Leshy, "Natural Resources Policy in the Bush (II) Administration: An Outsider's Somewhat Jaundiced Assessment," 14 *Duke Environmental Law and Policy Forum* 347 (2004): 348; Robert S. Devine, *Bush Versus the Environment* (New York: Anchor Books, 2004); Norman J. Vig, "Presidential Leadership and the Environment," *Environmental Policy*, ed. Vig and Kraft, pp. 115–120.
86. Douglas Jehl, "EPA Delays Further Rules of Clinton Era," *New York Times*, 17 July 2001.
87. Tom Hamburger, "Water Saga Illuminates Rove's Methods," *Wall Street Journal*, 30 July 2003, p. A4.
88. Kincaid, "The Devolution Tortoise," 17–40.
89. Helen Ingram, *Water Politics: Continuity and Change* (Albuquerque: University of New Mexico Press, 1990).
90. See Christopher J. Bosso, *Environment, Inc: From Grassroots to Beltway* (Lawrence: University of Kansas Press, 2005) for an examination of the role of the organized environmental advocacy community over time. See Edward P. Weber, *Bringing Society Back In: Grassroots Ecosystem Management, Accountability, and Sustainable Communities* (Cambridge, MA: MIT Press, 2003) for a deeper look at the rise in grassroots governance efforts.
91. Jennie L. Bricker and David E. Filippi, "Endangered Species Act Enforcement and Western Water Law," *Environmental Law* 30 (2000): 735–768.
92. Barbara Cosens, "Water Dispute Resolution in the West: Process Elements for the Modern Era in Basin-Wide Problem Solving," 33 *Environmental Law* 949 (2003): 963.
93. By 2000, 83 percent of Americans expressed agreement with the environmental movement's objectives. Riley E. Dunlap, "Americans Have Positive Image of the Environmental Movement," *Gallup News Service*, 18 April 2000.
94. Tanya Heikkila and Andrea K. Gerlak, "The Formation of Large-Scale Collaborative Resource Management Institutions: Clarifying the Roles of Stakeholders, Science and Institutions," *Policy Studies Journal* 33 (2005): 583–611.
95. For example, for the Everglades restoration efforts, the cost-sharing is a fifty-fifty financial arrangement. The Water Resources Development acts of 1996 and 2000 require a 50 percent cost-share for implementing the plan.
96. See Norris Hundley Jr., *The Great Thirst, Californians and Water: A History* (Berkeley: University of California Press, 2001), pp. 398–425, for a thorough history; Sue McClurg, "CALFED and the Delta Fix," *Western Water* (January/February 1999): 4–13.
97. CALFED Bay-Delta Program History (June 2001); <http://www.calfed.water.ca.gov/general/overview.html> (accessed 2 July 2005).

98. Chesapeake 2000 Bay Agreement; <http://www.chesapeakebay.net/agreement.htm> (accessed 25 July 2004).
99. Jon Cannon, "Choices and Institutions in Watershed Management," 25 *William and Mary Environmental Law and Policy Review* 379 (2000): 404.
100. U.S. Environmental Protection Agency, Office of Water, "Great Lakes Water Quality Initiative," March 1995; <http://www.epa.state.oh.us/dsw/gli/gli7.html> (accessed 25 October 2004).
101. Tomas Koontz, Toddi A. Steelman, JoAnn Carmin, Katrina Smith Korfmacher, Cassandra Moseley, and Craig W. Thomas, *Collaborative Environmental Management: What Roles for Government?* (Washington, DC: Resources for the Future Press, 2004), pp. 126–144.
102. See Julia M. Wondolleck and Steven L. Yaffee, *Making Collaboration Work: Lessons from Innovation in Natural Resource Management* (Washington, DC: Island Press, 2000); Philip Brick, Donald Snow, and Sarah Van de Wetering, eds. *Across the Great Divide: Explorations in Collaborative Conservation and the American West* (Washington, DC: Island Press, 2001); Paul A. Sabatier, Will Focht, Mark Lubell, Zev Trachtenberg, Arnold Vedlitz, and Marty Matlock, *Swimming Upstream: Collaborative Approaches to Watershed Management* (Cambridge, MA: MIT Press, 2005).
103. Robert Agranoff, "Managing within the Matrix: Do Collaborative Intergovernmental Relations Exist?" *Publius: The Journal of Federalism* 31 (Spring 2001): 31–56.
104. National Research Council, *Restoration of Aquatic Ecosystem—Science, Technology and Public Policy* (Washington, DC: National Academy Press, 1992), p. 41.
105. C. S. Holling, ed. *Adaptive Environmental Assessment and Management* (New York: John Wiley and Sons, 1978).
106. Kai N. Lee, "Appraising Adaptive Management," *Conservation Ecology* 3 (1999): 3; <http://www.consecol.org/vol3/iss2/art3> (accessed 5 March 2005).
107. Kai N. Lee, *Compass and Gyroscope: Integrating Science and Politics for the Environment* (Washington, DC: Island Press, 1993).
108. National Research Council, *Adaptive Management for Water Resources Project Planning* (Washington, DC: National Academy Press, 2004).
109. U.S. Army Corps of Engineers and the South Florida Water Management District, *A Vision Statement for the Comprehensive Everglades Restoration Plan* (2003), p. 2.
110. A 2003 report found gaps in adaptive management tools (General Accounting Office, *South Florida Ecosystem Restoration: Task Force Needs to Improve Science Coordination to Increase the Likelihood of Success* [Washington, DC: General Accounting Office, March 2003], p. 4).
111. See South Florida Ecosystem Restoration Task Force; <http://www.sfrestore.org> (accessed 5 February 2005).
112. See "Regional Collaboration: Interagency Task Force," Executive Order 13340 (18 May 2004); www.epa.gov/glnpo/collaboration/index.html.
113. Theodore J. Lowi, "American Business, Public Policy, Case Studies and Political Theory," *World Politics* 16 (July 1964): 677–715.

114. The 1992 Reclamation Projects Authorization Adjustment Act illustrates this. This legislation reallocates water from irrigation to fish and wildlife and authorizes funds for the completion of the Central Utah Project, demonstrating both the reallocative and distributive approaches in a single piece of congressional legislation.
115. See Richard S. Stewart, "A New Generation of Environmental Regulation?" 29 *Capitol University Law Review* 21 (2001): 29–30; Cannon, "Choices and Institutions in Watershed Management," 387–391.
116. Stephen S. Light and John R. Wodraska, "Forging a New State-Federal Alliance in Water Management," *Natural Resources Journal* 30 (Summer 1990): 479.
117. Charles H. W. Foster and Peter P. Rogers, *Federal Water Policy: Toward an Agenda for Action* (Cambridge, MA: Harvard University, Energy and Environmental Policy Center, 1998).
118. See A. Dan Tarlock, "Putting Rivers Back in the Landscape: The Revival of Watershed Management in the United States," 6 *Hastings W-NW J. Environmental Law and Policy* 167 (2000): 189–192; Bradley C. Karkkainen, "Collaborative Ecosystem Governance: Scale, Complexity and Dynamism," 21 *Virginia Environmental Law Journal* 189 (2002): 235.
119. Robert W. Adler, "Watershed and the Integration of U.S. Water Law and Policy: Bridging the Great Divides," *William and Mary Environmental Law and Policy Review* 25 (Fall 2000): 1–67.
120. Michael V. McGinnis, "On the Verge of Collapse: The Columbia River System, Wild Salmon and the Northwest Power Planning Council," *Natural Resources Journal* 35 (Winter 1995): 63–92.
121. McClurg, "CALFED Today: A Roundtable Discussion"; Gary Pitzer, "The CALFED Plan: Making It Happen," *Western Water* (January/February 2004): 4–13; Hank Shaw, "\$100M in Delta Funds May Sink," *Stockton Record*, 9 May 2005.
122. Michael Grunwald, "Everglades Project Revamped: New Rules Would Give Interior Greater Role in Restoration," *Washington Post*, 24 July 2002, p. A17; Michael E. Powers, "Infighting Swamps Everglades Cleanup," *Engineering News-Record* 254 (14), 11 April 2005, p. 10.
123. Cannon, "Choices and Institutions in Watershed Management," 402–404; Howard R. Ernst, *Chesapeake Bay Blues: Science, Politics, and the Struggle to Save the Bay* (Lanham, MD: Rowman & Littlefield, 2003).
124. See Michael McCloskey, "The Skeptic: Collaboration Has Its Limits," *High Country News*, 13 May 1996; George Cameron Coggins, "Regulating Federal Natural Resources: A Summary Case against Devolved Collaboration," 25 *Ecology Law Quarterly* 602 (1999): 602–610; Mark Lubell, "Collaborative Environmental Institutions: All Talk and No Action?" *Journal of Policy Analysis and Management* 23 (2004): 549–573.
125. Getches, "The Metamorphosis of Western Water Policy," 42–47; Sarah B. Van de Wetering and Robert W. Adler, "New Directions in Western Water Law: Conflict or Collaboration?" *Journal of Land, Resources, and Environmental Law* 20 (2000): 37; John D. Leshy, "Two

- Decades of Water Law and Policy Reform: A Retrospective and Agenda for the Future,” 5 *University of Denver Water Law Review* 308 (2001): 311–312.
126. “EPA Publishes New Radionuclides Rule,” *Water World* (January 2001): 1, 18 as cited in Denise Scheberle, “Devolution,” *Environmental Governance Reconsidered*, ed. Durant et al., p. 383.
 127. Claudia Copeland, *Water Quality: Implementing the Clean Water Act* (Washington, DC: Congressional Research Service, 2002).
 128. General Accounting Office, *Freshwater Supply: States’ Views of How Federal Agencies Could Help Them Meet the Challenges of Expected Shortages* (Washington, DC: General Accounting Office, July 2003), p. 6.
 129. John E. Thorson, “Visions of Sustainable Interstate Water Management Agreements,” 43 *Natural Resources Journal* 347 (Spring 2003): 358–359.