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Embracing Watershed Politics

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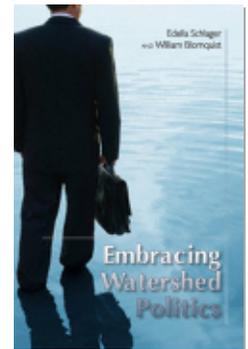
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Federalism and Watershed Governance

There also is the serious problem of “thinking federal,” that is, of approaching the problem of organizing political relationships from a federalist rather than a monist or centralist perspective.

DANIEL ELAZAR (1987, 12)

As described in Chapter 1, many natural scientists and policy analysts accept that most natural systems, such as watersheds, are complex adaptive systems. These systems do not need to be simplified and managed for one or two values, their complexity is to be recognized, protected, and respected. The same thinking, however, has not pervaded the social sciences concerning watershed governance. Political complexity is viewed as a barrier to the sustainable use of natural systems and something to be corrected. As illustrated in Chapter 2, policy reforms are sought that simplify, integrate, and centralize so the externalities, spillover effects, commons dilemmas, and public goods

that emerge from the human uses of a watershed may be traded off and balanced against each other.

The previous chapters offered an alternative view, namely, that social complexity is neither a barrier to sustainability nor something that is readily dispensed with. It arises from human decision-making capabilities, the many different conflicting values and goals people hold, the attempts to collectively achieve those many values and goals by designing multiple institutional arrangements in a world of transaction costs, and in so doing having to inevitably and unavoidably make difficult and challenging political decisions. All of this social complexity cannot be quieted by relying on science or nature to define boundaries or by forcing diversity into the well-designed box of hierarchy.

Building on Chapter 5, this chapter focuses on an approach for structuring complementary, cooperative, competitive, and conflicting relations among citizens, organizations, and governments at interstate watershed scales.¹ Citizens, public officials, and elected representatives in the United States have considerable experience developing working relations among organizations and governments at different levels and scales, because that is the essence of federalism, a fundamental principle of American politics. Federal systems of government exhibit both diversity and unity: diversity through many governments organized at different scales and for different purposes, and unity through coordination and cohesion among those governments. As such, federalism represents an important and powerful alternative to calls for more centralized governing forms. In this chapter, we explore federalism and how it structures watershed-level governance.

The chapter begins by distinguishing federalism from other forms of coordination and cooperation—federalism has particular defining features that differentiate it from other forms of governance. There follows a discussion of coordination, cooperation, and conflict resolution among governments and organizations in a federal system: that is, how unity or integration is achieved in a federal system. From there we sketch out a form of policy analysis appropriate for identifying and diagnosing the weaknesses and shortcomings likely to appear in a federal form of governance. The chapter closes with a case study of the creation and operation of the Delaware River Basin Compact and Commission, the first federal-interstate compact in the United States. For forty-five years, the participating states and the federal government, through the compact commission and its advisory commit-

tees, have addressed problems and provided benefits that the compact was intended for, failed to realize other benefits, created policy innovations to address unanticipated challenges, and resolved conflicts among themselves without recourse to the U.S. Supreme Court. The Delaware River Basin illustrates the strengths, challenges, and shortcomings of watershed federalism.

THE BASICS OF FEDERALISM

The United States has a long and rich history of contesting over and experimenting with watershed-level governance. That experimentation occurs in the context of federalism. Federalism encourages innovation and experimentation because of the dynamic tension between self-rule and shared rule. Federalism combines self-rule with shared rule. Federal systems are composed of equals, citizens and governments, who come together to form a common enterprise while maintaining their separate identities, rights, and authorities (Elazar 1987, 4). Achieving a workable combination of self-rule and shared rule depends on relationships among participants that protect the integrity of each while supporting and encouraging “the energetic pursuit” of common ends (Elazar 1987, 5).

In federal systems, citizens are constantly challenged to attend to issues of both political power (who gets what, when, and how) and justice (how power is to be exercised so good governance is realized) (Lasswell 1958; Elazar 1987).² Watershed collaboratives, and the literature they have spawned, for instance, explicitly encompass this tension between power and justice (Weber 2003). Collaboratives are formed to address specific problems in watersheds by gaining the commitment of collaborative members to engage in specific projects and activities. The process that is used to gain that commitment represents a particular form of justice—the deliberate coming together of equals whose free consent is required for the collaborative to act. The collaborative literature pays at least as much attention to the justice dimension (the relationships formed, the trust developed) as it does to the political dimension (the projects and plans adopted, the outcomes realized) (Sabatier et al. 2005).³

The focus on achieving self-rule and shared rule simultaneously is a critical feature that distinguishes federalism from other forms of governance. All forms of governance, no matter how centralized, are typically

divided into subunits that are based on function, territory, or both for the many reasons outlined in Chapters 3, 4, and 5. Consequently, all forms of governance are faced with challenges of achieving integration and cohesion. Hierarchical forms of governance depend on institutional mechanisms that tie the subunits more tightly to the central decision maker, giving the central decision maker greater control and direction over the subunits. The mechanisms may be blatantly coercive, based on command and control, or they may be incentive based, appealing to the interest of the subunit. Either way, the integrity, independence, and discretion of the subunits are controlled by the center. Issues of power and justice are conflated within the central decision maker. The focus rests on how the central decision maker can best exercise power in order to achieve desired ends. Justice becomes a consideration only to the extent that it helps the central decision maker more effectively exercise power.⁴

Relationships among governments in a federal system are qualitatively different. They are not hierarchical but polycentric (Ostrom 1973), or non-centralized (Elazar 1987). Noncentralization refers to multiple centers of power, each with its own authorities and capabilities, and with no one center dominating or commanding the others.

Noncentralization, particularly in the U.S. federal system, is achieved and protected through constitutions. Constitutions define the *capabilities* and, just as importantly, *limitations* of governments (Lutz 1988). Governments' capabilities, such as making and enforcing laws, are limited by circumscribing the substantive areas in which governments may act and/or by structurally dividing authority through a separation of powers. Constitutions define relationships among governments, among branches within governments, and between citizens and governments.⁵

It would be a mistake, however, to consider the U.S. Constitution and the fifty state constitutions as the only constitutions that matter in the United States, particularly in relation to water. Hundreds of additional constitutions have been devised and adopted that create "water governments." For instance, interstate river compacts are constitutions devised and adopted by states that spell out the types of water and water-related issues the compact will govern, a formula for allocating water, a governing body to oversee the operation of the compact and to establish policy, and perhaps a conflict resolution mechanism for settling differences among the states before, or instead of, calling upon the U.S. Supreme Court.

For instance, Nebraska and Kansas entered into the Big Blue River Compact in 1971, which governs the Big Blue River and its major tributary, the Little Blue River, from its headwaters in Nebraska to its confluence with the Kansas River near Manhattan, Kansas (Kansas Revised Statutes, Chapter 82a, Article 5). The compact governs water allocation and quality of surface and groundwater. From May through September of each year, Nebraska must ensure agreed-upon minimum daily flows at the state line for both rivers. If minimum daily flows drop below compact-specified levels, Kansas may request that Nebraska shut down water diversions, both ground and surface, so as to restore the required minimum flows.⁶ The compact recognizes water-quality issues, although it lacks regulatory authority. Nebraska and Kansas have developed a joint water-quality monitoring program and agricultural education and best practices programs (Big Blue Compact Administration, 29th annual report, 2002).

Interstate river compacts allow for a combination of self-rule and shared rule. States exercise their governing authority in ways and areas that they have historically used. Through compacts, however, they freely accede some of that control. Under the Big Blue Compact, for instance, Nebraska has had to regulate its citizens' water diversions not to meet the requirements of Nebraska water laws but to meet the requirements of the compact.

Compacts allow states to cooperate and coordinate their resource use. Most states have also provided enabling legislation that allows local water users to devise constitutions creating water organizations to govern intra-state water resources, as illustrated in the case studies in Chapters 1 and 5. For instance, most states allow for the creation of special districts that govern different aspects of water development and use. Among the most ubiquitous, at least in the western United States, are irrigation districts. State-enabling legislation typically spells out procedures for forming a district, such as who may participate in its creation and how, and once a district is created, its governing structure, powers (including taxing and spending authority), methods of reorganization and dissolution, and methods of electing and recalling board members.

Irrigation districts have allowed members to govern themselves, at least with respect to some aspects of resource use—arranging for water and its allocation, providing for system construction and maintenance, and allowing members to decide how and to what extent they wish to tax themselves. This self-governance occurs within a system of shared governance. Districts

are governed by states' water laws, conflicts are addressed through state courts, and so forth. Conversely, the integrity and autonomy of a district are protected by the district's enabling legislation and constitution that spell out how the district may be reorganized or dissolved.

Given the centrality of constitutions in creating and sustaining noncentralized systems, amendment procedures are critical. The amending process must allow participants to revise constitutions to address new and changing circumstances while still protecting the integrity of the governing system. One way this is accomplished is by strictly limiting governments' ability to revise constitutions so one government does not become too powerful relative to the others and to its own citizens. A government cannot unilaterally change its own constitution, and member governments typically have greater powers to change the constitution of the general government than vice versa (Elazar 1987). For example, state governments have a constitutionally defined role in amending the U.S. Constitution, but the U.S. government does not have a constitutionally defined role in amending state constitutions.⁷ Furthermore, the participation of elected officials in constitution-amending processes is limited. For nearly all states, either legislatures or citizens may place constitutional measures on the state ballot, but citizens must approve them.

COOPERATION AND COORDINATION IN A FEDERAL SYSTEM

Two important implications stem from a federal system of governance. First, in federal systems, joint action among members rests on mutual consent and building consensus rather than on threatening coercion or issuing commands. Mutual consent permeates federal systems. The multiple veto points sprinkled throughout the structure of a federal system, combined with the constitutional protections afforded governments and citizens, require participants to take one another into account in order to find mutual accommodation and agreement. Even if an actor has the authority to act unilaterally, often the initial tendency is to reach an understanding before acting. For instance, the U.S. Supreme Court has refused on a number of occasions to decree water allocations on an interstate river, although the court possesses the authority to do so at the request of one of the states. Instead, the court has urged the parties to devise their own water-allocation agreements through compacts. Elazar (1987, 67) refers to efforts to find mutual consent

as an element of the federal process. As he explains, “The elements of a federal process include a sense of partnership among the parties to the federal compact, manifested through negotiated cooperation on issues and programs and based on a commitment to open bargaining between all parties to an issue in such a way as to strive for consensus or, failing that, an accommodation that protects the fundamental integrity of all the partners.”

Second, strengthening and/or adapting a noncentralized, or polycentric, system is much different from doing so in a centralized system. Recall the earlier discussion in which centralized systems are strengthened by placing greater powers in the hands of the top-level decision maker. In contrast, a polycentric system becomes stronger by strengthening its constituent units, supporting their ability to communicate and coordinate, and providing means for resolving disputes among them.

Recently, several interstate river compacts have been before the Supreme Court to settle disputes and to revise operating rules and regulations to allow states to better coordinate their actions around shared rivers. The compacts include (1) the Arkansas River Compact between Colorado (upstream state) and Kansas (downstream state); (2) the Republican River Compact among Colorado (upstream state), Nebraska (downstream to Colorado but upstream to Kansas), and Kansas (downstream state); and (3) the North Platte Decree among Colorado (upstream state), Wyoming (downstream to Colorado but upstream to Nebraska), and Nebraska (downstream state). Conflicts centered initially on boundaries (what or who is covered by the agreement), as examined in Chapter 3. The downstream states claimed that the compacts governed groundwater, and consequently, groundwater use in the upstream states was to be counted against compact-defined water allotments. In each case, the text of the compact did not mention groundwater explicitly, and conflict over its inclusion simmered for decades as states attempted to resolve the issue through the compact commissions. However, because the commissions used unanimity rules, upstream states typically managed to block attempts to incorporate groundwater use in compact water allotments. Finally, the downstream states in each case filed lawsuits in the U.S. Supreme Court, and in each case, the court ruled that groundwater was within the bounds of the compacts.

With the boundary question resolved, the states, as part of the final settlements of each case, also adopted different institutional mechanisms to improve their ability to take joint action and to better realize their compact

commitments. Adoption of a unanimity rule for all decisions, no matter how great or small, limited the compact commissions' competency to engage in governance. In each settlement, the states revised the commissions' decision rules, allowing for a rule other than unanimity to be used in at least some situations.⁸ Also, in each of the settlements, the states devised a variety of conflict resolution mechanisms, providing the states with multiple opportunities to settle their differences before having to resort to the Supreme Court.⁹

In some of the cases, states better defined their own water rights laws and administrative practices so as to allow them to meet their compact commitments. For instance, the Supreme Court's ruling that groundwater pumping in the Colorado portion of the Arkansas River Basin caused harm to Kansas water users in violation of the compact required Colorado to limit and regulate groundwater pumping in the basin (*Kansas v. Colorado*, 514 U.S. 675 [1995]). Colorado water law recognizes the hydrologic connection between surface and groundwater and directs the state water engineer to incorporate wells into the prior appropriation system and to regulate them (Blomquist, Schlager, and Heikkila 2004). Although the state water engineer successfully adopted a set of well regulations for the South Platte River Basin, he was unable to do so for the Arkansas River Basin for a variety of reasons. Faced with the possibility of paying Kansas millions of dollars in damages for allowing its water users to take more than they were entitled to under the compact, the Colorado legislature allocated additional resources to the state engineer to adopt well regulations. Working with the major well associations in the Arkansas River Basin, the state engineer adopted rules within a matter of months that withstood a court challenge brought by a handful of well owners who adamantly opposed regulation.

In the Republican River case, Nebraska faced more difficult issues with the Supreme Court decision finding that groundwater was covered by the compact. Pumping would have to be regulated to prevent Nebraskans from taking more water than was allocated to them under the compact; however, as noted in connection with the Platte River case in Chapter 3, Nebraska law did not authorize the state to regulate groundwater pumping. After more than a decade of conflict among groundwater pumpers, surface-water users, and local and state officials, the Nebraska legislature passed LB 962, which allowed the state department of natural resources to declare watersheds overallocated. Once a watershed is determined to be overallocated,

two things occur. A moratorium on new and replacement wells goes into effect and the natural resource districts overlying the watershed are required to engage in groundwater planning and adopt well regulations (LB 962, 98th Legis., 2nd sess., Nebraska Laws, 2004).

The strengthening of the three interstate river compacts most recently before the U.S. Supreme Court involved addressing relations among states and between states and citizens. It did not involve greater centralization. The rules governing the operation of the compacts were revised to allow states to better coordinate and cooperate with each other. Rather than being saddled with a unanimity rule for every decision, decision rules now vary depending on the issue, with the unanimity rule still in place for most major decisions. Furthermore, the compacts have conflict-resolution mechanisms that allow states to address disagreements without having to allow them to fester until they are severe enough for the U.S. Supreme Court to accept and resolve. Finally, states and citizens have wrestled with devising new laws and better implementing existing laws so that water providers and users abide by state laws and compact requirements.

Strengthening federal systems by tending to the ties among member governments, organizations, and citizens often involves the use of overlapping organizations. Overlapping organizations may take a variety of forms, from purely voluntary organizations serving as forums for discussion and consultation to formal governments possessing powers of rule making, enforcement, and taxation. As observed in the San Gabriel River case in Chapter 5, overlapping organizations may be highly specialized, addressing a single issue, or general, addressing a variety of issues.

Watershed collaboratives are a form of overlapping organization at the voluntary end of the spectrum. They are widely heralded for encouraging their members to recognize and act on a more general, comprehensive view of a segment of a watershed.¹⁰ That is, in developing a watershed plan or designing a restoration project, multiple dimensions of the watershed are recognized and their interactions attended to, such as the interaction among land use, riparian areas, and the quality of water in the stream. As voluntary organizations, collaboratives rely heavily on persuasion and consensus to encourage members to exercise their discretionary authority in ways consistent with the mission and goals of the collaborative.

At the risk of stating the obvious, more authoritative forms of overlapping arrangements are qualitatively different from voluntary organizations.

These organizations are governments, either specialized (Type II, to use the language of Chapter 1) or general-purpose (Type I), with explicitly defined and delimited coercive powers. Interstate river compacts and commissions are examples of specialized (Type II) institutions grounded in enforceable laws. Compact commissions may adopt rules and regulations to carry out the purpose of the compact. They may monitor compliance with compact requirements, and member states may enforce compact commitments against one another and against their citizens. To be sure, persuasion, open bargaining, and accommodation among member states are vital if a compact is to work well; however, in the end if all else fails, members can resort to enforcement mechanisms to ensure that rules are followed and commitments carried out.¹¹

Type II governments, because of their rule-making and enforcement authority and dedicated sources of funding, are often considered desirable mechanisms for accomplishing watershed management. Created through the design and adoption of a constitution, they are not easily dismantled or avoided. Rule-making and implementation powers allow them to request and command action. Dedicated sources of funding from taxes, fees, and bonds provide regular and dependable sources of capital. These authorities are significant when compared with voluntary organizations in which members must spend considerable time, effort, and resources toward encouraging and maintaining participation, gaining consensus, obtaining funding, and persuading members to follow through with their commitments of resources and action. Substantial energy is expended simply maintaining the existence of voluntary organization, energy that is not expended in maintaining governments. Instead, that energy can be devoted to operations, implementation, monitoring, and enforcement.

Although attractive in that sense, more authoritative overlapping organizations are more difficult and costly to create than are voluntary organizations. Given their coercive authorities, multiple veto points characterize the processes used to create them. Veto points are the means by which consent is solicited and obtained from those who are to be subject to and governed by the new government. For instance, in devising an interstate compact, the designated representatives of each state must adopt the compact they have devised unanimously before it is brought before the legislatures of each of the states for ratification. If each state ratifies the compact, then it is brought before Congress and the president for approval. Given the extensive consul-

tation and review process, most interstate river compacts take more than a decade to devise and adopt, if they are devised at all.

The benefits from creating a new government must be significant to justify the high creation costs. Not only must the benefits be significant, but the allocation of benefits and costs of its creation and operation must be equitable among its members if it is to be formed. For instance, the South Platte Cooperative Agreement discussed in Chapter 3 took more than a decade to complete, even though the states initially believed that they would be able to finalize an agreement within three years. The benefits for each state were clear: avoid extensive endangered species consultations with the federal government and protect existing water users and uses. Adequately protecting and recovering endangered species, fairly allocating the costs of doing so, and devising acceptable and workable decision-making and monitoring arrangements were more difficult issues on which to agree.

The more comprehensive the government to be formed, both in scale and in scope, the more costly it will be to create. Creating a government at the scale of a watershed means that many governments and citizens within that watershed will have direct and indirect opportunities to support or inhibit its creation. Creating a government at the scale of a watershed that has a scope of authority encompassing many dimensions of the watershed will directly implicate and involve even more governments and citizens in its creation. The larger in scale and scope of the government being devised, the more costly and difficult it will be to gain the necessary consensus for its creation. As discussed in Chapter 4, Derthick (1974) labels these latter forms of governments “political accidents.” Consequently, voluntary overlapping organizations will be easier to create than overlapping governments (Derthick 1974). And among governments, limited-purpose special districts will be easier to create than more encompassing and comprehensive general-purpose governments. Given the high costs of creation and adoption and the challenges of ensuring an equitable distribution of benefits and costs, in most watersheds, coercive forms of overlapping organizations are likely to emerge only after multiple attempts at creation. In many instances, voluntary forms of overlapping organizations will be all that participants are able to create; in other instances, voluntary forms will be created as stepping-stones to the creation of governments.

A FEDERALISM-BASED POLICY ANALYSIS OF WATERSHED GOVERNANCE

Most policy analyses of the management and governance of watersheds are based on methods of analysis not well suited for polycentric systems. Such analyses assume that centralized, hierarchical forms of government are or should be the norm. Diagnoses proceeding from such an assumption tend to center on the diversity of organizations, agencies, and governments; that is, watershed governance is fragmented, disjointed, and disorganized because there is no single controlling center. Policy prescriptions of reducing diversity, creating a centralized authority, and so forth readily follow.

A federal, or polycentric, policy analysis begins from a different starting point with a consideration of the major points of conflict within a watershed. Major points of conflict tend to encompass multiple actors and entail significant disagreement over the types and causes of problems or the failure, indifference, or inability of key actors to take steps to address the problems. From there, attention is paid to the types and qualities of the relations among the actors most directly involved in the conflicts. Policy solutions centering on creating, redefining, and restructuring relations among governments and organizations may then be considered.

Of course, this is easier said than done because in crafting policy solutions, the many political questions raised in previous chapters must be confronted. For instance, will a new government be created or will a new program and/or agency be incorporated within an existing government? Who will be included within the new program/agency/government? What will decision-making processes be like? To whom and how will the new program/agency/government be held accountable? Will the policy solutions likely reduce the overall magnitude of transaction costs among the key actors? Have the trade-offs among transaction costs made by the policy solutions been carefully attended to, and have the obvious points of weakness been identified?

Examples of policy makers, public managers, and citizens struggling to redefine relations in order to better address perceived watershed problems abound in the case studies included in previous chapters. One example from the Columbia Basin seems particularly apt. The incompatibility between the Northwest Power Planning Council's fish recovery plan and the laws governing the federal water and power agencies allowed agency costs to blossom,

as the federal water and power agencies acted in ways that undermined the fishery plan. The council responded predictably. It increased its decision-making costs by defining more precisely specific actions that the federal water and power agencies were to engage in, such as developing and adhering to implementation plans and imposing timetables and deadlines on the completion of specific activities. In other words, the council attempted to limit the discretion of the agencies in order to reduce agency problems. The state and tribal fish and wildlife agencies that consulted and worked with the council on developing plans urged an additional approach. The state and tribal agencies understood that the federal water and power agencies would be reluctant partners. Consequently, the agencies requested that the council undertake a study on the federal water and power agencies' decision-making processes to identify appropriate points and procedures to directly insert consideration of the council's fish and wildlife plan, with the expectation that such a study would provide the information needed to revise the laws governing the federal agencies (Blumm 1984). For tribal and state wildlife officials, gaining the support of federal agencies required orienting their decision-making processes to include conservation goals; simply limiting their discretion in carrying out conservation activities was insufficient. In the end, the council's approach of limiting discretion met with only modest success, and it declined to engage in the study of federal agency decision-making processes.

Gaining the cooperation and commitment of semi-autonomous governments unfolds at different scales, as illustrated by the Platte River case study in Chapter 3. Colorado, Wyoming, and Nebraska together had to follow through on their commitments to provide additional water and to carefully regulate new water demands. If even one state failed to realize its water and regulatory commitments, the entire agreement failed, regardless of the actions of the other two states. Both Colorado and Wyoming believed that the weakest commitment was from Nebraska. Their state laws required the careful regulation of all new uses of both ground- and surface water so as to protect existing water rights, but Nebraska had no such laws, particularly in relation to groundwater. Nebraska could not credibly commit itself to regulate pumping so that its citizens would not pump the additional water that the three states made available in the river, other than to promise to actively pursue such legislation. Ultimately, the state was successful in realizing such legislation but an agency problem blossomed, undercutting the credibility

of Nebraska's commitment to regulating new uses. Farmers, anticipating the adoption of new legislation strictly limiting wells, applied for and were granted new well permits by the natural resource districts. Once the legislation passed, the Nebraska Department of Natural Resources declared the Platte River Basin over-appropriated and a moratorium on new wells went into effect (Nebraska Department of Natural Resources 2004). Now the natural resource districts are required to develop groundwater management plans, but that task is more complicated because of the new well permits issued and new wells installed before the law took effect. Do the natural resource districts have sufficient expertise, resources, and social capital to develop groundwater management plans likely to realize the goal of protecting and enhancing river flows? The Nebraska Department of Natural Resources is likely to face challenging agency issues with the natural resource districts, issues that they will most likely attempt to address through increased decision-making costs for the department and for the districts.

One of the strengths of polycentricity is that the existence of independent, autonomous governments organized at different scales allows first attempts to address problems and conflicts to occur at smaller scales, among the citizens, organizations, and governments most immediately involved and affected. These actors have access to a variety of institutional mechanisms that they may call upon to address shared problems, including mechanisms that do not require them to appeal to or depend upon governments organized at a larger scale. These mechanisms extend from creating voluntary organizations through which participants may cooperate and coordinate their actions to giving up some of their autonomy and authority by creating overlapping special-purpose or general-purpose governments. At each step, actors have choices about how political they want the issues to become: the more participants that are invited into the conflict, or the broader and more comprehensive the solutions, the more difficult the political questions become.

On the other hand, federalism also rests on consensus, although at an organizational rather than an individual level. Whether it is the passage of legislation, the revision of an existing constitution and government, or the creation of a new constitution and government, citizens, branches of government, and governments must be supportive. That is, they must not exercise their veto authority. A consensus orientation makes achieving coordinated action challenging.

THE DELAWARE RIVER BASIN COMPACT: A FEDERAL EXPERIMENT

The Delaware River begins in the state of New York, just above the Catskill Mountains and zigzags, first to the southeast and then to the southwest, back and forth, creating the boundaries between New York and Pennsylvania, Pennsylvania and New Jersey, and New Jersey and Delaware, before finally flowing into the Atlantic Ocean through the Delaware Bay. It flows through and supports diverse habitats, from the wooded uplands of central New York and northwestern Pennsylvania, to the Philadelphia metropolitan area, to the tidal wetlands of Delaware.

In terms of the volume of water that passes through it, the Delaware is not a particularly notable river for the eastern United States. Its annual average discharge is less than 3 percent of that of the Mississippi, and just less than half of the Susquehanna, its neighbor to the west, yet it provides drinking water for almost 10 percent of the U.S. population (Albert 2005, 1). It supplies water for major cities that reside within its boundaries, like Philadelphia and Trenton, but also for New York City, which is located in the Hudson River Basin.

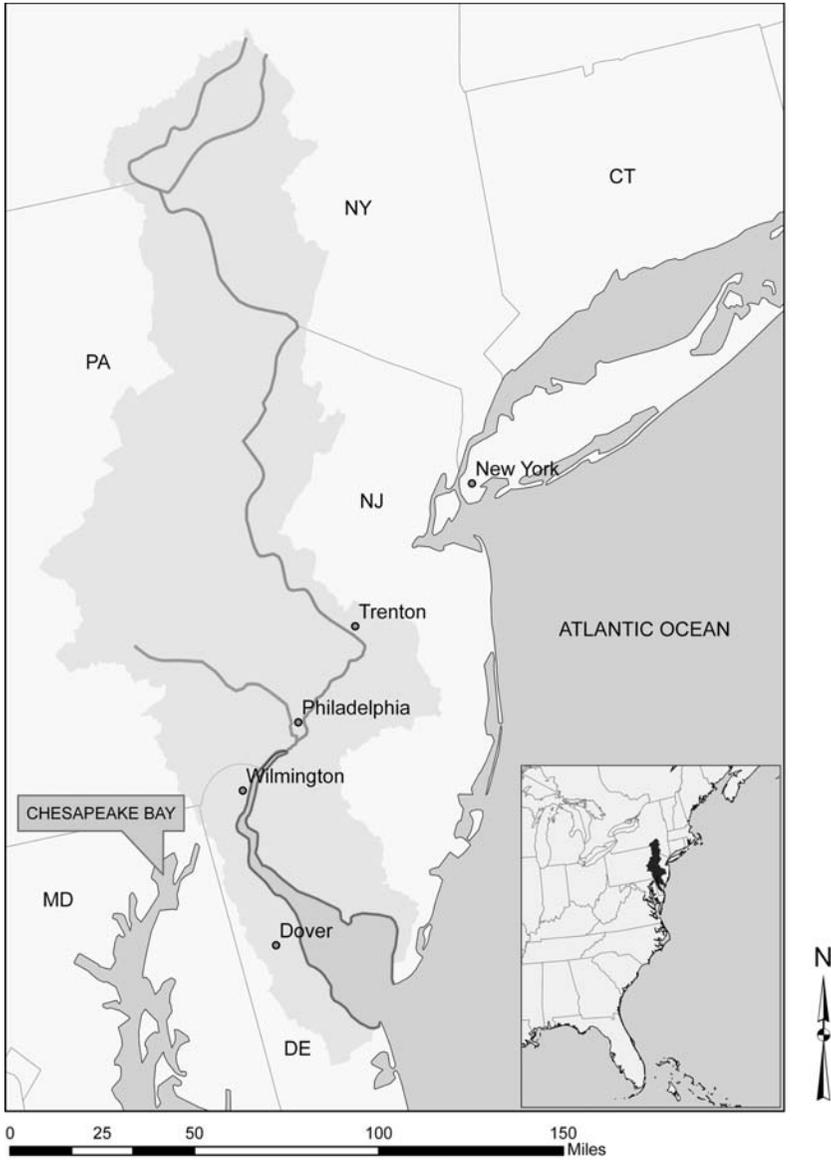
The Delaware Basin's physical complexity is readily matched by its institutional complexity. In 1783, Pennsylvania and New Jersey entered into a treaty to settle disputes over state ownership of islands in the Delaware River and to protect the river as a common highway by forbidding dams on the main stem (Albert 2005, 5). For the next 140 years the Delaware River was used largely for transportation purposes: its main stem was a major highway, and water from the main stem and tributaries fed transportation canals serving eastern cities.

Although the states bordering the Delaware River expressed interest in developing the river's hydropower potential, the 1783 treaty foreclosed the building of main-stem dams. Not until the 1920s, with the populations of New York City, Philadelphia, and north New Jersey rapidly outstripping water supplies, was serious attention paid to the Delaware River as something other than a common highway. With Pennsylvania, New York, and New Jersey considering water-supply projects on the Delaware River, the states began to discuss an interstate river compact that would allow them to coordinate their water-supply activities.

Creating a new overlapping government in the form of an interstate river compact proved difficult. The states could not agree upon a fair allocation

of benefits. The initial compact negotiated by representatives of the three states established minimum flow requirements while allowing each state to develop three-fifths of its Delaware River drainage area (Albert 2005, 17). New York was the only state to ratify it. New York City intended to develop projects that would siphon off water from the Delaware and feed the water into its drinking water supply. Pennsylvania interests objected to New York City, located outside the watershed, taking water from the river and argued also that Pennsylvania deserved a larger portion of the river because the state contained the largest portion of the watershed (Albert 2005, 18). New Jersey suggested that the compact be revised and then submitted to the states as a second proposal for ratification. The revised compact allocated specific amounts of water to each state, with Pennsylvania receiving a third more water than New York and New Jersey. The minimum streamflow requirements were kept in place even though they were reduced. New York again ratified immediately, and New York City proceeded to work with the state to begin the development of reservoirs on the East and West Branches of the river. This time, however, New Jersey rejected the compact because its cities feared that the reduced minimum flow requirements would deprive them of drinking-water supplies during summers and drought years when river flows were already low.

The three states, representing the interests of their citizens, negotiated and renegotiated a compact to allocate the waters of the Delaware River. The states recognized that they needed to protect river flows while allowing for limited water diversions. The states also understood that they were more likely to gain federal assistance in the development of water projects if they were to first settle their differences over their uses of the river. New York ratified both compacts but the other two states rejected them, largely for distributional reasons. Lacking the required consensus to create an interstate river compact, New Jersey and Pennsylvania appealed to the U.S. Supreme Court to protect their interests in the river. New York City moved forward with its water development plans as if the compact had been adopted. New Jersey, joined later by Pennsylvania, filed suit before the U.S. Supreme Court against New York, seeking to prevent New York City from diverting water out of the watershed. The two states claimed that an out-of-basin diversion would violate the riparian doctrine that all three states used to govern the river, and that a diversion as large as the one planned by New York would harm New Jersey's waterpower potential, river recreation, potential water supply, and shad fish-



The Delaware River Basin.

eries, among other things. They argued that New York City should develop water within its own watershed (Albert 2005, 21).¹² Although joining New Jersey in the litigation, Pennsylvania sought only a decreed water allocation

and the establishment of a river master to monitor and enforce the Supreme Court water decree. The river master would be an independent monitor ensuring that New York City did not take more than what was allocated to it and that it properly released water from its reservoirs in a timely manner.

In 1931 the Supreme Court issued its decree, which demonstrated the risks states face in turning to another entity to resolve their conflicts. The decree was a series of rules imposed by the Supreme Court governing the states' uses of the river. New York had the right to divert Delaware River water, and the Supreme Court allocated 440 million gallons of water per day to it. New York City was directed to release water from its planned reservoirs in order to maintain minimum flows specified in the decree, and New York was required to address several water-quality problems. The other two states would not receive water allocations until they had developed specific water projects. The Supreme Court retained the authority to reapportion the river, even to reduce New York City's allocation if considerations of equity demanded such action; and the court retained jurisdiction over the decree rather than establishing a river master. Thus, it was up to the states to monitor the decree and if violations occurred, the states could petition the Supreme Court for enforcement (Albert 2005, 24).

The decree differed in significant ways from the two compacts the states had negotiated but failed to ratify. First, the benefits allocated to the states differed substantially. Under both compacts all three states would have received water allocations, but under the decree only New York received a specific allocation. The decree also provided very little coordination among the states. Aside from establishing rules of use of the river that the states were to abide by, it did not create a mechanism that would allow states to share information, discuss, or fight over the river. The compacts, by creating commissions, would have established forums for coordination and cooperation.

The decree did not spell the end of interstate cooperation, though. Within five years, the three states created the Interstate Commission on the Delaware River Basin, or INCODEL. Delaware joined later. INCODEL was a voluntary organization with no enforceable authority. Nevertheless, the states embraced it and used it to coordinate joint efforts at water-pollution control. The commission worked closely with the four states to adopt water-pollution laws and construct wastewater treatment plants. By all accounts, these efforts were successful in improving the water quality of the river (Derthick 1974; Featherstone 1999; Albert 2005).

INCODEL's forays into water allocation and management, and project development, proved rockier. These were the issues that prevented the states from adopting an interstate compact, and the differences remained, as INCODEL was soon to discover. INCODEL's initial attempt to coordinate water allocation and use involved the development of a formula for overall diversions and flow releases. The commission intended the formula as a framework that would allow the states to coordinate their water-development activities while providing them with considerable flexibility in developing their own water-storage projects (Albert 2005, 33). The formula, however, was never adopted by the states.

INCODEL did not give up its efforts to coordinate the allocation and use of water. Rather, it switched approaches. Both Philadelphia and New York City were making preparations for water-supply projects, and New York was preparing to petition the Supreme Court to reopen the Delaware River decree and grant it a larger water allocation. Viewing the decree as an inadequate means of coordinating the states' uses of the river, INCODEL returned to the compact. It developed a comprehensive basin-development program that consisted of a series of water-supply projects to be built in a specified order that would supply billions of gallons of drinking water to all of the major metropolitan areas. It also proposed an interstate compact that would create a water-resources construction agency to implement the comprehensive basin-development plan. The compact agency would have no planning or regulatory authority, and it would issue bonds to pay for the construction of the dams and reservoirs (Albert 2005, 39).

This third effort at creating an interstate river compact and compact commission also failed, for many of the same distributional reasons that the first two efforts failed. Pennsylvania interests argued that the first water projects scheduled to be built would benefit New York and New Jersey, but Pennsylvania would have to help finance them. Projects designed to provide drinking water to Philadelphia would be built later. Furthermore, Philadelphia interests were not united behind the water-supply projects earmarked for them (Albert 2005).

Once again, having failed to settle their differences, the states returned to the Supreme Court. New York and New York City petitioned the court to reopen the original decree and increase New York's allocation to 800 million gallons of water per day, to recognize new water projects almost completed and another in the final planning stages. New Jersey, Pennsylvania, and

eventually Delaware joined the lawsuit. The special master appointed by the Supreme Court worked with the parties to develop an acceptable settlement. In the final decree issued by the Supreme Court, which was the negotiated settlement devised by the states with the special master acting as facilitator, a number of changes were made to the original decree. First, New York's allocation was increased to 800 million gallons per day. Second, New York agreed to water-release requirements governing its reservoirs that would ensure minimum flows and prevent the holding of water that the New York City water system did not need for its customers. Third, New Jersey was allocated 100 million gallons of water per day and agreed to cooperate with Pennsylvania if that state undertook efforts to build a main-stem dam. New Jersey agreed to repeal the 1783 treaty provision prohibiting dams and agreed to exercise its powers of eminent domain on property in New Jersey that Pennsylvania would have to purchase if it were to build a dam. Fourth, Pennsylvania's request for a river master to administer and monitor flow releases was granted (Albert 2005, 47).

The second decree went well beyond simply allocating water; it laid the groundwork for the creation of an interstate river compact. It provided an independent river master and removed a number of obstacles that had prevented the building of a main-stem dam. Pennsylvania actively began planning such a dam, and to protect such an investment, it spearheaded efforts to revive interstate cooperation. Extensive flooding from two hurricanes brought the Army Corps of Engineers into the basin, leading to a comprehensive study and recommendations for multiple dams for flood control, water supply, and recreation purposes. Eventually, the Army Corps of Engineers requested congressional authorization and funding for eight water projects, one on the main stem of the Delaware River at Tocks Island and seven on the river's tributaries. In response, the states contracted with the Maxwell School at Syracuse University for an in-depth analysis of the economic, social, and political setting of the river basin and recommendations for interstate governance (Martin et al. 1960).

The Syracuse report cataloged the social, political, and economic diversity of the river basin, which included vastly different conceptions of water problems, from New York City residents' concerns over adequate supplies of drinking water to Catskills residents' desire to maintain the integrity of their mountain streams and Easton residents' apprehension about flooding. As the authors noted, "Water thus presents different faces to different places

and people, and moreover the face it presents varies over time—indeed it varies with the seasons” (Martin et al. 1960, 5). The complexity of the river extended also to citizens’ different uses and preferences for governments. After surveying dozens of organizations and associations actively involved in water issues, the authors concluded that what most people wanted were separate governmental agencies in charge of their issues and to whom they would have special access (Martin et al. 1960, 36). In response, the authors suggested that whatever type of government was created, it should be of general purpose in order to balance the many different particular demands and to accomplish some form of the public good (Martin et al. 1960, 55).

Creating the boundaries of a general-purpose water government, however, would not be straightforward. The activities of such a government would occur at different scales, some basin-wide and some not. Furthermore, the government would affect and be affected by forces beyond its boundaries: transportation networks, inter-basin water transfers, and other governments (Martin et al. 1960, 104). The last would be particularly challenging:

[A]ny significant basin agency that may be devised at once becomes an orphan, with no strong parent government to look to for encouragement and support, no sister agencies with which to make common cause, no web of established procedure on which to lean, no body of precedent to serve as guide, and no articulate clientele to represent it in the public forum. . . . Few public bodies are likely to find much that is praiseworthy in a new regional program, and this is true especially of federal agencies in the field. (Martin et al. 1960, 104)

In the end, the authors proposed a two-phase approach to governance. They suggested the creation of a federal agency that would eventually be absorbed by a federal-state river compact. The agency would be vested with relatively broad water powers, including data collection and dissemination; comprehensive planning; building, owning, and operating all water-storage projects in the basin, including existing ones; governing all water allocations and diversions; and issuing standards and regulations for water-quality purposes. Their reasons for creating a federal agency first and transforming it into a compact later were several. First, they believed that a federal agency could be created relatively quickly, whereas a compact may take years to negotiate. Second, the federal government would likely be more generous in funding water projects of a federal agency than of a state-created government. Third,

the initial activities of the agency would center on project construction, an activity at which the federal government is particularly adept; later activities such as water allocation and water-quality control are ones typically performed by states and could be done through the compact commission (Martin et al. 1960, 341–361). Such governing arrangements—transforming a federal agency into a federal-state government and having the federal government as an equal member of a river compact and compact commission—had not been tried before.

The states accepted only the second phase of the study's proposal. Within a year of the release of the Syracuse University study, the states had drafted a federal-state compact, and within another year, the four states and the federal government adopted it. The compact was unusual in two respects—its relatively comprehensive scope compared to other interstate river compacts and its federal member. Most interstate river compacts govern rivers in the western United States, and they only address water-allocation issues. Only a handful extend beyond allocation to include water quality. The Delaware River Basin Compact gives the compact commission the authority to engage in comprehensive planning, data gathering, and monitoring; water-supply development by partnering with the Army Corp of Engineers, who would build the projects; water allocations and diversions; water-quality standard setting; drought planning; and flood-control and floodplain planning (Featherstone 1999).

What nearly brought a presidential veto of the compact, however, was the inclusion of the federal government as an equal partner. Members of the executive branch, such as Interior Secretary Stewart Udall, questioned the constitutionality of subjecting the federal government to the compact. It would be possible for the state representatives, who outnumber the federal representative, to adopt programs, projects, and regulations to which the federal government would be committed even if it objected to them.¹³ To allay such fears, two provisions were added to the compact. First, the federal government was committed only to those items that the federal representative voted to support. Second, the president was given the authority to suspend or delete any provision within the comprehensive plan out of considerations of the national interest (Derthick 1974, 53).

For their part, the states wanted the federal government as a partner in the compact. Federal interests in the river basin would expand rapidly as dozens of federally built and funded water projects were brought on line; also, national parks were planned that would be associated with some of the

water projects; and, there was the continuing challenge of addressing water-quality concerns. Rather than working with multiple federal partners, the states wished to deal with a single federal partner who would represent all federal interests. The states believed that the increasingly important role of the federal government merited a seat at the table.

The first challenge the commission faced turned out to be one for which it was particularly well suited. The compact gave full recognition to the Supreme Court decree, granting the commission the authority to administer it but also the authority to override it by unanimous decision in cases of emergency, such as droughts or flooding. In 1961, just after the compact's creation, drought emerged in the basin. By 1965, New York announced that because of the drought it would not release water from its reservoirs in accordance with the decree. The commission declared an emergency and the representatives worked out an alternative water-allocation agreement acceptable to all. By 1967, the drought subsided, the emergency was rescinded, and the decree was once again followed (Derthick 1974, 54). The commission later developed a framework that established drought plans and operations, which the commission has called upon three times since the early 1980s, and each time the response has seen the states through the emergency (Featherstone 1999, 106–110; DRBC 2006a).

The commission has also experienced success around its water-quality activities, although not in the way it initially envisioned. Shortly after its creation, the commission sought to become the water-quality standard setter for the basin, as opposed to the states or the federal government. The commission's reasoning was that the states and the federal government are its members, thus standard setting should be centered in it. Neither the states nor the federal government were willing to concede direct regulatory authority to the commission, and it eventually changed its approach. Instead of seeking to become the standard setter for the basin, it worked with the states to develop water-quality standards and regulations that the states' legislatures or regulatory agencies could adopt as their own, and which they have largely done. Thus, there is considerable consistency in water-quality standards across the basin even though there is no single water-quality standard setter (Featherstone 1999, 137).

Many of the standards and regulations that the commission develops are adopted eventually by the states, or by municipalities, townships, and counties in the basin. For instance, the commission worked with each of

the states to review drought plans and suggested numerous revisions to the plans, both to strengthen the plans and to make them more nearly uniform across the basin. The commission wanted to avoid a drought scenario where one state's water users were subject to strict conservation requirements while another state's users enjoyed the additional supplies of water made available by the other state's conservation efforts. All states revised their drought plans and regulations in accord with the commission's recommendations (Featherstone 1999, 111). The commission also adopted a set of conservation performance standards for fixtures such as toilets, faucets, and showerheads. All states except Pennsylvania adopted the standards, and most municipalities and water utilities within Pennsylvania adopted them independently (Featherstone 1999, 113).

In addition to working with the states to develop and adopt more uniform water rules and regulations, the commission coordinates the allocation and use of water across the basin through its licensing program.¹⁴ All substantial new diversions, wastewater releases, floodplain encroachments, and streambed modifications must first be approved by the commission. The commission has defined substantial diversions as those involving more than 100,000 gallons per day for thirty days or longer (Featherstone 1999, 163). This allows all states and the federal representative to consider the impact of major projects on their interests and request modifications to projects even though they are located within a single basin state. Featherstone (1999) notes that before an organization or government formally requests a license, it works carefully with the staff of the commission. Considerable discussion, negotiation, and modification of projects occur before the commission issues a license. The licensing powers also apply to federal projects, and states have used the process to obtain modifications in federal activities. For instance, Delaware realized water-quality protections in relation to an Army Corps of Engineers dredging project in the lower Delaware River (Featherstone 1999, 166–167).

The commission has used its licensing powers to gain compliance with its standards and regulations. It regularly requires utilities to adopt water conservation plans and to install water meters as a condition of receiving a license. In turn, states have also used the commission's licensing powers to realize goals that they would not otherwise have been able to accomplish. By the 1970s, many municipalities in southeastern Pennsylvania relied almost exclusively on groundwater, and serious problems were emerg-

ing—water tables declining, wells drying up, reduced flows in streams and rivers, and water-quality problems. Furthermore, groundwater pumping in Pennsylvania was affecting the flow of the Delaware River. Pennsylvania law does not allow for the regulation of groundwater. At the request of the Pennsylvania representative, the commission undertook a study of the groundwater problems and developed a set of groundwater regulations and standards based on the study. In 1980, the commission declared a groundwater protected area in southeastern Pennsylvania and applied the groundwater regulations and standards to all new or expanded water diversions of 10,000 gallons a day for at least thirty days (Featherstone 1999, 118). In order to obtain a license for a new groundwater withdrawal, the applicant must demonstrate that the withdrawal will not adversely impact the aquifer or existing users, must meter all service connections, must adopt water conservation rules, and must develop a drought contingency plan (Featherstone 1999, 118). The commission has amended the reach of the protected area and the regulations several times. Most notably, the commission adopted numerical withdrawal limits in some reaches of the aquifer (Featherstone 1999, 119). Pennsylvania relies on the commission to actively regulate groundwater in its portion of the Delaware River Basin, and, in turn, it pays the costs for the operation of the program (Featherstone 1999, 119).

Compared with these successes in increasing coordination among the states and the progress that has been made with respect to river flows and water quality, the commission's efforts regarding water development and supply have not lived up to initial hopes and expectations for a variety of reasons, many outside the commission's control. One of the commission's first acts was to adopt a comprehensive plan. The initial plan largely consisted of the eight water-storage projects for which the Army Corps of Engineers had received congressional authorization. Of those eight, only two smaller projects were built, both on tributaries of the Delaware River.¹⁵ The major project, a main-stem dam and reservoir at Tocks Island, and five other smaller reservoirs were not built. In some ways, the Tocks Island dam was a centerpiece of the compact, one of the primary reasons that the states entered into it. In fact, Pennsylvania was pursuing a similar main-stem project following the 1954 Supreme Court decree, which it put aside in favor of the compact and the Army Corps of Engineers constructing Tocks Island. Tocks Island was not built for a variety of reasons, mostly financial and environmental. As the planning and design of the project proceeded, its costs

increased substantially. At the same time, the federal government began experiencing budget problems, and some members of Congress began to publicly question the value of the project. Financial problems delayed the project sufficiently that it was swept up in the environmental movement. Local and national environmental groups, such as the Sierra Club, raised a host of environmental issues, from eutrophication of the reservoir because of high phosphorus levels in the river, to the loss of fish and wildlife, to the loss of a free-flowing river (Albert 2005, 119). Eventually, opposition to the project among citizens of New York and New Jersey became so intense that by 1975, four years after the dam was originally scheduled for completion, the commission, over the strenuous protests of the Pennsylvania representative, voted against congressional appropriations for the project, effectively killing it (Featherstone 1999, 98).

The activities and performance of the federal representative also have not lived up to the hopes and intentions of the Delaware River Basin Compact. The expectation was that the federal representative would not only commit the federal government to particular courses of action but be able to forge a single unifying federal position among the numerous federal agencies active in the basin. Ideally, the representative would work with various agencies and develop a consensus position. Conflicts among federal agencies that the federal representative could not resolve would be turned over to the president (Featherstone 1999, 175). The federal representative, however, has no special power or authority in relation to federal agencies, no methods available to gain the cooperation and support of agency heads, and no more right to call upon the president than do cabinet secretaries. Consequently, the federal representative acts more as an ambassador than as a commissioner (Derthick 1974, 71; Featherstone 1999, 176). He conveys the interests of the different federal agencies to the commission and in turn reports to the agencies on the interests and activities of the commission.¹⁶ Even that limited role has been threatened by actions of Congress. In 1995, Congress eliminated federal funding for the commission and replaced the federal representative with a representative from the Army Corps of Engineers, with the expectation that the Army Corps of Engineers would provide federal funding. It has not done so and the commission has experienced budget problems ever since (DRBC 2006b).

The federal representative has turned out to be a partner with few benefits but many costs. The primary benefit of having the federal government

as a partner in the compact is that all federal projects must receive a license from the compact commission before they may be built, thus giving the states a greater say in federal projects than they otherwise would have. On the other hand, the federal representative has been unable to deliver federal cooperation and support for the commission's efforts, and the position has exposed the commission to national politics, both formally and informally. Formally, the commission is required to follow the federal Administrative Procedures Act and publish its rule makings and standard settings in the Federal Register (Albert 2005). Informally, powerful and well-organized interests have been able to derail commission activities by appealing to Congress or the president.¹⁷

Watershed-level governance in the Delaware River Basin is a federal form of governance, created and operated within a federal system. It consists of a variety of special-purpose and general-purpose governments and voluntary organizations organized at different scales. Over the last forty-five years, the basin states and the federal government have engaged in close cooperation and coordination of their uses of the basin by creating a special government of which they are members. They have used it to tightly coordinate their most important uses and policies concerning the river. The compact commission cannot impose water-quality standards on the states or the states' citizens; however, the legislatures have agreed to adopt the commission's standards. Also, the legislatures have agreed to adopt the commission's drought plans. In other areas, states have ceded more direct authority to the commission. The commission, not the states, licenses all types of water projects. Furthermore, the states have agreed to allow the commission to regulate in areas where they have chosen not to. For instance, Pennsylvania has allowed the commission to develop and implement groundwater rules and regulations for the southeastern portion of the state. As Derthick (1974, 72) notes, "A coordinating organization will work only to the extent that the participants share an interest in making it work." That is the hallmark of a federal system, political action through negotiation and consensus building.

CONCLUSION

In Chapter 1, we argued that complex adaptable systems of institutions are well suited for the management and protection of complex adaptive natural

resource systems. In this chapter, we laid out a theory of federalism (which is a complex adaptable system), used the theory to develop a form of policy analysis appropriate for a federal system, and pointed out how a complex adaptable system of governance makes some of the political choices identified and analyzed in the previous chapters more manageable. Before leaving this topic, however, we believe that there are important normative dimensions to federal forms of watershed governance that should be pointed out.

In many watersheds, communities of interest have identified, defined, and organized themselves—albeit in a seemingly innumerable diversity of forms, from the most informal sorts of associations to the most formal incorporations of municipalities. As efforts to assemble sub-watershed or watershed-wide responses to problems get under way, these previously established communities of interest claim their place at the table. Having already organized, they are often in a position to either withhold their cooperation (the stick) or offer resources along with their cooperation (the carrot) in inter-organizational or intergovernmental water resources management arrangements. Their interests must be recognized and addressed. Communities of interest, communities that have invested in the watershed, are protected through federal arrangements.

Furthermore, Oakerson (1999, 5) argues that productive polycentric systems require committed and active citizens. The same theme is echoed in the ecosystem-management literature (Cortner and Moote 1999). However, supporters of ecosystem management and watershed-level management often fail to realize the connections between committed and active citizens and forms of governance. As de Tocqueville (1969) noted, American administrative decentralization (or as Elazar [1987] would say, noncentralization) has much to recommend it, even if it appears chaotic, and even if it moves forward in fits and starts. Noncentralization, which places problem-solving powers in the hands of citizens and communities, promotes liberty and freedom among citizens. Citizens view themselves as governors, capable of addressing shared problems and providing for shared benefits. Remove that problem-solving authority from citizens and place it in the hands of central administrators and, de Tocqueville (1969) argues, citizens become indifferent and passive, waiting for administrators to come to their aid. Thus, active citizens and communities, embedded in a federal system, engage in watershed management while at the same time preserving their liberty and their capacity for self-government.

NOTES

1. Earlier case studies examined interstate watersheds but for different purposes. Chapter 3 used the Platte River to illustrate fundamental political decisions involving boundary drawing, decision rules, and accountability mechanisms. Chapter 4 used the Columbia River to illustrate the unavoidable trade-offs among transaction costs. In this chapter, we explicitly focus on the ties and linkages among the many governments in a watershed through the lens of federalism.

2. As Elazar (1987, 84) explains, "One of the primary attributes of federalism is that it cannot, by its very nature, abandon the concern for either power or justice but must consider both in relationship to each other, thus forcing people to consider the hard realities of political life while at the same time maintaining their aspirations for the best polity."

3. Concerns with power and justice repeatedly emerge in the watershed governance literature. In a study of intergovernmental arrangements for deciding upon and implementing alternatives for wastewater treatment, O'Toole (1993) observed that the governance issue of community autonomy (a justice issue) was itself one of the values with which participants were concerned, along with the management issues of efficiency and regulatory compliance (a power issue).

4. How the central decision maker can utilize justice to more effectively exercise power is a central theme in the organization theory and behavior literature (Barnard 1938; Williamson 1985; Miller 1992).

5. For instance, the first ten amendments to the U.S. Constitution define relations between the federal government and citizens. Article I, Section 10, allows states to enter into compacts with one another, and Article IV governs relations among states through the full faith and credit clause and the privileges and immunities clause. Article VI establishes the supremacy of the national government and addresses the resolution of conflicts among the national and state governments. The designers of the U.S. Constitution anticipated the importance of coordination, cooperation, and conflict resolution among governments.

6. Over the history of the compact, Nebraska has met the minimum streamflow requirements except for brief periods during unusually dry years. In those periods, Kansas has requested that Nebraska actively regulate water diversions and Nebraska has done so, although on at least one occasion the minimum streamflow requirements were not met (Big Blue Compact Administration, 19th annual report, 1993).

7. The supremacy clause in the U.S. Constitution constrains and conditions state constitutions but does not give the U.S. government a role in amending them. The point at which the national government exercises the most immediate influence over state constitutions is in the adoption of enabling legislation that spells out the process and conditions for a territory to become a state. For instance, the enabling legislation for Arizona, the last of the lower forty-eight states to be admitted into

the Union, dictated specific items to be included in the state constitution. Congress imposed strict limits on the use and disposal of state trust land, the land the federal government granted to Arizona. In addition, the enabling legislation required the president to approve the constitution, a requirement not imposed on any previous state (McClory 2001, 22). Taft, the president at the time, vetoed the constitution because it allowed citizens to recall judges. Taft feared that the procedure would destroy the independence of the judiciary. The citizens of Arizona amended the constitution to remove recall of judges, and the constitution was passed by Congress and the president (McClory 2001, 31). Upon admission of Arizona to the Union as a state, the citizens of Arizona promptly amended the state's constitution to allow for the recall of judges (McClory 2001, 32).

8. For instance, the Republican River Compact settlement allowed a state to call a special meeting of the compact commission to address substantive concerns over the operation of the compact. All three states did not have to first agree to a special meeting (Final Settlement Stipulation 2002, 36).

9. Returning to the Republican River Compact settlement, the states devised several different conflict-resolution mechanisms. If the compact administration cannot settle a dispute, a single state may request non-binding arbitration. If non-binding arbitration fails to settle the issue, the states, by unanimous consent, may use binding arbitration. If unanimous consent for binding arbitration is not forthcoming, a state may still resort to the U.S. Supreme Court, but only after it has used the multiple conflict-resolution mechanisms afforded it under the compact (Final Settlement Stipulation 2002, 36–37).

10. Scholars and practitioners of watershed collaboratives often confuse or conflate scale and centralization, however. One of the oft-claimed benefits of watershed collaboratives is that they encompass watersheds. In practice, many do not; rather, they match segments of watersheds, such as the upper portion of a stream or creek, or the middle portion of a river.

11. Governments can, of course, be general-purpose—municipalities, counties, states, and the national government. As discussed in Chapter 5, they tend to have more extensive powers and more diverse sources of funding than do special governments. As general-purpose governments, they address, act on, balance, compromise, and make trade-offs among a whole host of issues. A general-purpose government may consider and attempt to balance a variety of water problems, and in turn, water problems are considered and balanced against transportation needs, economic development, and so forth. As general-purpose governments, and as foundational governments in the U.S. federal system, they provide the institutional structure around which governance is created. They provide the means by which governments and citizens within their jurisdictions create and follow common sets of laws and settle disputes.

12. New York City turned to the Delaware River Basin for water after towns, farmers, and other water users in the Hudson River Basin strenuously opposed further water supply projects (Albert 2005).

13. As Derthick (1974, 51) explained, “The executive branch maintained that the proposal would require the federal government to yield certain of its constitutional powers to ‘a third form of government’ responsible to neither the federal government nor the states.”

14. The commission is guided in its licensing program by its comprehensive plan. The commission is required to approve licenses that do not conflict with the plan. The term “comprehensive plan” is somewhat of a misnomer since the plan does not consider the many dimensions of the watershed and human impacts on those dimensions. Also, it is not integrated—it does not attempt to balance and make trade-offs among the many different aspects of the watershed that it governs—and it is not prospective. Rather, the comprehensive plan is a loose compilation of the commission’s standards, regulations, policy statements, operating rules for water projects, and licenses issued. The commission does engage in more prospective and integrated planning through what is called the Water Resources Plan. The Water Resources Plan, which was just completed in 2004 after an extensive public participation process, establishes a framework to guide the actions of the commission and the states for the next thirty years. The plan consists of five key results areas, with goals and objectives identified for each of the areas. The areas are sustainable water use and water supply, waterway corridor management, linking land and water resource management, institutional coordination and cooperation, and education and involvement for stewardship (DRBC 2004).

15. The Beltzville Reservoir, located on a tributary of the Lehigh River, holds up to 39,830 acre-feet of water. The Blue Marsh Reservoir on the Schuylkill River holds 14,600 acre-feet of water (Featherstone 1999, 67).

16. As Derthick (1974, 71) explains, “Unable to deliver commitments from the federal government or to state a unified position, the federal commissioner . . . typically reports the positions of federal agencies. He is an ‘ambassador’ rather than a ‘commissioner.’”

17. For instance, once it became apparent that the federal government would not be building large water projects in the basin, the commission turned to other alternatives to expand water storage (Featherstone 1999). The commission decided to pursue the expansion of a reservoir by raising the dam. In order to pay for the expansion, the commission wanted to impose a tax on all basin water users, which required an amendment to the compact. The compact forbids imposing taxes on pre-compact water users. Although the commission and the states were prepared to support such a compact amendment, petroleum refineries and steel companies, who were major water users, managed to gain sufficient support in the U.S. Senate

to prevent congressional approval of the compact amendment. The companies believed that they would gain little from the reservoir expansion but pay the bulk of the expense (Featherstone 1999, 98).