

# USING COLLABORATION AS A GOVERNANCE STRATEGY Lessons From Six Watershed Management Programs

MARK T. IMPERIAL

University of North Carolina at Wilmington

*This article utilizes a comparative cross-case analysis of six watershed programs to examine how collaboration is used to enhance governance of networks where problem-solving capacity is widely dispersed and few organizations accomplish their missions by acting alone. A conceptual framework that illustrates how collaboration occurs at the operational, policy-making, and institutional levels is presented. Understanding these structural relationships is important and can help public managers design effective collaborative processes. The article concludes with a discussion of the implications for future research and advice for public managers using collaboration as a strategy for enhancing network governance.*

**Keywords:** *collaboration; governance; intergovernmental management; interorganizational relations; networks; watershed management*

**A growing number of researchers recognize the ubiquitous nature of network relationships, the roles they play in social and organizational life, and their importance to policy implementation (Hall & O'Toole, 2000;**

**AUTHOR'S NOTE:** *This research was funded in part by the National Academy of Public Administration. A previous version of this article was presented at the American Society for Public Administration's 63rd National Conference in Phoenix, Arizona. The author is grateful to Derek Kauneckis, Leslie Kotzoi, Sally McGee, and Kathy Summers for helping collect and analyze the data used in this article. The views and opinions contained in this article do not reflect those of the author's current or previous affiliations or those of any individual who commented on a previous version of the article. Correspondence concerning this article should be addressed to Mark T. Imperial, Department of Political Science, University of North Carolina at Wilmington, 601 S. College Rd., Wilmington, NC 28403-5607; e-mail: imperialm@uncw.edu.*

ADMINISTRATION & SOCIETY, Vol. 37 No. 3, July 2005 281-320

DOI: 10.1177/0093399705276111

© 2005 Sage Publications

Kickert, Klijn, & Koppenjan, 1997; O'Toole, 1997, 2000). In part, this is due to the tendency for policies and programs to collect around problems over time as a policy subsystem develops (Elmore, 1985). As Bressers, O'Toole, and Richardson (1995) observe, it is not uncommon to find that

no organization of government possesses sufficient authority, resources, and knowledge to effect the enactment and achievement of policy intentions. Instead, policies require the concerted efforts of multiple actors, all possessing significant capabilities but each dependent on multiple others to solidify policy intention and convert it into action. Indeed, it is often difficult for any one actor, or group of actors, to manage, or manipulate, the flow of problems and solutions onto the political agenda in the first place. (p. 4)

Moreover, this portfolio of programs varies across state and local governments, reflecting differences in capacity and policy innovation that are an integral part of our evolving polycentric federal system (Elazar, 1987; V. Ostrom, 1989, 1994; Wright, 1988).

For public managers, the challenge is to find ways to improve governance when the capacity for solving problems is widely dispersed and when few organizations accomplish their missions by acting alone (Mandell, 1989; Milward & Provan, 2000; Teisman & Klijn, 2002). Governance refers to the means for achieving direction, control, and coordination of individuals and organizations with varying degrees of autonomy to advance joint objectives (Frederickson, 1996; Lynn, Heinrich, & Hill, 2000). It involves more than the configuration of governmental organizations and nongovernmental organizations (NGOs). Governance includes their enabling statutes, organizational and financial resources, programmatic structures, and administrative rules and routines. It also includes the formal and informal rules, social norms, and structures that govern relationships among organizations (Frederickson, 1996; Lynn et al., 2000; Milward & Provan, 2000). Thus, it is inherently political and involves bargaining, negotiation, and compromise.

Public managers often use collaboration as a strategy to improve the governance of interorganizational networks. Although collaboration is clearly a practical concern, the process is not well understood, nor is the pragmatic concern of how managing collaborative relationships differs from that of single organizations (Agranoff & McGuire, 2001; Jones, Hesterly, & Borgatti, 1997; Mandell, 1990). Moreover, although the polycentric structure of our federal system creates opportunities for collaboration, it simultaneously imposes constraints (e.g., competing statutory objectives, conflicting values or missions, budgetary responsibilities,

resource constraints, turf, etc.) that limit practitioners' abilities to exploit an interorganizational network's collaborative capacity (Imperial, 2001). The challenge for researchers is to explain how collaborative processes enhance governance while recognizing the configurational and loosely coupled nature of the institutional setting (Lynn et al., 2000).

This study examines the use of collaboration as a strategy for improving watershed governance. Watersheds provide an excellent policy subsystem for examining collaborative processes, and there is a growing body of research highlighting the important role collaboration plays in these governance systems (e.g., Born & Genskow, 2001; Imperial, 2001; Imperial & Hennessey, 2000; Leach & Pelkey, 2001; Leach, Pelkey, & Sabatier, 2002; Wondolleeck & Yaffe, 2000). Indeed, there appears to be a high latent potential for using collaboration to improve watershed governance. Watersheds span political, geographic, and ideological boundaries. The policies and programs governing watersheds are specialized by medium (e.g., air, water, soil, land use, etc.), geographic location (e.g., wetlands, coastal zone, tidal waters, agricultural land, forest land, etc.), statute, or function (e.g., permitting, enforcing, educating the public, installing best management practices [BMPs], issuing grants, etc.). The corresponding institutional fragmentation limits any organization's ability to accomplish its mission by acting alone and creates numerous opportunities for joint action. As one agency director in Lake Tahoe observed, "There are few projects that can be done by just one agency." Thus, watershed management is as much a challenge of governance as it is a question of science and of designing effective policies. As one respondent put it, "So much of what this work comes down to is less technical, less scientific than we make it out to be. It's more practical, political, and social and it's local." Although scientific research helps define problems and set priorities, ultimately implementation reflects participants' values, ideologies, constituencies, turfs, powers, and egos (Bardach, 1998).

Moreover, watershed management encourages practitioners to holistically address environmental problems rather than functioning along traditional programmatic boundaries. Managers must look beyond their particular program and acknowledge the interrelationships among problems and the institutions that address them. As one Tampa Bay official observed, "The ecosystem approach helped pull people together so that they deal on a geographic scale instead of a programmatic scale. That has helped quite a bit. It brings more expertise and ideas to the table." Another official observed, "To me, the power of the watershed approach is in the collaboration." Also, A respondent in Tillamook Bay noted, "People can

achieve things that were just unimaginable when they first got together. Once they understand what their opportunities are, they create opportunities that were previously unbeknownst to them."

The focus of this study is to answer three research questions. First, what types of collaborative activities were used to improve watershed governance? Second, do these activities occur at different levels? Last, how are these activities interrelated? Because few studies examine different types of collaboration within a single interorganizational network (e.g., Lawrence, Hardy, & Phillips, 2002), these empirical findings contribute to the growing research on collaboration and networks and demonstrate that there is no one way to organize collaborative activities.

Understanding the relationships among collaborative activities in the same interorganizational network also improves our understanding of the developmental dynamics that are an essential part of collaborative processes. As Bardach (2001) notes, it is common to find that collaborative activities at one level lead directly or indirectly to activities at other levels, which gives these processes an evolutionary and emergent character. Moreover, as Provan and Milward (2001) observe, collaboration generates value at different levels (e.g., organizational or participant, network, and community levels) in part because collaborative activities occur at different levels.

The article begins with a brief discussion of the method used to collect and analyze the data. A conceptual framework that identifies collaborative activities occurring at the operational, policy-making, and institutional levels is then developed. The article concludes with a discussion of the implications for future research and advice for public managers seeking to use collaboration as a strategy to improve network governance.

## METHOD

Given the complexity of collaborative processes and the lack of precisely defined theories, the study was developmental and employed a qualitative, comparative case study research design that focused on developing theory grounded in the data and the literature (Agranoff & Radin, 1991; Glaser & Strauss, 1967; Strauss & Corbin, 1990; Yin, 1994). This study also takes an ecumenical rather than a parochial view of theory by building on previous research in a number of areas (Kiser & Ostrom, 1982). This avoids the ideological hegemony that makes it difficult to view collaboration in a manner different from that found in a particular

stream of literature (Maxwell, 1996). This is important because the complex and dynamic nature of collaboration make it unlikely that a single theory will fully explain all aspects of the process (Menzel, 1987).

Case selection was guided by criteria ensuring there would be differences in ecological settings, environmental problems, institutional environments, and situational histories, factors found to influence the implementation of watershed management programs (Born & Genskow, 2001; Leach & Pelkey, 2001). Also, watersheds that utilized a variety of regulatory and nonregulatory policy instruments were selected to ensure a wide range of collaborative activities were observed. These criteria resulted in the selection of the following watersheds: Inland Bays (Delaware), Narragansett Bay (Rhode Island and Massachusetts), Salt Ponds (Rhode Island), Lake Tahoe (California and Nevada), Tampa Bay (Florida), and Tillamook Bay (Oregon; see the appendix for a summary of the cases).<sup>1</sup>

Data were collected from two primary sources. Field interviews were conducted with over 200 individuals representing various organizations involved in the governance of the six watersheds. The individuals and the organizations they represented were identified using a snowball sampling technique (Leach, 2002).<sup>2</sup> All interviews were confidential and recorded on tape to ensure the accuracy of these data. Telephone interviews were conducted with individuals who could not be reached in the field. Additional contacts and follow-up interviews clarified responses and obtained additional information. Some direct observation of interorganizational events and meetings also occurred during site visits. The other primary data source was documents and archival records about the organizations, programs, and collaborative efforts in the watershed governance system. Examining different data sources allowed triangulation to be used to improve the validity of the study's findings (Yin, 1994).

Systematic qualitative techniques such as coding were used to examine these data. Codes were derived inductively and deductively from these data and were generated based on a start list derived from previous research. As coding continued, patterns emerged and codes were used to dimensionalize concepts. When coding data, quotes and short vignettes were identified to provide context. As the analysis continued, tables, figures, matrices, and network displays were developed to display data, identify trends, and make observations (Miles & Huberman, 1994). Timelines were prepared to evaluate causal linkages. Detailed case studies for each watershed governance effort were then prepared and sent to principal informants for factual verification.

Cross-case analysis was used to deepen our understanding of collaborative processes and determine the extent to which findings extended beyond individual cases. The basic approach was one of synthesizing interpretations and looking for themes that cut across cases (Miles & Huberman, 1994). Potential rival explanations were contrasted against one another to identify logical inconsistencies and determine their consistency with these data (Yin, 1994). The chain of events was examined to help determine causality. Potential threats to the validity were then analyzed.<sup>3</sup>

### USING COLLABORATION TO IMPROVE WATERSHED GOVERNANCE

One of the obstacles to theory building is that researchers employ different definitions of collaboration (Wood & Gray, 1991). Some researchers ignore the definitional question by examining a specific type of collaboration. Others recognize different types of collaboration, but their analysis is mostly descriptive, and little consideration is given to what differentiates activities or how they are interrelated (e.g., Wondolleck & Yaffe, 2000). The problem with both approaches is that they fail to contribute to our understanding of the relationships among different forms of collaboration. Accordingly, this study examines multiple instances of collaboration in an interorganizational network to better understand these relationships.

Phillips, Lawrence, and Hardy (2000) suggest defining collaboration broadly to capture the full range of activities and relationships. Following Bardach (1998), who builds on Moore (1996), collaboration is defined as any joint activity, by two or more organizations, intended to create public value by working together rather than separately.<sup>4</sup> This interactive process involves an autonomous group of rational actors who use shared rules, norms, or organizational structures to act or make collective decisions (Wood & Gray, 1991). This definition is inclusive enough to encompass a wide range of network relationships among governmental and NGOs. It also provides critical characteristics that distinguish collaboration from other forms of interorganizational activity relying on markets or hierarchical control mechanisms (Lawrence et al., 2002; Powell, 1990). Instead, politics, bargaining, negotiation, and compromise become critical control mechanisms because organizations remain relatively autonomous and

must be convinced to work together because they cannot be forced to do so (Phillips et al., 2000). Thus, exchange mechanisms tend to be social, to depend on communication, relationships (personal and organizational), mutual interests, and reputation; and to be guided less by formal authority structures (Powell, 1990).

Accordingly, collaboration can be viewed as a particular type of network relationship. Networks are structures of interdependence, involving multiple organizations, that exhibit some degree of structural stability but that include both formal and informal linkages or relationships (O'Toole, 1997). Relations can involve communication and passing information or the exchange of goods, services, or resources. Relations may also involve developing shared norms and expectations (Aldrich & Whetten, 1981).

It is useful to distinguish among distinct types of network relationships. An organization set consists of those organizations with direct links to some focal organization (Aldrich & Whetten, 1981; Alexander, 1995). Each relationship is a dyad, the unit of analysis for many network researchers. Of more interest to this study is the action set or group of organizations that form temporary or permanent alliances for a limited purpose or common area of involvement (Aldrich & Whetten, 1981; Alexander, 1995). Whereas an organization set is concerned with a focal organization's relationships with other organizations, the action set is oriented toward the collective activity of a group of organizations (Alexander, 1995; Mandell, 1989). An interorganizational network is the totality of all of the organizations connected by a certain type of relationship and is typically bounded by a common orientation such as a policy area, type of service, or geographic area (Aldrich & Whetten, 1981; Alexander, 1995; Mandell, 1989).<sup>5</sup>

This study is primarily concerned with action sets and interorganizational networks. Each collaborative activity involves a group of organizations formed for the purpose of working together to accomplish some task or purpose. It was common to find that the collaborative activities involved different combinations of organizations. Therefore, the collection of organizations involved in these collaborative activities (i.e., action sets) comprises the watershed's interorganizational network. In some cases a so-called second-order organization, consisting of an organization of organizations, was created with a purpose of enhancing the governance of collaborative activities or the broader interorganizational network (Provan & Milward, 2001). This article refers to this organizational form as a collaborative organization.

## THE LEVELS OF COLLABORATIVE ACTION FRAMEWORK (LCAF)

A wide range of collaborative activities, many of which were permanent, temporary, project based, or ad hoc in nature (Mandell, 1990), occurred in the six watersheds. Some activities were preparatory, whereas others were nested such that one activity influenced or constrained another (Bardach, 1998). Some were extensions of traditional agency behavior, whereas others were significant departures (Wondolleck & Yaffee, 2000). It was also clear that different individuals were involved in activities at different levels. For example, it was common to observe line staff working with their counterparts in other agencies on individual projects. Midlevel administrators often negotiated policies, whereas high-level administrators (or their designees) represented organizations in formal decision-making processes. When viewed over time, collaborative activities also tended to reflect a trial and error process with practitioners becoming engaged in an expanded set of activities once they learned how to work together.

To conceptualize the different collaborative activities and their relationships, the LCAF was developed. It is based upon the three levels of analysis proposed by Kiser and Ostrom (1982) and reflects an extension of their approach to explaining the structure of action within an institutional framework divided into three levels of rules. As such, there are many similarities between the two approaches. For example, the collaborative activities described in subsequent sections are structured by the formal or informal rules that evolve intentionally or unintentionally as a result of repeated interactions, and the rules often operate at the three levels comprising Kiser and Ostrom's framework. The decision making embodied in the collaborative activities at each level also shares similarities with Kiser and Ostrom's framework.

There are some differences. The LCAF focuses on collaborative activities, whereas Kiser and Ostrom (1982) focus on the rules affecting individual decision makers. Activities are linked in conceptual ways unrelated to Kiser and Ostrom's framework. Whereas Kiser and Ostrom draw attention to how rules at different levels influence a particular activity or help identify the level of the rule produced by an activity, the following discussion focuses on understanding how collaborative activities occur at different levels and are interrelated.

The collaborative activities observed in each watershed were categorized based on three levels of joint action: operational, policy making, and

institutional. Conceptual differences were then used to further group different activities occurring at each level. These categorizations are by no means exhaustive, and elements of a single activity can cut across categories or levels. For example, a memorandum of understanding (MOU) may serve as the basis for devolving permitting authority from one agency to another with some overlapping or shared responsibilities (e.g., permitting, enforcing, reporting, monitoring, etc.). The actual permitting activity takes place at the operational level. Developing shared policies, which may or may not become institutionalized in a MOU, is an activity at the policy-making level because it influences or constrains operational-level activities. Adopting the MOU is an institutional-level activity because it results in rules that govern subsequent actions at the operational or policy-making level.

It is also important to note that the linkages and feedback loops are deliberately kept simple, even though they can get quite complicated. The number of levels is somewhat arbitrary. It is possible that activities within each level may have their own set of interrelationships and hierarchical linkages. Rules and activities can also function at different levels for different actors. The reader should recognize that this complexity exists even though the LCAF is presented without the additional levels or linkages because it does not add much and would only serve to make the discussion more cumbersome. Moreover, although the LCAF is tailored to the collaborative activities used by watershed management programs, it could readily be adapted for use in other policy subsystems.

### OPERATIONAL LEVEL

The world of action occurs at the operational level where organizations take action within the structure of rules created within the worlds of constitutional and collective action (Kiser & Ostrom, 1982). However, organizations often choose to work together because it is difficult or impossible to accomplish a task without collaborating. It is also possible that greater public value can be generated through joint action than can be achieved by working alone. As a participant in Tampa Bay observed, "Some of the strongest opponents became the strongest proponents when they began to see that it could actually increase their ability to get things done rather than just taking time away from them."

Collaborative activities at the operational level vary and largely consist of government service delivery. In terms of watershed policy, this includes

awarding grants, processing permits, installing BMPs, acquiring land, restoring habitat, educating the public or decision makers, and collecting data on environmental conditions (see Table 1). Some of these activities are inherently temporary or ad hoc (e.g., a habitat restoration project), whereas others are designed to endure over time (e.g., collaborative permitting processes).

There were some common patterns across the six watersheds. However, the scope and scale of collaborative activities varied due to differences in available resources and a wide range of contextual factors such as the physical environment, configuration of problems, institutional setting, situational histories, and the programmatic context (Imperial, 2001). In Lake Tahoe, Tampa Bay, and Tillamook Bay, there was a wide range of operational activities, many of which were guided and supported by other activities at the policy-making level. They also found ways to institutionalize shared policies. Conversely, although Narragansett Bay initiated some isolated collaborative projects at the operational level, the absence of policy-making activities providing guidance or support hindered its ability to share in the success experienced in Lake Tahoe, Tampa Bay, and Tillamook Bay. The Inland Bays and Salt Ponds reflect more of a mixed record of success.

#### IMPROVING ENVIRONMENTAL CONDITIONS

Actions at the operational level improve environmental conditions directly (e.g., installing sewers to remove on-site sewage disposal systems, or OSDSSs) or indirectly (e.g., educating decision makers or the public). A frequently observed activity in all six watersheds was habitat restoration, where different organizations provide funding, land, technical expertise, planning, engineering, construction, or maintenance or manage the completed project. If volunteers are used, another organization may recruit, organize, and manage the volunteers.

Collaboration was also used to install BMPs and other types of environmental infrastructure to address nonpoint source pollution on urban, agricultural, and forestry lands. It was not uncommon to find that one organization provided funding for the BMP, whereas others provided technical assistance or funding, encouraged landowner participation, and assisted in the installation of BMPs. Collaboration also resulted in the removal of point source discharges (e.g., Inland Bays) and OSDSSs (e.g., Inland Bays, Narragansett Bay).

TABLE 1  
Collaborative Activities at the Operational Level

Type of Collaboration	Inland Bays	Narragansett Bay	Salt Ponds	Tampa Bay	Tillamook Bay	Lake Tahoe
Improving environmental conditions						
Habitat restoration projects	X	X	X	X	X	X
Land acquisition	X		X	X		X
Installing urban best management practices (BMPs)			X	X		X
Installing agricultural BMPs	X			X	X	
Installing forestry BMPs					X	X
Installing sewers to remove on-site sewage disposal systems (OSDSs)	X	X	X			X
Upgrading OSDSSs		X	X			
Relying on another organization's technical review			X			X
Agency tying its permit approval to that of another agency			X			X
Standardizing information for permit applications			X			
Agency implementing another's permits			X			X
Educating decision makers and public						
Public education targeted at schools	X			X	X	
Public education for homeowners				X		
Public education for industry	X			X		
Public education for resource users				X		
Special events and conferences	X	X		X	X	X
New school curriculum	X			X		
Training programs	X	X	X		X	X
Monitoring and enforcement						
Environmental monitoring	X		X	X	X	X
Joint reporting on implementation	X			X	X	X
One organization helping enforce another's regulations		X	X			X

Permitting processes also improved as a result of collaboration. A frequent approach was for one agency to delegate permitting activities to another organization to streamline permitting. For example, the Tahoe Regional Planning Agency (TRPA) devolved some of its permitting authority to local governments and utility districts. One Lake Tahoe official described the rationale for their effort: "Let's identify where we are duplicating and we are not using our staff correctly, and let's take care of it through an MOU." He also noted, "We are trying to give more of the stuff back to the local jurisdictions, make it very user friendly for the customer, one stop shopping." A local official described the results this way:

It has become more of a partnership than when we first started. They [TRPA] were the authority figure. I think it has come around to more of partnership than how it was before with us being the child of that relationship.

Agencies may also rely on another agency with superior expertise, information, or regulatory authority to review a particular aspect of a project (Bardach, 1998). For example, the Rhode Island Coastal Resources Management Council (CRMC) relies on the Rhode Island Department of Environmental Management's (RIDEM) review of OSDSS. The CRMC then benefits from the RIDEM's technical specialization and economies of scale.

#### EDUCATING THE PUBLIC AND DECISION MAKERS

Collaborative activities also educated the public and decision makers about the environment, watershed problems, or management strategies. Some outreach activities involved informal efforts such as developing a speakers bureau. Others were more complex. For example, three organizations in Tampa Bay developed the *Boaters Guide to Tampa Bay*, which contains information on habitats, sport fish, and boating safety. More than 100,000 copies were then distributed through a partnership with county tax collectors, who distribute the materials to boat owners when they renew their tags. Collaborative training and technical assistance programs also target teachers, industry officials, decision makers, and homeowners.

#### MONITORING AND ENFORCEMENT

Collaboration also enhanced monitoring programs by improving the scope and substance of data on environmental conditions. For example,

volunteer monitoring programs, with local universities working with state and local officials to recruit volunteer monitors, were created for the Inland Bays, Salt Ponds, and Tillamook Bay. University researchers then analyzed the data and put it in a form useful to decision makers. Collaboration also enhanced existing monitoring programs. Tampa Bay created an interagency monitoring program in which the partners agreed to a common sampling design and monitoring protocols. They also share data and routinely swap samples to improve quality assurance-quality control. One participant described the advantages of this approach: "One benefit of collaborating was this economizing. The other was that we needed to be sure we were measuring the same thing. We even share equipment now."

Collaboration also improved enforcement efforts. For example, in Lake Tahoe, the Lahontan Regional Water Quality Control Board (LRWQCB) works with the TRPA in many enforcement efforts. Whereas the LRWQCB has the authority to impose administrative fines, the TRPA can only impose fines through the judicial system. Conversely, the TRPA is better staffed when it comes to enforcement and refers violators to the LRWQCB.

#### POLICY-MAKING LEVEL

The policy-making level is analogous to Kiser and Ostrom's (1982) collective-choice level. Rather than having a direct effect on the real world, individual or collective policy-making activities determine, enforce, continue, promote, enhance, constrain, or alter actions at the operational level (Kiser & Ostrom, 1982). These activities perform a steering function by improving communication among actors, coordinating actions, and integrating policies in ways that advance collective goals (Peters & Pierre, 1998). They can also enhance government service delivery at the operational level whether these activities are undertaken individually or collectively. My analysis of this set of activities resulted in clustering the activities into three general categories based on how they provided guidance or support for operational-level activities (see Table 2).

#### KNOWLEDGE SHARING

Ecosystems are complex, dynamic, and subject to an immense number of internal and external relationships that change over time. This

TABLE 2  
Collaborative Activities at the Policy-Making Level

Type of Collaboration	Inland Bays	Narragansett Bay	Salt Ponds	Tampa Bay	Tillamook Bay	Lake Tahoe
<b>Knowledge sharing</b>						
Joint research and fact finding	X	X	X	X	X	X
Interagency databases (e.g., geographic information system)		X	X	X	X	X
Development of joint technical information or resources	X	X	X	X	X	X
Co-locating staff from different organizations		X		X	X	X
One actor collecting information for another organization	X		X	X	X	X
Ad hoc working groups	X	X	X		X	X
Groups that meet on a regular basis	X			X	X	X
Collaborative organizations meet regularly	X			X	X	X
<b>Resource sharing</b>						
One actor hiring staff to work in another organization					X	
One organization recruiting and training volunteers to support another agency				X		
One organization detailing staff to work in or support another's work				X	X	X
Agencies pooling financial resources for a common set of activities				X		X
One agency funding activities pursuant to another organization's priorities	X			X		X
<b>Shared policies, regulations, and social norms</b>						
Priority for habitat restoration			X	X		X
Priorities for infrastructure investment			X			X
Priorities for land acquisition				X		X
Formal shared goals				X	X	X
Formal shared policies			X	X		X
Joint budgeting	X			X	X	
Informal social norms	X		X	X		X
Agreement on formal monitoring protocols and quality assurance-quality control procedures				X		X
Joint work plans				X		
Report on progress toward environmental goals				X	X	X
Report on progress toward implementation activities	X			X	X	X



uncertainty presents a formidable governance challenge (Dryzek, 1987). A government official in Lake Tahoe described the problem this way: "We need to communicate with the researchers; they need to communicate with us. We need to integrate that knowledge into how we are going to do things in the future."

One way to cope with this uncertainty is to incorporate additional scientific and time-and-place information into decision making (E. Ostrom, 1990, 1999). When information is lacking, organizations often undertake research projects to generate new information (Busenberg, 1999). When information exists, it is sometimes necessary for organizations to reach agreement on common facts, theories, or methods (Wondolleck & Yaffee, 2000, p. 29). All three types of activities were frequent occurrences in the six watersheds. Because information is often widely dispersed, it was common to find collaborative efforts focused on reducing information asymmetries by developing common databases (e.g., geographic information systems), shared technical resources (e.g., computer models), integrated resource inventories, and other forms of data synthesis (e.g., annual reports, monitoring reports, etc.).

Watershed problems are also complex and affect a wide range of human interests and values. Not surprisingly, collaborative activities such as work groups, task forces, advisory committees, and other formal or informal staff interactions were frequent occurrences. These interactive processes are important because they help network members find ways to work together, generate new ideas, share knowledge, solve problems, build relationships, and develop trust. The networks also create valuable channels of information exchange. Politicians and upper-level agency officials get information about management issues and problems, whereas lower-level staff gain a greater appreciation of political and resource allocation issues (Wondolleck & Yaffee, 2000). The interactions also promote the policy-oriented learning observed by Sabatier and Jenkins-Smith (1993, 1999). As information is exchanged, it becomes part of the shared knowledge base that is owned by all participants in the process. As a result, managers presumably are better informed and make better decisions (Wondolleck & Yaffee, 2000). Resource managers also function in a political environment where there is competition for resources and direction. Thus, interorganizational networks help agency leaders build concurrence or support for desired courses of action.

#### RESOURCE SHARING

A common complaint among respondents was that there was a shortage of resources (e.g., staffing, funding, and expertise) for implementation efforts. One strategy for overcoming these limitations was pooling organizational resources (e.g., funding, staff, equipment, etc.) in ways that improved their collective ability to solve problems or enhance service delivery. Various forms of resource sharing were employed. Some activities were relatively informal and involved something as simple as sharing water quality monitoring equipment (e.g., Tampa Bay). More complex activities included co-locating staff, allocating staff to support another agency's efforts, and pooling financial resources in new and creative ways. For example, in Tillamook Bay, the Oregon Department of Forestry (ODF) hired an Oregon Department of Fish and Wildlife (ODFW) wildlife specialist to work entirely on habitat restoration in the Tillamook State Forest. This allowed the ODF to increase its restoration activities and improved communication with the ODFW. There were also examples where agencies collectively applied for project grants. Respondents reported that this increased their chances of receiving grants. In some cases, government agencies included an NGO as a partner because it helped cut costs or expedited projects by removing them from cumbersome government contracting and purchasing systems.

#### DEVELOPING SHARED POLICIES, REGULATIONS, AND SOCIAL NORMS

Because there are different laws, programs, and value preferences and competing constituency groups, there are many legitimate objectives and competing views about how a watershed should be managed (Wondolleck & Yaffee, 2000). Thus, a common activity involved efforts to develop shared policies. As one Tillamook Bay respondent observed, "We are not going to make watershed decisions until we collaboratively define agency priorities." Thus, it was not surprising to find that all six watersheds developed one or more shared policy documents. For example, Tampa Bay developed a series of binding commitments for habitat restoration and nutrient reduction, whereas in the Salt Ponds, the state and local governments reached agreement on a common set of zoning regulations to limit development.

In other cases, shared policies were based more upon tradition, shared norms, and the informal agreements that govern much of our political and

social lives (Axelrod, 1997). Although social norms will not be sufficient in all cases, they are particularly important when participants lack the authority to compel others to act. Even in Tampa Bay, where the partners signed a binding Interlocal Agreement, there really is no legal way to compel a signatory to implement the agreement. Instead, social norms and peer pressure at the political, professional, and individual level, along with the threat of formal (e.g., being removed as a partner) or informal (e.g., verbal and nonverbal) sanctions, were used to enforce the agreement. As one Tampa Bay respondent observed, the Interlocal Agreement "sets up a checks and balance system because there is pressure for the signatories to stick with in and to do the right thing, and I like that." Another observed that there is "a good amount of peer pressure when you get everyone down at one table and the numbers are revealed and it gets you to get your attention."

Shared policies and social norms and peer pressure are also important mechanisms for encouraging collaboration among network actors. As one Lake Tahoe official observed, "The vision beckons for us to resolve disagreements we may have. My opinion is that if we did not have that vision out there, then we would stomp out of the room." Another member of the local business community observed, "I think there is a common vision of what we don't want and that becomes a very powerful motivator of what we do." Similarly, a respondent in Tillamook Bay noted that their efforts to develop measurable goals and targets "created awareness and brought groups together that otherwise wouldn't have worked together."

### INSTITUTIONAL LEVEL

Institutional-level activities are analogous to the constitutional level proposed by Kiser and Ostrom (1982). These activities influence, constrain, enhance, or promote actions at the operational and policy-making levels. The key distinction is that institutional-level decisions precede and constrain interactions and decisions at the policy-making level, which in turn constrain the operational level (Kiser & Ostrom, 1982). The inclusion of a shared set of policies in some higher order set of rules or the development of a new collaborative organization were common techniques for institutionalizing the policies, rules, norms, practices, procedures, and processes generated at the operational and policy-making levels (see Table 3). For example, the creation of a new collaborative organization

may require its members to adhere to specific policies and undertake a prescribed set of operational-level activities. Activities at the policy-making level can also be necessary precursors to institutional-level activities. For example, a committee may meet over a period of years to develop a set of shared policies that are then institutionalized through a formal agreement or the development of a new collaborative organization.

### FORMALIZING SHARED POLICIES, RULES, NORMS, PRACTICES, PROCEDURES, AND PROCESSES

There are many ways to institutionalize shared policies and norms (see Table 3). A common technique was formalizing a MOU. Lake Tahoe uses a series of MOUs to formalize the delegation of the TRPA's permitting authority to local governments and utility districts. Shared policies were also incorporated into higher order rules that are binding on other organizations. For example, shared policies were incorporated into state or regional planning documents, comprehensive plans, capital-improvement programs, zoning ordinances, and other regulatory or programmatic documents. Finding ways to institutionalize these shared policies is important because it helps ensure that the policies are implemented and that operational-level activities are undertaken. It also makes future collaborative efforts less dependent on personal relationships or leaders that are hard to replace. This minimizes problems produced by staff turnover such as the loss of institutional memory or trust embedded in personal relationships (Bardach, 1998).

### DEVELOPING COLLABORATIVE ORGANIZATIONS

The other common institutional-level activity was developing new collaborative organizations, or organizations composed of other organizations. When a group of individuals or organizations begins to embrace collaborative processes, makes joint decisions, and acts as a single entity, it is in effect acting as a new organization (Finn, 1996; Jones et al., 1997). Researchers refer to this organizational form in different ways including partnerships (e.g., Teisman & Klijn, 2002), coalitions, alliances or strategic alliances (e.g., Dyer & Singh, 1998; Gulati, 1995; Osborn & Hagedoorn, 1997), consortiums, network brokers (Mandell, 1984), and network administrative organizations (Provan & Milward, 2001). These second-order organizations can provide resources and encourage

TABLE 3  
Collaborative Activities at the Institutional Level

Type of Collaboration	Inland Bays	Narragansett Bay	Salt Ponds	Tampa Bay	Tillamook Bay	Lake Tahoe
Institutionalizing shared policies						
Memorandums of understanding			X	X	X	X
Creating a new program		X				
Capital improvement programs				X		
Comprehensive land use plans	X		X	X		
Harbor management or water use plans	X		X			
Incorporating policies into other policies or programs	X	X	X	X		X
Resolution of decision-making body					X	
Legal agreements				X		
Federal or state legislation	X					X
Collaborative organizations						
Nonprofit organization	X				X	
Alliance of governmental entities				X		
Performance partnership					X	
Regional planning agency						X
Informal organizations	X			X	X	X

collaboration by members of the interorganizational network. They also provide a mechanism for coordinating the actions of organizations and therefore provide an important means of enhancing network governance (Jones et al., 1997).

Collaborative organizations perform a variety of functions by serving as conveners, catalysts for action, conduits for information and advocacy, organizers, funders, technical assistance providers, capacity builders, partners, dispute resolvers, or facilitators (Himmelman, 1996). The collaborative organizations observed in this study often perform one or more of these functions. For example, the Tampa Bay Estuary Program (TBERP) convenes groups for discussing bay issues; conducts research and disseminates this information to its members and to other agencies; advocates the protection of the bay; organizes projects to address bay problems; provides migrants to other organizations to address bay problems; provides technical assistance to state and local agencies; improves the capacity of other state and local agencies to address bay problems; and makes itself a member of other collaborative organizations in the bay (Imperial, 2000b).

In other cases, collaborative organizations were developed to fill specific institutional needs. For example, the Center for the Inland Bays (CIB) was created to sponsor educational activities, conduct restoration projects, and encourage land acquisition. It also serves as a neutral forum for discussing bay issues and building partnerships among governmental organizations and NGOs to address specific problems. Accordingly, the CIB's creation stimulated greater interaction among network members (Imperial, 2000a).

The membership composition of the collaborative organizations varied. Some had restrictive membership limited to selected state and local government agencies (e.g., TBERP). Others were more flexible and had a much larger membership consisting of representatives of federal, state, local, private sector, professional, and conservation organizations (e.g., Tillamook County Performance Partnership, TCP, Tillamook Estuaries Partnership, TEP). Although organizations typically comprise its membership, there can also be provisions for citizens or interest group representatives to serve as members, much the same way these people participate on advisory boards and policy-making bodies in the human service area (Bardach, 1998). For example, the CIB's board of the directors includes both the chair of the citizen advisory committee and two citizen representatives appointed by the Delaware General Assembly.

A common characteristic of this organizational form is that there tend to be no formal hierarchies among the member organizations even though outside the collaborative organization there may be significant differences in power and authority (Huxham, 1996). This limits a collaborative organization's ability to address controversial problems because its members are other organizations rather than employees. Accordingly, they rely on consensus building to compensate for imperfections resulting from other decision rules (Bardach, 1998). Membership in a collaborative organization can be voluntary or mandated by some higher order set of rules (e.g., state statute). In either case, membership has consequences. Partners are expected to adhere to shared policies or behavioral norms, some of which are departures from normal organizational behavior. Membership may require sharing information or resources. It may even require or encourage participation in operational or policy-making activities.

Collaborative organizations also vary in their formality. Some were established by state statutes or binding legal documents, whereas others involved informal structures based primarily on shared social norms. For example, collaborative organizations such as Tampa Bay's Nutrient Management Consortium are relatively informal and operate based on informal agreements and social norms. The TCPMP was established by a resolution of the Tillamook County Board of Commissioners, and its by-laws are poorly developed. Conversely, the TBEP has detailed rules governing its operations and decision-making procedures contained in a binding legal document, the Interlocal Agreement, developed pursuant to Chapter 163 of state statutes. Alternatively, the CIB is a chapter 501 (c)(3) organization established by an act of the Delaware General Assembly.

There was no clear trend in the characteristics of these collaborative organizations. Rather, they are tailored to fit the needs of a particular institutional setting and tend to be the product of the vision of selected opinion leaders or champions (Khator, 1999). It was also common for participants to underestimate the challenges associated with developing and then administering new collaborative organizations as they increase in complexity, become more formal, expand their membership structure, and increase the scope of activities and services provided. It also appears to be beneficial to formalize informal agreements and shared social norms that develop over time by establishing formal rules governing membership (i.e., access rules), decision making (i.e., decision rules), parameters for action, and conflict resolution. As a result, collaborative organizations become less reliant on individuals and personal relationships.

#### IMPORTANCE OF INSTITUTIONALIZING OPERATIONAL AND POLICY-MAKING ACTIVITIES

Institutionalizing policies, rules, norms, practices, procedures, and processes developed at the operational and policy-making level is not necessarily critical to their success, particularly if they are designed to be temporary or ad hoc in nature. However, if these activities are not institutionalized, then their governance is left to the participants in each collaborative activity. This requires a high level of commitment to shared policies, resource allocations, and interorganizational cooperation that can be difficult to sustain over long periods of time (Provan & Milward, 2001). One way to make productive collaborative relationships endure is by institutionalizing them in a higher order set of rules or by creating new organizational structures. This minimizes potential governance problems and has the added benefit of diffusing policies, rules, norms, practices, procedures, and processes beyond the boundaries of the specific collaborative context where they developed (Lawrence et al., 2002).<sup>6</sup>

The analysis of the six watersheds reveals that the development of new collaborative organizations was a particularly effective way to improve the governance of collaborative activities at the operational and policy-making levels. The creation of a collaborative organization helps institutionalize shared policies and resource commitments and promotes stable interactions that reinforce norms of cooperation and reciprocity. Collaborative organizations also create a forum for making collective decisions. Thus, they provide a means for achieving direction, control, and coordination of the organizations involved in collaborative activities.

These new organizations also improve the interorganizational network's problem-solving capacity. Through repeated interactions, the partners gain a greater appreciation of their interdependence. New perspectives on shared problems also result. Moreover, by working together, the partners have the opportunity to craft creative responses to shared problems. Collaborative organizations also create a form of institutional infrastructure upon which subsequent collaborative efforts and individual programs can build. For example, Tampa Bay developed the TBEP pursuant to the Interlocal Agreement. This allowed other organizations to link their funding for habitat restoration to the TBEP's policies.

The creation of collaborative organizations such as the TBEP also creates a certain measure of stability that allows operational and policy-making activities to endure over long periods of time. Membership in a collaborative organization also connects organizations in multiple ways

(e.g., through operational-level activity and membership in the new collaborative organization). Such ties are stronger than a single link because the relationship is maintained when one of the links is broken, such as when an operational-level activity ends (Aldrich & Whetten, 1981; Provan & Milward, 2001).<sup>7</sup> Kiser and Ostrom (1982) argue that when individuals or organizations interact frequently in a specific decision situation, the level of common understanding will be higher than when individuals participate sporadically on different issues. Thus, collaborative organizations ensure that interactions are repeated over long periods of time, which in turn promotes the development of strong social networks, cooperation, and, most important, trust (Aldrich & Whetten, 1981; Axelrod, 1984, 1997; Milward & Provan, 2000; E. Ostrom, 1990; E. Ostrom, Gardner, & Walker, 1994). Trust is an important governance mechanism because it lowers transaction costs by promoting smooth and efficient resource exchanges (Tsai & Ghoshal, 1998; Wicks, Berman, & Jones, 1999). Information from trusted individuals or organizations is also more likely to be viewed as reliable and accurate (Granovetter, 1985). It also proved to be the case that many of the respondents noted that the greatest benefit associated with creating these new collaborative organizations was the increased level of trust and improved working relationships among members, which at times helped these same organizations address unrelated policy problems.

Collaborative organizations can also improve an interorganizational network's capacity to collaborate. Collaborative organizations are often staffed directly (i.e., partners contributed funding that paid for dedicated staff) or indirectly (i.e., one partner provided staff support), which provides important resources that can be allocated to support collaborative efforts at the operational or policy-making levels. Although some collaborative efforts (e.g., habitat restoration projects) require capital funding, others depend on resources such as staff time, technical expertise, or equipment. Accordingly, one of the important functions of collaborative organizations is to absorb the transaction costs associated with organizing, supporting, or conducting collaborative activities at the operational or policy-making level among network members.

Creating collaborative organizations also encourages network members to make investments in relation-specific assets. Examples observed in the watersheds include developing databases, inventories, plans, or other resources that are shared and that support collaborative efforts at the operational or policy-making level. There were also instances where

organizations specifically hired staff whose skills, knowledge, or experience was tailored to support collaborative efforts. In other cases, organizations modified their decision making or service delivery to support the needs of a collaborative organization.

These findings should not be surprising as they are widely supported in the literature. Relation-specific investments demonstrate a credible commitment to long-term participation in collaborative efforts, which in turn strengthens the ties among organizations (Zaheer & Venkatraman, 1995). Organizations are likely to make these investments when they believe that they will recover the costs of initial investments or when there is a strong likelihood of repeated interactions (Cropper, 1996; Huxham, 1996; Zaheer & Venkatraman, 1995). Accordingly, actors engaged in frequent, recurring interactions should be more likely to develop specialized governance structures such as collaborative organizations because they can lower transaction costs (Dyer & Singh, 1998; Williamson, 1985). However, the incentives for making these investments will be tempered by the fact that the more specialized these investments and governance structures become, the more difficult it becomes to deploy them in alternative ways when a collaborative effort ends (Dyer & Singh, 1998; Park, 1996).

Collaborative organizations also promote a stable pattern of interaction that allows network members to become engaged in a particular form of organizational learning called collaborative know how (Simonin, 1997). In essence, organizations and the individuals that comprise them learn how to collaborate by collaborating. Organizations must learn how to govern collaborative processes and find ways to reduce the transaction costs associated with joint activities (Dyer & Singh, 1998; Kraatz, 1998). Artifacts of these learning processes were readily apparent in the six watersheds. For example, respondents reported that they had to learn how to collectively manage grants, contracts, and personnel in new ways to avoid creating administrative problems.

It also takes time for organizations to discover which organizations make good partners in that respondents viewed some as being more trustworthy, reliable, and cooperative than others. Organizations also need time to identify which activities are likely to be effective (Dyer & Singh, 1998; Gulati, 1995; Kraatz, 1998; Simonin, 1997). This seemed to be particularly true for operational-level activities. For example, it was common to find that it took watershed participants a great deal of time to plan, design, secure funding for, and construct their first habitat restoration project. However, as the partners learned how to manage this type of activity,

subsequent efforts required less time and money. The implication is that public managers need to maximize their learning opportunities and allow sufficient time to gradually scale up and expand collaborative efforts.

Although collaborative organizations can enhance network governance, developing these organizations is not without challenges. The collaborative organizations identified in this study were typically the product of a series of efforts at the operational and policy-making level. Thus, a certain amount of collaborative inertia had to be overcome before a collaborative organization could be formed (Bardach, 1998; Wondolleck & Yaffee, 2000). Time and effort had to be spent building relationships and trust, important precursors to joint action. Participants had to decide on an organizational structure and then collectively negotiate issues such as decision-making rules, membership structure, and what the organization would or would not do. Participants also had to secure resources to create these organizations. These efforts often took well over a year (e.g., TBEP, CIB).

There are also challenges associated with developing any new organization. There is growing support for a theory of organizational newness or adolescence. Despite disagreement on the specifics, researchers seem to agree that the risks of death are higher for new organizations and that these risks decline steadily over time (e.g., Amburgey, Kelly, & Barnett, 1993; Bruderi & Schussler, 1990; Freeman, Carroll, & Hannan, 1983; Singh, House, & Tucker, 1986; Singh, Tucker, & House, 1986). Creating a collaborative organization presents similar challenges. For example, in the Inland Bays, respondents noted that in the years immediately following the creation of the CIB, a great deal of time and resources were spent on issues such as human resource management, permanent location search, budgets, grants management, staff and board member liability, and fundraising (Imperial, 2000a). The TCPF experienced some similar problems and has since left its home in county government and formed a chapter 501 (c)(3) nonprofit organization called the TEP. Other researchers have similarly noted that new collaborative organizations experience growing pains and can be overwhelmed by the effort required to develop and maintain the organization (Bardach, 1998).

Although the previous discussion has noted the benefits associated with the stability a collaborative organization provides, the same organizational processes that promote stability also make it difficult to adapt and respond to changing environmental conditions (Milward & Provan, 2000). This can be particularly problematic for watershed management programs because researchers frequently note the importance of learning,

adaptation, and change (Imperial, 1999; Leach & Pelkey, 2001; Wondolleck & Yaffee, 2000). Collaboration also involves trial-and-error processes (Bardach, 1998; Simonin, 1997; Wondolleck & Yaffee, 2000). Accordingly, although some measure of stability is beneficial, public managers should be mindful that too much stability can create its own particular set of organizational problems. Staff in the new collaborative organization may begin viewing their careers as dependent on a collaborative organization's success. This can result in investments benefiting the collaborative organization rather than other network members. A Tillamook Bay respondent described the potential problem this way:

You have to keep focus because you can get so wrapped up in the bureaucracy of keeping the staff employed, keeping the GIS stuff up to date, that you begin to lose the real intent. The real intent of the performance partnership [TCPF/TEP] is to help agencies, land owners, interest groups implement the CCMP and other goals.

It is also possible that the collaborative organization could become involved in turf fights with other organizations as it tries to secure necessary resources (Bardach, 1998). It may also become difficult to change shared policies because participants may be reluctant to reopen negotiations on contentious issues.

### IMPLICATIONS FOR RESEARCHERS AND PRACTITIONERS

These findings reveal several implications for researchers and public managers. Given the dearth of studies examining a range of collaborative activities in a single interorganizational network, these empirical findings provide some important directions for future research. A greater understanding of why some policies, rules, norms, practices, procedures, and processes at the operational and policy-making levels were institutionalized and why others were not is clearly warranted and should help practitioners design more effective network-governance mechanisms. The LCAF illustrates that there is no one best way to organize collaborative activities and that governance can be enhanced in a variety of ways. However, a greater understanding of the potential benefits and problems associated with collaborative activities is clearly needed. A greater understanding of the constraints limiting a public manager's ability to utilize these opportunities is also needed to understand the myriad of choices involved in organizing collaborative efforts.



From a watershed manager's perspective, whereas it may be important to understand how ecological systems function, it is equally important to understand the ecology of governance (i.e., the unique contextual setting, the trade-offs among problems, and the ways in which institutions function and interact; Imperial & Hennessey, 2000). Public managers need to understand the functions of the institutional ecosystem corresponding to the ecological system. The configurational nature of the interorganizational network simultaneously creates opportunities for joint action and imposes constraints that limit a public manager's ability to utilize this collaborative capacity. This suggests that public managers may want to perform the type of forward and backward mapping recommended by Elmore (1985) to identify constraints on joint action. Both analyses have the added benefit of helping practitioners identify potentially supportive coalitions or sources of political conflict that may impede collaborative efforts.

Although watershed management encourages public managers to view ecosystems holistically, collaboration is an inherently strategic endeavor. It is typically limited to issues of mutual interest that are primarily to win-win or at least win-no-lose situations (Wondollock & Yaffee, 2000). Consequently, it is unlikely to be an appropriate strategy for addressing controversial problems involving win-lose situations (i.e., zero-sum games). Moreover, although participants work together on some issues, they have to be willing to agree to disagree on others and to respect these differences if they are to maintain cooperative working relationships.

As implied earlier, collaboration can be a difficult task, and there are many challenges confronting public managers when it comes to initiating, organizing, managing, and completing collaborative projects. In many ways, collaboration is an exercise in advanced governance. Leadership, staffing and recruitment, personnel management, budgeting, contracting, and grants management all proved to be important factors influencing collaborative activities in the six watersheds. Managing collaborative processes is also a complex endeavor requiring that its participants possess a formidable set of professional skills. Good interpersonal and facilitation skills were necessary to resolve disputes and broker agreements. Political skills were necessary to avoid conflicts. Leadership, argument, and persuasion skills were also important because collaboration is typically a voluntary activity (Imperial & Hennessey, 2000).

Public managers should also give careful consideration to whether they have the resources necessary to undertake collaborative activities. Respondents were quick to note that it takes resources such as time,

money, equipment, staff, technical expertise, and legal authority to get things done. After all, if participants in a collaborative effort can do little more than attend meetings, many of the operational activities noted in Table 1 cannot be accomplished. The importance of adequate resources should not be ignored. Watershed management (e.g., Imperial & Hennessey, 2000; Leach & Pelkey, 2001; Wondollock & Yaffee, 2000), implementation (e.g., O'Toole, 1986), and network (e.g., Alexander, 1995) research all point to their importance.

Although the amount of resources is obviously important, there must also be some measure of stability when viewed over time. This lets participants plan and budget with confidence and enables the resources to be redeployed as participants learn what types of collaborative activities can be undertaken effectively. The distribution of resources is also important. When resources are widely distributed among different organizations, it creates complementary relationships that provide important incentives for collaboration (Wondollock & Yaffee, 2000). Conversely, when one organization has disproportionate control over the resources necessary to undertake collaborative activities, it gains power that others lack.

Researchers and public managers are also advised to avoid a so-called centralized is best mind-set. The experiences in the six watersheds suggest that it is often equally effective to use several targeted or overlapping collaborative efforts rather than trying to centrally direct all collaborative activities using some sort of centralized committee structure or large collaborative organization. A centralized approach certainly generates frequent contacts among individuals and organizations, offers some measure of centralization and control, and provides a central point of contact. However, it can also increase transaction costs with little corresponding benefit (e.g., Narragansett Bay). By way of contrast, Inland Bays, Lake Tahoe, and Tampa Bay utilized a series of targeted collaborative efforts that included only those organizations with something to contribute. This reduced transaction costs by allowing potential collaborators to negotiate directly with one another, thereby adding additional certainty that agreements would be implemented.

It is important to recognize that this polycentric approach can be equally effective (Blomquist, 1992; Imperial, 1999; E. Ostrom, 1990, 1999; E. Ostrom, Schroeder, & Wynne, 1993). Network theory has long noted that although information moves quickly among organizations with strong ties, the spread of new information, ideas, and innovations often comes through weak or nonredundant ties (Burt, 1992; Granovetter, 1973). Moreover, although networks containing homophilous individuals

and organizations tend to communicate more effectively, heterophilous communication tends to accelerate the diffusion of new ideas and practices among different networks because it connects socially dissimilar individuals and organizations (Rogers, 1995).

Accordingly, a series of separate collaborative efforts targeted at specific problems may allow a greater number of organizations to be involved in the overall effort. Because each organization may be involved with different combinations of organizations, the number of weak or nonredundant ties linking organizations increases. This increases the diffusion of information and creates additional interactive processes that provide organizations with an opportunity to communicate, share information, build trust, develop personal relationships, and ultimately identify new opportunities for joint action. What this suggests for public managers is that there is no one best way to organize collaborative activities. Creating several smaller, targeted, or overlapping collaborative arrangements could be equally or more effective than developing a centralized collaborative effort. Thus, practitioners should give careful consideration to the choices associated with organizing collaborative activities.

Public managers should also remember that once trust and interorganizational relationships have developed, they must be maintained. Some effort is required to socialize new participants to the norms, values, and routines of collaborative processes (Leana & Van Buren, 1999). Otherwise, trust and relationships will erode, especially when there is high staff turnover, when agency leadership changes, or when new organizations join the effort. This proved to be particularly important for collaborative organizations and prolonged processes associated with developing shared policies. Accordingly, public managers are advised to institutionalize informal agreements and interpersonal relationships whenever possible to make the collaborative effort's success less reliant on individuals (e.g., dynamic leader).

Conversely, although trust tends to build slowly over time, it is often destroyed quickly by negative experiences (Axelrod, 1984; Leana & Van Buren, 1999). Respondents frequently noted that negative experiences had much stronger effects on their willingness to participate in collaborative activities than did positive ones. Accordingly, public managers are advised to avoid situations that have a high risk of failure, particularly when the participants have a limited base of collaborative experience. Instead, they should be strategic, focus on problems that are manageable, look for opportunities where there is strong political support, and focus their efforts where the likelihood of success is high. This provides public

managers with the requisite time needed to build relationships and trust while they learn how to work together. They can then build on these successes and celebrate their victories because it makes subsequent failures and problems easier to tolerate.

## SUMMARY AND CONCLUSION

Although collaboration can be an effective strategy for improving policy outcomes or enhancing governance, it is important to remember that it is only one strategy and it is unlikely to be an appropriate strategy for addressing all problems (e.g., zero-sum games). Unilateral action, litigation, legislative intervention, markets, and hierarchical control remain alternative strategies. Practitioners should also be careful to avoid embracing collaboration simply to avoid conflict. Some conflict can and should occur because it is an important component of our federal system that promotes a healthy competition of ideas and stimulates policy change and learning (Sabatier & Jenkins-Smith, 1993, 1999). In Lake Tahoe, prolonged conflict actually set the stage for a prolonged period characterized by productive collaborative relationships (Imperial & Kanneckis, 2003; Kanneckis, Koziol, & Imperial, 2000).

Accordingly, although many of the positive virtues of collaboration have been highlighted throughout the article, public managers should remember that collaboration is not a magical cure for all governance problems. Nor should collaboration be viewed as an end in and of itself; it is a means to an end. It should be valued insofar as it produces better organizational performance or lower costs than can be achieved without it. As Bardach (1998) so wisely advises,

We should not be impressed by the idea of collaboration *per se*. That collaboration is nicer sounding than indifference, conflict, or competition is beside the point. So, too, is the fact that collaboration often makes people feel better than conflict or competition. I do not want to oversell the benefits of interagency collaboration. The political struggle to develop collaborative capacity can be time consuming and divisive. But even if no such struggle were to ensue, the benefits of collaboration are necessarily limited. (p. 17)

Even the most imaginative practitioners are constrained by a federal system that places government organizations in conflict with one another and creates an underlying tension as to whether federal, state, regional, or



local priorities should govern decision making. Limits also exist with respect to whether organizations can or should be willing to sacrifice their priorities or those of the constituencies they represent for the sake of collaboration, no matter how noble the goal. Even when an organization's formal rules do not conflict, its behavioral norms, professional values, knowledge, experience, autonomy, and abilities limit its participation in collaborative activities (Chisholm, 1995; Wondolleck & Yaffee, 2000). Moreover, no amount of creativity can overcome the shortage of resources (e.g., staff, money, etc.) that often creates important obstacles to collective action (Bardach, 1998).

Fortunately, when collaboration highlights common values and interests, participants often find productive ways to work together and generate greater public value than can be achieved by working alone. Thus, collaboration is both an individually rational strategy and a means of collectively improving network governance (McCaffrey, Faerman, & Hart, 1995). The challenge for public managers is to identify opportunities for collaboration that create public value while simultaneously minimizing problems and transaction costs. Public managers are therefore cautioned to use collaboration wisely. When used correctly, collaboration is an effective governance strategy. When used inappropriately, it can create more problems than it solves.

### APPENDIX

#### Summary of the Six Case Study Watersheds

	<i>Inland Bays</i>	<i>Lake Tahoe</i>	<i>Narragansett Bay</i>	<i>Salt Ponds</i>	<i>Tampa Bay</i>	<i>Tillamook Bay</i>
Physical environment						
Size of watershed	300 square miles	501 square miles	1,600 square miles	32 square miles	2,300 square miles	570 square miles
Population	131,000*	53,000	2,000,000+	32,000	2,000,000+	17,000
Focal problems	Nutrient loading	Nutrients & sedimentation	None	Nutrient loading	Nutrient loading & seagrass loss	Shellfish closures, sedimentation, & endangered species
Sources or causes of problems	Chicken farms, onsite sewage disposal systems (OSDSs), point sources, & storm water	Storm water, erosion, & habitat loss from urbanization	Diverse sources & causes	OSDSs, point sources, habitat loss, & storm water from urbanization	Nutrient loading from diverse sources & habitat loss	Bacterial loading & sedimentation from agriculture, forestry, & urban sources
Planning process						
Duration	1989-1995	1980-1987	1985-1993	1979-1984, 1994-1999	1990-1998	1993-1999
Jurisdictional complexity	Low	High	High	Low	Medium-high	Low-medium
Level of conflict	Medium	High	High	Low	Low	Low

(continued)

APPENDIX (continued)

Implementation activities						
Coordinating entity	Nonprofit organization	Regional planning agency	Line program in Rhode Island Department of Environmental Management	Intergovernmental partnership	Intergovernmental partnership	Intergovernmental partnership and nonprofit organization
Primary funding sources	Federal	Federal, state, regional, & local	Federal	Federal, state, & local	Federal, state, regional, & local	Federal & Oregon Department of Forestry
Funding amount	Low	High	Low	Low	High	Medium
Funding stability	Medium	High	Low	Medium	High	Medium
Scope of operational-level collaboration	Medium	High	Low	Medium	High	Medium
Scale of operational-level collaboration	Low	High	Low	Low	High	High
Scope of policy-making-level collaboration	Low	High	Low	Medium	High	High
Scale of policy-making-level collaboration	Low	High	Low	Low	High	High
Shared policies or regulations	No	Yes	No	Yes	Yes	Yes
Collaborative organization	Yes	Yes	No	No	Yes	Yes

NOTE: All assessments of high, medium, or low are based on comparisons among the six programs.  
 a. This was measured at the county level.

NOTES

1. Because the study was part of the academy's Learning from Innovations in Environmental Protection project (National Academy of Public Administration, 2000), there was also some negotiation with academy staff to ensure that our cases met their project's needs.
2. Interviewing a wide range of individuals representing a wide range of organizations is important. A recent study of watershed partnerships indicates that information obtained from watershed coordinators is often systematically biased toward success. The study also found that the differences between participants and nonparticipants are not nearly as great as the differences between the coordinators and everyone else (Leach, 2002).
3. For additional discussion of our research methods and findings, see the original report prepared for the National Academy of Public Administration (Imperial & Hennessey 2000), the supporting technical reports (Hennessey & Imperial, 2000; Imperial, 2000a, 2000b; Imperial, McGee, & Hennessey, 2000; Imperial & Summers, 2000; Kauneckis, Kozl, & Imperial, 2000), and related publications (Imperial, 2001; Imperial & Kauneckis, 2003).
4. Regardless of the terminology (e.g., public value, collaborative advantage, relational rents, etc.), the general argument that collaboration should only be used when it generates value, better organizational performance, or reduced transaction costs than acting alone is well established in the literature (e.g., Bardach, 1998; Dyer & Singh, 1998; Huxham, 1996; Zahner & Venkatraman, 1995). This emphasis on public value is used to distinguish this study from those that argue that collaboration is always preferable because important public policy problems cannot and should not be tackled by a single organization or level of government acting alone.
5. Other commonly examined interorganizational networks include implementation structures (e.g., Hiern & Porter, 1981), policy networks (e.g., Kickert, Klijn, & Koppenjan, 1997), and policy subsystems (e.g., Sabatier & Jenkins-Smith, 1993, 1999).
6. Lawrence, Hardy, and Phillips (2002) refer to these policies, rules, norms, technologies, practices, procedures, and processes as proto-institutions. They argue that they are institutions in the making that have the potential to become full-fledged institutions if social processes entrench them and if they are diffused throughout the institutional field.
7. Network research refers to this concept as multiplexity or the strength of ties between organizations in a larger network (Scott, 1991).

REFERENCES

Agranoff, R., & McGuire, M. (2001). Big questions in public network management research. *Journal of Public Administration Research and Theory, 11*(3), 295-326.

Agranoff, R., & Radin, B. A. (1991). The comparative case study approach in public administration. In J. L. Perry (Ed.), *Research in public administration* (Vol. 1, pp. 203-231). Greenwich, CT: JAI.

Aldrich, H., & Whetten, D. A. (1981). Organization-sets, action sets, and networks: Making the most of simplicity. In P. C. Nystrom & W. Starbuck (Eds.), *Adapting organizations to their environments* (Vol. 1, pp. 385-408). New York: Oxford University Press.

Alexander, E. R. (1995). *How organizations act together: Interorganizational coordination in theory and practice*. Amsterdam: Gordon & Breach.

- Amburgey, T. L., Kelly, D., & Barnett, W. P. (1993). Resetting the clock: The dynamics of organizational change and failure. *Administrative Science Quarterly*, 38, 51-73.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Axelrod, R. (1997). *The complexity of cooperation: Agent-based models of competition and collaboration*. Princeton, NJ: Princeton University Press.
- Barbach, E. (1998). *Getting agencies to work together: The practice and theory of managerial craftsmanship*. Washington, DC: Brookings Institution.
- Barbach, E. (2001). Developmental dynamics: Collaboration as an emergent phenomenon. *Journal of Public Administration Research and Theory*, 11(2), 149-164.
- Bloomquist, W. (1992). *Dividing the waters: Governing groundwater in Southern California*. San Francisco: ICS Press.
- Born, S. M., & Genskow, K. D. (2001). *Toward understanding new watershed initiatives—A report from the Madison watershed workshop*. Madison, WI: Madison Watershed Workshop.
- Bressers, H., O'Toole, L. J., Jr., & Richardson, J. (1995). Networks as models of analysis: Water policy in comparative perspective. In H. Bressers, L. J. O'Toole, Jr., & J. Richardson (Eds.), *Networks for water policy: A comparative perspective* (pp. 1-23). London: Frank Cass.
- Brundel, J., & Schussler, R. (1990). Organizational mortality: The liabilities of newness and adolescence. *Administrative Science Quarterly*, 35, 530-547.
- Burt, R. S. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Busenberg, G. J. (1999). Collaborative and adversarial analysis in environmental policy. *Policy Sciences*, 32, 1-11.
- Chisholm, D. (1995). Problem solving and institutional design. *Journal of Public Administration Research and Theory*, 5, 451-491.
- Cropper, S. (1996). Collaborative working and the issue of sustainability. In C. Huxham (Ed.), *Creating collaborative advantage* (pp. 80-100). Thousand Oaks, CA: Sage.
- Dryzek, J. S. (1987). *Rational ecology*. Oxford, UK: Basil Blackwell.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23, 660-679.
- Elazar, D. (1987). *Exploring federalism*. Tuscaloosa: University of Alabama Press.
- Elmore, R. F. (1985). Forward and backward mapping: Reversible logic in the analyses of public policy. In K. Hanf & T. A. J. Toonen (Eds.), *Policy implementation in federal and unitary systems: Questions of analysis and design* (pp. 33-70). Boston, MA: Martinus Nijhoff.
- Finn, C. B. (1996). Utilizing stakeholder strategies for positive collaborative outcomes. In C. Huxham (Ed.), *Creating collaborative advantage* (pp. 152-164). Thousand Oaks, CA: Sage.
- Frederickson, H. G. (1996). *The spirit of public administration*. San Francisco: Jossey-Bass.
- Freeman, J., Carroll, G. R., & Hannan, M. T. (1983). The liability of newness: Age dependence in organizational death rates. *American Sociological Review*, 48, 692-710.
- Glasser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-1380.
- Granovetter, M. (1985). Economic action and social structure: The problems of embeddedness. *American Journal of Sociology*, 91, 481-510.
- Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal study. *Administrative Science Quarterly*, 40, 619-652.
- Hall, T. E., & O'Toole, L. J., Jr. (2000). Structures for policy implementation: An analysis of national legislation, 1965-1966 and 1993-1994. *Administration and Society*, 31, 667-686.
- Hennessey, T., & Imperial, M. T. (2000). *Rhode Island's salt ponds: Using a special area management plan to improve watershed governance*. Washington, DC: National Academy of Public Administration.
- Himmelman, A. T. (1996). On the theory and practice of transformational collaboration: From social service to social justice. In C. Huxham (Ed.), *Creating collaborative advantage* (pp. 19-43). Thousand Oaks, CA: Sage.
- Hjert, B., & Porter, D. (1981). Implementation structures: A new unit of administrative analysis. *Organization Studies*, 2, 211-227.
- Huxham, C. (1996). Collaboration and collaborative advantage. In C. Huxham (Ed.), *Creating collaborative advantage* (pp. 1-18). Thousand Oaks, CA: Sage.
- Imperial, M. T. (1999). Analyzing institutional arrangements for ecosystem-based management: The institutional analysis and development framework. *Environmental Management*, 24, 449-465.
- Imperial, M. T. (2000a). *Delaware Inland Bays Estuary Program: Using a nonprofit organization to implement a CCMR*. Washington, DC: National Academy of Public Administration.
- Imperial, M. T. (2000b). *The Tampa Bay Estuary Program: Developing and implementing an interlocal agreement*. Washington, DC: National Academy of Public Administration.
- Imperial, M. T. (2001). *Collaboration as an implementation strategy: An assessment of six watershed management programs*. Unpublished doctoral dissertation, Indiana University, Bloomington, IN.
- Imperial, M. T., & Hennessey, T. (2000). *Environmental governance in watersheds: The importance of collaboration to institutional performance*. Washington, DC: National Academy of Public Administration.
- Imperial, M. T., & Kanneckis, D. (2003). Moving from conflict to collaboration: Lessons from the Lake Tahoe experience. *Natural Resources Journal*, 43, 1009-1055.
- Imperial, M. T., McGee, S., & Hennessey, T. (2000). *The Narragansett Bay Estuary Program: Using a state water quality agency to implement a CCMR*. Washington, DC: National Academy of Public Administration.
- Imperial, M. T., & Summers, K. (2000). *The Tillamook Bay National Estuary Program: Using a performance partnership to implement a CCMR*. Washington, DC: National Academy of Public Administration.
- Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms. *Academy of Management Review*, 22, 911-925.
- Kanneckis, D., Kozio, L., & Imperial, M. T. (2000). *Tahoe Regional Planning Agency: The evolution of collaboration*. Washington, DC: National Academy of Public Administration.
- Khaton, R. (1999). Networking to achieve alternative regulation: Case studies from Florida's National Estuary Programs. *Policy Studies Review*, 16(1), 66-85.

- Kickert, W. J. M., Klijn, E. H., & Koppenjan, J. F. M. (Eds.). (1997). *Managing complex networks: Strategies for the public sector*. Thousand Oaks, CA: Sage.
- Kiser, L., & Ostrom, E. (1982). The three worlds of action: A metatheoretical synthesis of institutional approaches. In E. Ostrom (Ed.), *Strategies for political inquiry* (pp. 179-222). Beverly Hills, CA: Sage.
- Kratz, M. S. (1998). Learning by association? Interorganizational networks and adaptation to environmental change. *Academy of Management Journal*, 41, 621-643.
- Lawrence, T. B., Hardy, C., & Phillips, N. (2002). Institutional effects of interorganizational collaboration: The emergence of proto-institutions. *Academy of Management Journal*, 45, 281-290.
- Leach, W. D. (2002). Surveying diverse stakeholder groups. *Society and Natural Resources*, 15, 641-649.
- Leach, W. D., & Pelkey, N. W. (2001). Making watershed partnerships work: A review of the empirical literature. *Journal of Water Resources Planning and Management*, 127, 378-385.
- Leach, W. D., Pelkey, N. W., & Sabatier, P. A. (2002). Stakeholder partnerships as collaborative policymaking: Evaluation criteria applied to watershed management in California and Washington. *Journal of Public Policy Analysis and Management*, 21, 645-670.
- Leana, C. R., & Van Buren, H. J., III (1999). Organizational social capital and employment practices. *Academy of Management Review*, 24, 538-555.
- Lynn, L. E., Jr., Heinrich, C. J., & Hill, C. J. (2000). Studying governance and public management: Challenges and prospects. *Journal of Public Administration Research and Theory*, 10, 233-261.
- Mandel, M. P. (1984). Application of network analysis to the implementation of a complex project. *Human Relations*, 37, 659-679.
- Mandel, M. P. (1989). Organizational networking: Collective organizational strategies. In J. Rabin, G. J. Miller, & W. B. Hildreth (Eds.), *Handbook of strategic management* (pp. 141-165). New York: Marcel Dekker.
- Mandel, M. P. (1990). Network management: Strategic behavior in the public sector. In R. W. Gage & M. P. Mandel (Eds.), *Strategies for managing intergovernmental policies and networks* (pp. 29-53). Westport, CT: Praeger.
- Maxwell, J. A. (1996). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage.
- McCaffrey, D. P., Faerman, S. R., & Hart, D. W. (1995). The appeal and difficulties of participative systems. *Organization Science*, 6, 603-627.
- Menzel, D. C. (1987). An interorganizational approach to policy implementation. *Public Administration Quarterly*, 11(1), 3-16.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Milward, H. B., & Provan, K. G. (2000). Governing the hollow state. *Journal of Public Administration Research and Theory*, 10, 359-379.
- Moore, M. H. (1996). *Creating public value: Strategic management in government*. Cambridge, MA: Harvard University Press.
- National Academy of Public Administration. (2000). *Environment.gov: Transforming environmental protection for the 21st century*. Washington, DC: Author.
- Osborn, R. N., & Hagedoorn, J. (1997). The institutionalization and evolutionary dynamics of interorganizational alliances and networks. *Academy of Management Journal*, 40, 261-278.
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. New York: Cambridge University Press.
- Ostrom, E. (1999). Institutional rational choice: An assessment of the institutional analysis and development framework. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 35-71). Boulder, CO: Westview.
- Ostrom, E., Gardner, R., & Walker, J. (1994). *Rules, games, & common-pool resources*. Ann Arbor: University of Michigan Press.
- Ostrom, E., Schroeder, L., & Wynne, S. (1993). *Institutional incentives and sustainable development: Infrastructure policies in perspective*. Boulder, CO: Westview.
- Ostrom, V. (1989). *The intellectual crisis in American public administration* (2nd ed.). Tuscaloosa: University of Alabama Press.
- Ostrom, V. (1994). *The meaning of American federalism: Constituting a self-governing society*. San Francisco: ICS Press.
- O'Toole, L. J., Jr. (1986). Policy recommendations for multi-actor implementation: An assessment of the field. *Journal of Public Policy*, 6(2), 181-210.
- O'Toole, L. J., Jr. (1997). Treating networks seriously: Practical and research-based agendas in public administration. *Public Administration Review*, 57(1), 45-52.
- O'Toole, L. J., Jr. (2000). Research on policy implementation: Assessment and prospects. *Journal of Public Administration and Theory*, 10, 263-288.
- Park, S. H. (1996). Managing an interorganizational network: A framework of the institutional mechanism for network control. *Organization Studies*, 17, 795-824.
- Peters, B. G., & Pierre, J. (1998). Governance without government? Rethinking public administration. *Journal of Public Administration Research and Theory*, 8, 223-243.
- Phillips, N., Lawrence, T. B., & Hardy, C. (2000). Interorganizational collaboration and the dynamic of institutional fields. *Journal of Management Studies*, 37(1), 23-43.
- Powell, W. (1990). Neither market nor hierarchy: Network forms of organization. *Research in Organizational Behavior*, 12, 295-336.
- Provan, K. G., & Milward, H. B. (2001). Do networks really work? A framework for evaluating public-sector organizational networks. *Public Administration Review*, 61, 414-423.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1993). *Policy change and learning: An advocacy coalition approach*. Boulder, CO: Westview.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The advocacy coalition framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 117-166). Boulder, CO: Westview.
- Scott, J. (1991). *Social network analysis: A handbook*. London: Sage.
- Simonin, B. L. (1997). The importance of collaborative know-how: An empirical test of the learning organization. *Academy of Management Review*, 40, 1150-1174.
- Singh, J. V., House, R. J., & Tucker, D. J. (1986). Organizational change and organizational mortality. *Administrative Science Quarterly*, 31, 587-611.
- Singh, J. V., Tucker, D. J., & House, R. J. (1986). Organizational legitimacy and the liability of newness. *Administrative Science Quarterly*, 31, 171-193.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Teisman, G. R., & Klijn, E. H. (2002). Partnership arrangements: Governmental rhetoric or governance scheme? *Public Administration Review*, 62(2), 197-205.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41, 464-476.

- Wicks, A. C., Berman, S. L., & Jones, T. M. (1999). The structure of optimal trust: Moral and strategic implications. *Academy of Management Review*, 24(1), 99-116.
- Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York: Free Press.
- Wondollock, J. M., & Yaffee, S. L. (2000). *Making collaboration work: Lessons from innovation in natural resource management*. Washington, DC: Island.
- Wood, D. J., & Gray, B. (1991). Toward a comprehensive theory of collaboration. *Journal of Applied Behavioral Science*, 27(2), 139-162.
- Wright, D. S. (1988). *Understanding intergovernmental relations* (3rd ed.). Pacific Grove, CA: Brooks/Cole.
- Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Zaher, A., & Venkatraman, N. (1995). Relational governance as an interorganizational strategy: An empirical test of the role of trust in economic exchange. *Strategic Management Journal*, 16, 373-392.

*Mark T. Imperial, Ph.D., is an assistant professor in the Department of Political Science at the University of North Carolina at Wilmington, where his teaching and research interests are in public management, policy analysis, and environmental policy. He has published articles in Nonprofit and Voluntary Sector Quarterly, Public Works Management and Policy, Environmental Management, Natural Resources Journal, and Coastal Management.*