

# **Improving Watershed Governance: Collaboration, Public Value, and Accountability**

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**Abstract:** Networks present an interesting governance challenge. Little is known about how to design effective institutions and implement public policies in a world of shared power and authority. One implementation strategy used in networked settings is collaboration. This study used an in-depth qualitative research design to understand the role that collaboration plays as an implementation strategy. Specifically, the paper examines two research questions: (1) what types of collaborative activities were used to implement public policies? and (2) what public value (or costs) was added as a result of these actions? To answer these questions, we examined the implementation of six watershed management plans. Watershed management efforts are a useful policy arena for studying collaboration. Every watershed is “managed” by a wide range of governmental and nongovernmental actors whose decisions influence the health and integrity of ecological systems. Therefore, watershed management programs often focus on finding ways to get this portfolio of actors and programs to work together more effectively. Our analysis revealed a variety of collaborative activities at the operational, policy-making, and institutional levels. We then present a conceptual framework for understanding the various ways that public value can be added at the individual, organizational, network, and societal levels. Our hope is that an improved understanding of the collaborative process will enhance our understanding of policy implementation in a networked setting and allow practitioners to exploit the collaborative capacity inherent in our federal system.

### **Introduction**

A growing number of researchers are examining interorganizational networks among governmental, nongovernmental, and private organizations. Researchers approach the network phenomena from different perspectives such as issue networks (Hecl 1977), interorganizational networks (e.g., Kickert, et al. 1997; Alexander 1995; Nohria and Eccles 1992; Hanf and Scharpf 1978), social networks (e.g., Wasserman and Galaskiewicz 1994), policy networks (e.g., Bressers et al. 1995a; Marsh and Rhodes 1992; Marin and Mayntz 1991), advocacy coalitions (e.g., Sabatier and Jenkins-Smith 1999, 1993), implementation structures (e.g., Hjern and Porter 1981), hollow state (e.g., Milward and Provan 2000; Milward and Provan 1993; Milward, et al. 1993), intergovernmental management (e.g., Agranoff 1996; Agranoff and McGuire 1999, 1998; Radin, et al. 1996; Gage and Mandel 1990), strategic alliances (e.g., Dyer and Singh 1998), and collaboration (e.g., Bardach 1998; Huxham 1996; Gray 1989). Increasingly, researchers are employing a network perspective in implementation research to avoid what Hjern and Porter (1981) call the “lonely organization syndrome.” Studies that focus on a particular organization or subprocess in a governance system while neglecting the context of the wider system may fail to account for the influences and impacts occurring at other levels (Lynn, et al. 2000).

The increased focus on interorganizational networks is not surprising. As Elmore (1985) observed, there is a tendency for policies and programs to collect around problems over time as policy systems develop. O’Toole (2000) and others (Hall and O’Toole 2000; O’Toole and Montjoy 1984; Hjern and Porter 1981) have also noted that most implementation settings involve multiple actors who may be located at different governmental levels. The actors also vary in their individual and collective capacity to solve policy problems.

“Often, 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. . . . Thus, there are complex multi-actor processes for both the identification, definition and resolution of policy problems, and for the implementation of policy (Bressers et al. 1995b, 4).”

The multicentered, polycentric structure of our federal system creates numerous opportunities for collaboration, only some of which are exploited (Ostrom 1994, 1989; Wright 1988; Elazar 1987). The challenge is to find ways to govern in a world of shared power where few organizations have the power to accomplish their missions alone and problem-solving capacity is widely dispersed (Milward and Provan 2000).

This paper examines the use of collaboration as a strategy for implementing policies in an interorganizational setting. Following Bardach (1998, 8) we define collaboration as any joint activity by two or more organizations intended to increase public value by working together rather than separately.<sup>1</sup> Typically, this interactive process involves an autonomous group of actors who use shared rules, norms, or organizational structures to act or make decisions related to an issue or problem (Gray and Wood 1991, 146). The nature of the work that is done can be quite varied and be permanent, temporary, project-based, or ad hoc in nature (Mandell 1990). Practitioners also may be involved in over-lapping collaborative activities that influence one another (e.g., Agranoff and McGuire 1999, 1998; and, Bressers, et al. 1995a). Some collaborative activities will also be preparatory to others or be “nested” in that different activities will influence and constrain other activities (Bardach 1998, 20). Collaboration also tends to be a trial and error process with practitioners becoming engaged in new activities as they learn how to work together and discover ways to add public value (Bardach 1998; and, Simonin 1997).

While collaboration is clearly a practical concern, the process is poorly understood as is governing in a networked setting (Mandell 1990). There is no consensus on definitions, concepts, or methodological approach to studying collaboration. There is little agreement on the factors that create collaborative capacity or influence participation in collaborative activities. Nor is there a readily accepted framework for understanding how public value is added as a result of collaborative activities.

## **Research Design**

Our study was exploratory in nature and focused on gaining a greater understanding of the collaborative process. We examined two questions: (1) what types of collaborative activities were used to implement public policies? and (2) what public value (or costs) was added as a result of these actions?<sup>2</sup> To address these questions, we examined the implementation of six watershed management plans developed by the Delaware Inland Bays Estuary Program (DIBEP), Narragansett Bay Estuary Program (NBEP), Salt Ponds Special Area Management Plan (SAMP), Tahoe Regional Planning Agency (TRPA), Tampa Bay Estuary Program (TBEP), Tillamook Bay National Estuary Program (TBNEP) [Table 1]. These programs proved to be a useful venue for examining collaboration. Watershed management often involves context

specific problems such as nonpoint source (NPS) pollution and complex policy solutions, which affect multiple agencies located at different governmental levels. The challenge for practitioners is to discover ways to get this portfolio of actors and programs to work together in a manner that adds public value. Thus, implementation is likely to require collaboration and the crafting of institutions to improve watershed governance.

The exploratory nature of our research into collaborative processes led us to employ a qualitative methodology recommended for developing grounded theory (Strauss and Corbin 1990; and Glaser and Strauss 1967). We used a comparative case study research design that relied primarily on data from two main sources: (1) field interviews with more than 200 individuals; and, (2) program documents and other archival records. We also used telephone interviews, direct observation, and participant observation. Systematic qualitative techniques (e.g., coding) were used to analyze the data (e.g., Miles and Huberman 1994). Codes were derived both inductively and deductively from the data and generated based on a start list derived from previous research (e.g., Miles and Huberman 1994; Strauss and Corbin 1990). As the analysis continued, tables, figures, and displays were used to identify trends and make observations (Miles and Huberman 1994).

We then used cross-case analysis to deepen our understanding of these 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 the cases (Miles and Huberman 1994). Potential rival explanations were examined to identify logical inconsistencies and to determine their consistency with the data (Yin 1994). The chain of events was examined to help determine causality. Potential threats to the validity of the findings were then analyzed (Cook and Campbell 1979).<sup>3</sup>

## **Collaborative Activities**

There are few studies examining the role that collaboration plays in implementing public policies. Thus, we first focused our attention on examining the different ways collaboration was used as an implementation strategy. Our analysis confirmed previous findings that found that organizations frequently interact in permanent functional networks as well as temporary, project-based, and ad hoc networks (Mandell 1990). It also became clear that different individuals within an organization were often involved in different collaborative activities, some of which were interrelated (e.g., Agranoff and McGuire 1998; and, Bressers, et al. 1995a). For example, line staff worked on individual projects, mid-level administrators negotiated policies, and high-level administrators represented their organization in collaborative forums. The patterns of collaborative activity differed among our cases and reflected contextual factors such as institutional arrangements and previous histories of collaborative activities.

We organized our findings by their level of action [Table 2]. The three levels of action proposed by Kiser and Ostrom (1982) inform the categorization. The following sections briefly describe each group of activities and some of their interrelationships.

**Table 1: Characteristics of the Six Case Studies**

<b>Watershed Characteristics</b>	<b>Delaware Inland Bays (DIBEP)</b>	<b>Narragansett Bay (NBEP)</b>
<b>Physical Environment</b>		
Water body	Delaware Inland Bays (DE)	Narragansett Bay (RI, MA)
Size of watershed	300 sq. miles	1,600 sq. miles
Population	131,000 <sup>a</sup>	2,000,000 in watershed
Focal problem(s)	Nutrient loading	None; Comprehensive in scope with a diverse range of problems
Sources/Causes of problem(s)	Poultry farms, septic systems, stormwater runoff, and sewage treatment plants	Diverse range of sources and causes of problems
<b>Institutional Environment</b>		
Jurisdictional complexity	Low	High
Previous planning activity	Several collaborative studies beginning with report to the Governor in 1969	27 water quality studies dating back to 1900. No collaborative watershed-based programs
<b>Planning Process</b>		
Duration	1989 - 1995	1985 – 1993
Driving force	State officials	Congress
Program	EPA’s National Estuary Program	EPA’s National Estuary Program
Hiring entity for staff	Department of Natural Resources and Environmental Control (DNREC)	New England Interstate Water Pollution Control Authority
Level of conflict	High. Agricultural interests had problem with draft plan	High. Lot of actors had problems with the plan
Level of collaboration	Medium. Mostly at the committee level, DNREC’s Inland Bays initiative, and NRCS HUA	Low. At the end of the process actors protected their turf
<b>Implementation Activities</b>		
Implementing organization(s)	Center for the Inland Bays (CIB)	Rhode Island Department of Environmental Management (RIDEM)
Organizational arrangement	Nonprofit Organization	Line-item program in RIDEM
Hiring entity for staff	CIB	RIDEM
Nature of conflict	Low	Low
Nature of collaboration	Mostly focuses on restoration, public education, and research	Limited collaboration with other actors on selected projects
Clear goals/policies	No/No	No/No
Key regulatory agencies	DNREC; Conservation District; local governments	RIDEM; CRMC; local governments
Key funder of BMPs, restoration, & infrastructure	NRCS, Conservation District, Sussex County	None
<b>Outcomes</b>		
Environmental improvements	Medium	Low

**Note:** All assessments of high, medium and low are based on comparisons among the six programs

<sup>a</sup> Measured at the county level

**Table 1: Characteristics of the Six Case Studies (Continued)**

Watershed Characteristics	Salt Ponds (SAMP)	Lake Tahoe (TRPA)
<b>Physical Environment</b>		
Water body	Salt Ponds (RI)	Lake Tahoe (CA, NV)
Size of watershed	32 sq. miles	501 sq. miles
Population	32,000	53,000
Focal problem(s)	Nutrient loading	Nutrients and sedimentation
Sources/Causes of problem(s)	Septic systems, sewage treatment plants, and stormwater runoff	Erosion from development, stormwater runoff, and habitat destruction in the 1960s and 1970s
<b>Institutional Environment</b>		
Jurisdictional complexity	Low	High
Previous planning activity	First watershed plan	Planning efforts date back to 1960s and resulted in federal-state compact in 1969. Planning has continued
<b>Planning Process</b>		
Duration	1979 - 1984 (original); 1994 - 1999	1980 – 1987 (for main regulations)
Driving force	Citizens, local officials	Citizens, NGOs, state officials
Program	NOAA – CZMA	Federal-State compact
Hiring entity for staff	Coastal Resources Center (CRC); Coastal Resources Management Council (CRMC)	TRPA
Level of conflict	Low	High. Environmental, property rights, and development interests
Level of collaboration	Medium. Mostly CRMC and local governments. Little collaboration with RIDEM	Low. A consensus building process used to identify tradeoffs that formed the basis of new regulations
<b>Implementation Activities</b>		
Implementing organization(s)	CRMC and local government	TRPA
Organizational arrangement	Partnership based on shared regulations (i.e., zoning)	Regional Planning Council with politically appointed representatives
Hiring entity for staff	CRMC	TRPA
Nature of conflict	Low	Medium. Same as during planning but conflict has declined
Nature of collaboration	Low. Mostly through informal permit review process	MOUs devolve permitting to locals; \$900 million EIP
Clear goals/policies	No/Yes. Zoning standards and regulations	Yes/Yes. Environmental thresholds and regulations
Key regulatory agencies	CRMC, RIDEM, Local government	TRPA, Lahontan Regional Water Quality Board
Key funder of BMPs, restoration, & infrastructure	None	federal, state, local governments; USFS, California Tahoe Conservancy
<b>Outcomes</b>		
Environmental improvements	Medium	Medium

**Note:** All assessments of high, medium and low are based on comparisons among the six programs

**Table 1: Characteristics of the Six Case Studies (Continued)**

Watershed Characteristics	Tampa Bay (TBEP)	Tillamook Bay (TBNEP)
<b>Physical Environment</b>		
Water body	Tampa Bay (FL)	Tillamook Bay (OR)
Size of watershed	2,300 sq. miles	570 sq. miles
Population	2,000,000	17,000
Focal problem(s)	Nutrient loading leads to loss of seagrass	Closed shellfish beds from bacterial contamination, sedimentation, & salmon listed as endangered species
Sources/Causes of problem(s)	Stormwater runoff, sewage treatment plants, phosphate mining, and fertilizer production	Dairy farms, septic systems, stormwater runoff, and forestry activities
<b>Institutional Environment</b>		
Jurisdictional complexity	Medium – High	Low – Medium
Previous planning activity	Activity dates back to the late 1960s. Two watershed plans developed during the 1980s.	Activity dates back to the late 1970s. Several efforts in 1980s. RCWP runs from 1981 – 1996
<b>Planning Process</b>		
Duration	1990 – 1996 for plan and until 1998 for implementing agreements	1993 – 1999
Driving force	TBRPC, ABM, SWFWMD, FDEP	DEQ, ODF, Tillamook County
Program	EPA’s National Estuary Program	EPA’s National Estuary Program
Hiring entity for staff	TBRPC	Oregon State University
Level of conflict	Low	Low
Level of collaboration	High. Lot of activity focused on research, environmental monitoring, and public education.	Low. Limited by staff turnover. Mostly limited to research and public education
<b>Implementation Activities</b>		
Implementing organization(s)	Tampa Bay Estuary Program (TBEP)	Tillamook County Performance Partnership (TCPP)
Organizational arrangement	Independent alliance of government entities pursuant to FL statute	Intergovernmental partnership
Hiring entity for staff	TBEP	Tillamook County
Nature of conflict	Low	Low
Nature of collaboration	Habitat restoration, stormwater, public education, environmental monitoring	Habitat restoration projects and installing BMPs
Clear goals/policies	Yes/Yes. Goals and binding commitments for nutrient reductions	Yes/Yes. CCMP and TCPP have general goals but specific targets
Key regulatory agencies	FDEP, EPC, SWFWMD, and local governments	DEQ, ODA, and local government
Key funder of BMPs, restoration, & infrastructure	SWFWMD and local governments	ODF, NRCS, GWEB, Tillamook County
<b>Outcomes</b>		
Environmental improvements	High	Medium

**Note:** All assessments of high, medium and low are based on comparisons among the six programs

## **Operational Activities**

Kiser and Ostrom (1982) argue that organizations functioning at the operational level take direct action or adopt strategies for future action depending on expected contingencies. Accordingly, we view activities such as permitting, planning, construction of environmental infrastructure, installation of best management practices (BMPs), public education, and water quality monitoring as operational level activities.

In some cases, collaborative activities at the policy-making level influenced operational activities. For example, Tampa Bay produced a habitat restoration plan intended to redirect where these activities occurred, even if they did not involve collaboration. There was also a wide range of operational activities implemented in a collaborative fashion, many of which were project-based and of limited duration [Table 2]. Common collaborative activities were installing BMPs and undertaking restoration projects. For example, a restoration project might involve one organization providing the funding for land acquisition, another providing technical expertise, another doing the engineering or design work, another the construction or installation of the project, and another doing the maintenance and site management. If volunteers were used, another organization may recruit, organize, and manage the volunteers. Delaware Inland Bays, Lake Tahoe, Tampa Bay, and Tillamook Bay all employed this form of collaboration.

Another type of collaborative activity occurred when one agency hired staff to work in another organization. In Tillamook Bay, the Oregon Department of Forestry (ODF) hired a fish biologist and a wildlife specialist from the Oregon Department of Fish and Wildlife (ODFW) to work entirely on habitat restoration in the Tillamook State Forest. This allowed the ODF to increase its restoration efforts and improved communication between the agencies. In the ODFW, a private timber company pays for staff to work in private forests designing and implementing projects. Project-level activities were also used to develop and distribute educational materials. In Tampa Bay, actors collaborated to produce a boater's guide. Another partnership between the TBEP and the county tax collectors allowed the distribution of more than 100,000 copies of the guide to boat owners renewing their tags.

Another type of collaborative activity was when one actor collected information for another partner. In Delaware Inland Bays, Salt Ponds, and Tillamook Bay, volunteer water quality monitoring programs collect information that is used to varying degrees by decisionmakers in other organizations. In Tampa Bay, local governments and regulatory agencies created a collaborative monitoring program. At the operational level, the actors share data and routinely swap samples to improve their quality assurance-quality control (QA/QC) procedures. In the Salt Ponds, the Coastal Resources Management Council (CRMC) and Rhode Island Department of Environmental Management (RIDEM) work together to try to ensure that the information submitted by permit applicants satisfies both agencies.

There are other examples of collaboration in regulatory programs. The CRMC worked with local building officials to get them to forward permit applicants to the agency and to report violators. RIDEM historically relied on the CRMC to enforce its Section 401 Water Quality Certification under the Clean Water Act (CWA). Conversely, the CRMC relies on the RIDEM's Onsite Sewage Disposal System (OSDS) permit to satisfy that part of the agency's technical



**Table 2: Collaborative Implementation Activities**

Type of Collaboration	DIBEP	NBEP	SAMP	TBEP	TBNEP	TRPA
<b>Operational Level</b>						
▪ Restoration projects/BMPs	X	X		X	X	X <sup>a</sup>
▪ Actor hiring staff to work in another's office					X	X
▪ Develop/distribute educational materials	X			X		
▪ Training of local officials					X	
▪ Scientific/Technical research/guidance	X	X		X	X	
▪ Actor collecting information for another actor	X		X	X	X	
▪ Participating in other collaborative processes		X		X	X	X
▪ Collaborating on joint grant proposals	X	X		X	X	
▪ One actor issues another's permits			X			X
▪ One actor helps enforce another's regulations			X			X
▪ Regulator and actor collaborate to achieve environmental improvements			X	X <sup>a</sup>		X
<b>Policymaking Level</b>						
▪ Identify priority sites for restoration/BMPs			X	X		X
▪ Identify priority sites for infrastructure						
▪ Adopt shared goals				X	X	X
▪ Adopt shared policies			X	X		X
▪ Memorandums of Understanding (MOUs)			X		X	X
▪ Data collection/distribution (e.g., monitoring)				X	X <sup>a</sup>	
▪ Report on joint implementation activities	X			X	X <sup>a</sup>	X
▪ Create a forum to discuss technical issues	X			X		X
▪ Collaborative permit review process			X			
▪ Frequent meetings to share information and coordinate activities	X			X	X	
<b>Institutional/Capacity Building Level</b>						
▪ Create nonprofit organization	X					
▪ Create intergovernmental organization	X		X	X	X	X
▪ Create federal-state compact						X
▪ Develop shared regulations (e.g., zoning)			X			X
▪ Incorporating collective choice policies into other constitutional level rules		X	X	X		X

X = undertaken; X<sup>a</sup> = Planned;

review. Recently, RIDEM began deferring its review of freshwater wetlands permits when the applicant was subject to the CRMC's review of tidal wetlands. In Lake Tahoe, the Lahontan Regional Water Quality Board and the Nevada Department of Environmental Protection (NDEP) defer their review of many activities to the Tahoe Regional Planning Agency (TRPA). The TRPA and the CRMC both meet with local officials and developers to discuss ways to modify projects in order to minimize impacts.

## **Policy-Making Activities**

The policy-making level is analogous to the collective-choice level proposed by Kiser and Ostrom (1982). This level involves the world of collective policy decisions that determine, enforce, continue, or alter the operational activities of some actors. It also includes the development of joint plans for future action. The activities may also serve to synthesize and add additional value to actions occurring at the operational level. Thus, these activities can serve to guide, constrain, or enhance those at the operational level.

A wide range of collaborative activities occurred at the policy-making level [Table 2]. These activities often perform a “steering” function by improving communication between actors, coordinating action, and integrating policies such that each actor’s individual actions (e.g., decision-making processes) advanced a common set of collective goals. Typically, this occurred through the development of shared policies that were contained in a formal document such as a watershed management plan. Tampa Bay developed measurable goals that committed the partners to nutrient reductions and habitat restoration. The Salt Ponds adopted density policies that limit development and nutrient loadings in the watershed. Environmental thresholds (goals) and development restrictions were also developed for Lake Tahoe. Tillamook Bay adopted a number of measurable targets for restoring salmon habitat and addressing pervasive NPS problems in the watershed.

In other cases, the partners agreed to new policies such as priority sites for habitat restoration or the installation of certain BMPs (e.g., Lake Tahoe, Salt Ponds, and Tampa Bay). In the Salt Ponds, the CRMC and local governments agreed on the areas that should be sewered to remove septic systems as well as areas that should not be sewered or have investments in infrastructure in order to limit development. Memorandums of Understanding (MOUs) were developed to formalize shared policies or norms and to guide collaborative efforts at the operational level. For example, Lake Tahoe used MOUs to delegate permitting authority to local governments while the CRMC and RIDEM used an MOU to coordinate their review of wetlands permits. Members of the Tillamook County Performance Partnership (TCPP) signed MOUs committing the partners to its goals.

A key determinant of whether these policy-making activities were effective appeared to be whether the actors developed the ability to monitor and enforce collective decisions, whether it was through a formal or legally binding process (e.g., regulation changes) or through peer pressure mechanisms, social norms, or social sanctions. In fact, we found that informal social rules were an important mechanism for enforcing the voluntary and binding agreements that guided action at the policy-making and operational levels.

Informal social norms were factors in all of the cases and resulted in peer pressure at the political, professional, and interpersonal level. Respondents reported that peer pressure was important because it encouraged implementation, provided informal sanctions for violating social agreements, and improved accountability by creating an important stimulus for implementing the commitments made at the policy-making level. Activities that helped develop and reinforce social norms included regular meetings and interactions among the actors,

development of joint work plans, and the frequent reporting (e.g., performance monitoring) on implementation efforts.

However, collaborative activities at the policy-making level were not limited to the development of shared policies and social norms. These activities served to synthesize information and thereby added value for decisionmakers. For example, Tampa Bay collects data produced by all of the environmental monitoring programs, synthesizes the information, puts it in a form understandable to decisionmakers, and reports on progress towards collective goals. This activity is not limited to collecting environmental data but includes critical information about implementation efforts. Delaware Inland Bays, Tampa Bay, and Tillamook Bay regularly report on the implementation activities of the partners and their progress. TRPA conducts a threshold evaluation every five years to assess its progress. Collective reporting is important because it develops and reinforces peer pressure for the partners to continue their implementation efforts. Reporting also stimulates policy-oriented learning that can serve as a catalyst for policy change (Sabatier and Jenkins-Smith 1999, 1993).

Other collaborative activities at the policy-making level included joint meetings and routine interactions to improve coordination and communication between actors and to stimulate, legitimize, and enhance collaborative activity at the operational level. This activity took many forms. Delaware Inland Bays and Tampa Bay have science and technical advisory committees (STACs) that developed during the planning process. Both have evolved into organizations in their own right that meet regularly. Each STAC serves as a forum for improving communication among the scientific community and technical specialists working in government and NGOs. They also serve as a forum for agencies to go to for technical advice. Lake Tahoe has an Advisory Planning Commission (APC) that serves a similar function. In the Salt Ponds, the CRMC developed an informal permit review process where the agency meets with local officials, the developer, and on occasion the RIDEM while projects are still in the preliminary design stage to discuss the projects and applicable regulations. The organizations or partnerships developed at the institutional level also meet on a regular basis and serve as a forum for improving communication, coordinating actions, and finding opportunities for collaboration at the policy-making or operational level.

### **Institutional/Capacity Building Activity**

The institutional/capacity building level is analogous to the constitutional level proposed by Kiser and Ostrom (1982). This level develops the rules that govern future policy-making and operational activities. Every case involved at least one collaborative activity related to developing new institutions or building capacity to address environmental problems [Table 2].

This occurred by incorporating shared policies into a higher order set of rules that exist at the constitutional level for one or more actors. The Salt Ponds SAMP was designed to serve as a collaborative constitution and a shared set of regulations that function at the constitutional level for most federal, state, and local agencies (Imperial 1999b). Narragansett Bay incorporated its plan into the *State Guide Plan*, which theoretically, this could produce changes in decision-making at the state and local level, although our investigation uncovered no evidence that this occurred. TRPA's *Regional Plan* was adopted by the Lahontan Regional Water Quality Board

as a Section 208 plan. Tampa Bay incorporated its nutrient reduction and habitat restoration policies into a binding interlocal agreement. In each instance, the incorporation of shared policies into higher order rules enhanced accountability and constrained future activities at the policy-making and operational levels.

The other type of activity at the institutional/capacity building level was the development of new collaborative organizations, organizations whose members are other organizations [Table 3]. When a group of individuals or organizations embrace collaborative processes, make joint decisions, and act as a single entity they are in effect acting as a new organization (Jones, et al. 1997; Finn 1996). Researchers use a variety of terms for this organizational form including partnerships, coalitions, strategic alliances, consortiums, and networks. The collaborative organizations we identified varied in their formality with organizational rules prescribed in statutes, legal documents, or by-laws. In other instances, they were the product of informal social norms and rules. There tend to be no formal hierarchies among the members, even though outside the partnership there may be significant power differences (Huxham 1996b, 6). Membership in a collaborative organization may have consequences for the partners (i.e., development of shared policies or social norms) that require resource allocation or constrain an organization's policy-making and operational activities. Collaborative organizations also perform a variety of roles and functions and can be a catalyst for action, conduit for information, advocacy organization, organizer, funder, technical assistance provider, capacity builder, partner in other collaborative efforts, dispute resolver, or facilitator (Himmelman 1996, 35 -37).

The development of collaborative organizations appeared to encourage and expand the range of collaborative activities occurring at the policy-making and operational levels. They also provide a steering function and are a means of organizing and managing the complexity inherent in a governance system where no single organization is in charge. One of the most effective ways this occurred was by creating a "nested" arrangement with a collaborative organization developing shared policies that guided operational activities.<sup>4</sup> Different actors or individuals within an organization were often involved at different levels, which expands the breadth and scope of the social networks resulting from collaborative activities.

Collaborative organizations also improved the capacity for problem solving. Many collaborative organizations were staffed directly or one partner allocated staff to support its efforts. This provides slack resources to absorb the transaction costs associated with organizing collaborative activities at the policy-making and operational levels. The staff can also represent the collaborative organizations in other participatory planning processes, thereby representing this distinct set of interests in other political processes. Other organizations may build upon this new institutional infrastructure. For example, the Southwest Florida Water Management District (SWFWMD) linked its funding for habitat restoration projects to the TBEP's restoration policies while the Florida Department of Environmental Management (FDEP) used its nutrient reduction commitments to satisfy the CWA's total maximum daily loading (TMDL) requirements.

Collaborative organizations also create some measure of stability, which can help legitimize and sustain collaborative activities and encourage investments in these collaborative processes and other relation-specific assets (Milward and Provan 2000; Dyer and Singh 1998;

**Table 3: Examples of Collaborative Organizations**

<b>Watershed</b>	<b>Collaborative Organizations</b>
<b>Delaware Inland Bays</b>	<ul style="list-style-type: none"><li>▪ Center for the Inland Bays</li><li>▪ Citizens Advisory Committee (CAC)</li><li>▪ Scientific and Technical Advisory Committee (STAC)</li></ul>
<b>Lake Tahoe</b>	<ul style="list-style-type: none"><li>▪ Tahoe Regional Planning Agency</li><li>▪ Tahoe Transportation and Water Quality Coalition</li><li>▪ Coordinated Transit System</li></ul>
<b>Tampa Bay</b>	<ul style="list-style-type: none"><li>▪ Agency on Bay Management</li><li>▪ Tampa Bay Estuary Program</li><li>▪ Nutrient Management Consortium</li><li>▪ Florida West Coast Regional Ambient Monitoring Program</li><li>▪ Scientific and Technical Advisory Committee</li></ul>
<b>Tillamook Bay</b>	<ul style="list-style-type: none"><li>▪ Tillamook County Performance Partnership</li><li>▪ Tillamook Coastal Watershed Resource Center</li><li>▪ Tillamook Watershed Council</li></ul>

Cropper 1996; Huxham 1996b). Stability promotes the development of strong social networks, cooperation, and trust since interactions are repeated over a long period of time, there are ways to monitor behavior, and agreements can be enforced through formal or informal sanctions (Milward and Provan 2000; Axelrod 1997, 1984; Ostrom, et al. 1994; Ostrom 1990). This process generates social capital (Leana and Van Buren 1999; Tsai and Ghoshal 1998) as well as social norms and peer pressure that allows the members to hold one another accountable. This helps ensure that commitments at the operational and policy-making levels are adhered to (Leana and Van Buren 1999). However, our data suggested that accountability is a two-edged sword. There is a constant tension between organizational autonomy and accountability (Huxham 1996b; Fredericksen and London 2000). Accountability mechanisms can help reduce costly strategic behavior (e.g., free riding, social loafing, rent seeking, turf guarding, shirking), whether it is formal sanctions or informal social norms and peer pressure mechanisms. However, excessive monitoring and enforcement can also create a strong disincentive because collaborators may resist joining an effort if they fear reprisals and criticism.

The stability created by a collaborative organization can also encourage investment in collaborative processes and other relation-specific assets because there is a reasonable possibility of reaping benefits over the long term (Milward and Provan 2000, 372; Dyer and Singh 1998). It also allows the members to learn how to collaborate, find ways to govern collaborative processes, and discover which actors can be trusted (Milward and Provan 2000; Dyer and Singh 1998; Simonin 1997). Our results clearly suggest that collaboration was a trial and error process. As actors worked together, trust developed and they found new ways to add public value. However, while stability can be a strength, investment in collaborative processes and the

development of stable network relationships may make it difficult to adapt and change in the future (Milward and Provan 2000).

## **Value Added by Collaboration**

Many factors influenced an organization's propensity to engage in collaborative activity (Imperial and Hennessey 2000).<sup>5</sup> However, our focus here is not to examine these factors or propose another theoretical model to explain why collaboration occurs. Rather, we explore the more fundamental question of how these activities add public value. It is an important theoretical question because value is added in many ways at the individual, organizational, network, and societal levels, although most research tends to focus on a single level using a limited set of values. The question is also important to practitioners. Collaborators must "perceive" that the benefits outweigh the costs or they may be unwilling to become engaged in these activities.

## **Conceptualizing Public Value**

Several lines of research have addressed the value-added question. Building on the work of Moore (1996, 10), Bardach (1998, 9) argued that collaboration should only be used when these activities add public value and results in better organizational performance or lower costs than can be achieved without it (Bardach 1998, 17). In some cases, this may be relatively simple because there was no other practicable way to achieve similar outputs or outcomes without collaborating. It may also reflect a type of synergistic effect whereby organizations voluntarily choose to work together to jointly produce outputs in a manner that adds more value than could be achieved by working unilaterally.

Huxham (1996b) uses a similar concept of collaborative advantage, which focuses on the outputs of collaboration that could not be achieved except through collaborating. This occurs when an organization, through collaboration, is able to achieve its own objectives better than it could alone. In some cases, collaboration may also achieve higher level objectives for society as a whole rather than just a single organization (Huxham 1996b).

A third concept used to capture the value-added concept is relational rents (Dyer and Singh 1998). It builds on the self-interest logic, is grounded in transaction cost economics, and is consistent with the concept of competitive advantage. Relational rents are possible when partners combine, exchange, or invest in relation-specific assets, knowledge, and resources/capabilities, or employ effective governance mechanisms that lower transaction costs or permit the realization of rents through the synergistic combination of assets, knowledge, and capabilities (Dyer and Singh 1998, 662).

The public value, collaborative advantage, and relational rent conceptualizations are consistent with the two rationales for collaboration prevalent in the literature (Huxham 1996a). The first is self-interest. An organization may choose to collaborate because it can achieve something that can be achieved in any other way, although, this need not, and should not, imply that the self-interest is at the expense of others (Huxham 1996a). Thus, collaboration is

frequently limited primarily to win-win or win-no-lose situations. Organizations tend to look for opportunities for mutual gain but are often willing to participate with limited gain if the transaction costs are relatively low. The potential for win-lose situations is reduced because it is a voluntary activity and organizations typically interact as equals with a symmetric power relationship. This necessarily implies that collaboration is strategic in nature. In order to maintain relationships, collaborators must be willing to agree to disagree in other areas and respect these differences. Accordingly, it was frequently the case that actors with a history of conflict or ongoing conflicts in other policy areas found ways to work together to address common problems (Lake Tahoe, Narragansett Bay, Salt Ponds, Tampa Bay).

The second rationale for collaboration is a moral one. It reflects a belief that really important public policy problems facing society cannot and should not be tackled by a single organization or level of government acting alone (e.g., Milward and Provan 2000; Huxham 1996b). Therefore, collaboration ensures that a greater range of interests is represented in our political system when addressing policy problems (Ostrom 1989). Thus, it enhances the democratic features of our polycentric federal system, builds social capital, and encourages a civil society by building new organizational and social networks and involving citizens in governmental and nongovernmental institutions.

Unfortunately, previous network research tends to focus on a limited set of values such as social capital and trust (e.g., Leana and Van Buren 1999; Tsai and Ghoshal 1998) or learning and innovation (e.g., Kraatz 1998; Simonin 1997). Some levels of analysis have received little attention with most network studies examining individual connections in social networks (e.g., Wasserman and Galaskiewicz 1994). There is also a general lack of research targeted at measuring network performance and how specific features of a governance structure influence outcomes, regardless of how measured (e.g., Milward and Provan 1998; Provan and Milward 1995; Provan and Sebastian 1998). The same is true with implementation research, which tends to view “success” from the perspective of one actor using a limited set of criteria such as compliance (e.g., Mazmanian and Sabatier 1983), feasibility (e.g., Linder and Peters 1987), effectiveness (e.g., Lippincott and Stoker 1992), level of effort (e.g., Thompson and Scicchitano 1985), policy outputs (e.g., Ringquist 1993a), and policy outcomes (e.g., Ringquist 1993b).

### *A Framework for Understanding the Public Value Added by Collaboration*

We concluded that collaborative activity has the potential to add value in numerous ways. It can improve an organization or network’s ability to produce policy outputs or outcomes. Table 4 summarizes the major accomplishments and future challenges associated with each implementation effort. In most cases, these activities involve or require some form of collaboration.<sup>6</sup> Each case also resulted in a wide range of implementation activities that were either collaborative in nature or an organization’s operational activities were influenced or constrained by collaborative activities at the policy-making or institutional level. Examples of common implementation activities included substantial investments in environmental infrastructure (e.g., Delaware Inland Bays, Lake Tahoe, and Salt Ponds), stormwater retrofits (e.g., Tampa Bay), habitat restoration (e.g., Delaware Inland Bays, Lake Tahoe, Tampa Bay, and Tillamook Bay), and the installation of BMPs (e.g., Delaware Inland Bays, Lake Tahoe, and

Tillamook Bay). Other activities included the education of homeowners (e.g., Tampa Bay) and farmers (e.g., Delaware Inland Bays and Tillamook Bay) to address NPS problems.

While achieving environmental improvements were often the driving force behind initiating collaborative activities, when asked about the value of implementation efforts most respondents did not identify improved environmental conditions. Instead, they identified numerous intangible benefits such as improved trust, personal relationships (i.e., social networks), and enhanced working relationships among organizations.<sup>7</sup> For many respondents, this increased social capital was a significant source of public value because it enhanced their ability to undertake additional collaborative activities. Other respondents noted that the efficiency or equity of a program or process improved through economies of scale, technical specialization, or improved organizational capacity. Respondents also reported that collaboration resulted in changes in decision making that advanced the missions of one or more organizations or improved resource allocation. The creation of new collaborative organizations also increased stability and provided a mechanism for managing activities at other levels.

In Table 5, we organize our findings related to the types of public value. Our approach follows the suggestions of Ostrom (1999) and others (e.g., Imperial and Hennessey 2000; Imperial 1999a, 1999b; Ostrom, et al. 1994; Ostrom, et al. 1993) by recognizing that collective action occurs at different levels and that value can be added in different ways. The concepts are interrelated and in some cases span multiple levels. For example, social capital can be generated at all four levels through social networks between individuals and organizations that result in trust and reciprocity (Leana and Van Buren 1999; Tsai and Ghoshal 1998; Putnam 1995; Coleman 1990). Other respondents reported that personal relationships and trust facilitated interactions and led to future collaboration.

Social networks also encourage learning at all levels. All of the cases contain examples of the type of policy-oriented learning observed by Sabatier and Jenkins-Smith (1999, 1993) and the type of social learning discussed in the environmental policy literature on adaptive management (e.g., Lee 1995, 1993; Holling 1995, 1978; and, Gunderson, et al. 1995). In fact, numerous respondents reported that they had a better understanding of issues and problems as well as how other organizations operated. This was particularly evident in watersheds with a history of collaboration or conflict, which suggests that it is the ongoing interaction of individuals and organizations that promotes learning.

Understanding policy outputs and outcomes also requires looking across levels of analysis. Organizations may produce outputs as a result of collaboration that otherwise would not be possible. They also produced outputs more quickly (e.g., ODFW staff working in ODF) and at less cost (e.g., using volunteers), which resulted in “more bang for the buck”. The network itself may generate its own resources to undertake implementation actions. It can also provide the slack resources to help organize and manage collaborative activities that may enhance organizational outputs. This was particularly true where a collaborative organization was developed to manage and encourage collaboration (e.g., Delaware Inland Bays, Lake Tahoe, Tampa Bay, and Tillamook Bay). These outputs presumably result in greater environmental improvements (i.e., policy outcomes) than would otherwise have occurred.



**Table 4: Selected Accomplishments and Future Challenges of the Case Studies**

Case Study	Accomplishments	Challenges
<b>Delaware Inland Bays</b>	<ul style="list-style-type: none"> <li>▪ Hydrologic Unit Area (HUA) program</li> <li>▪ Inland Bays Recovery Initiative</li> <li>▪ Water Use Plan</li> <li>▪ TMDL and tributary strategies</li> <li>▪ \$158 million in sewer infrastructure</li> <li>▪ \$13 million in land aquisition</li> <li>▪ Restoration project at James Farm</li> </ul>	<ul style="list-style-type: none"> <li>▪ Center for the Inland Bays (CIB) is still a relatively new organization</li> <li>▪ Agricultural nutrient loadings are still a major problem</li> <li>▪ Revised comprehensive plans in 1988 and 1997 but development continues</li> <li>▪ CCMP is decreasing usefulness</li> </ul>
<b>Lake Tahoe</b>	<ul style="list-style-type: none"> <li>▪ Growth controls in the <i>Regional Plan</i></li> <li>▪ Devolution of permitting to local governments</li> <li>▪ Joint lobbying agenda with agencies and NGOs</li> <li>▪ \$900 Million Environmental Improvement Program</li> <li>▪ Presidential Summit</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unclear if funding for EIP will be obtained, particularly local government's share</li> <li>▪ Unclear what is causing declining lake clarity</li> </ul>
<b>Narragansett Bay</b>	<ul style="list-style-type: none"> <li>▪ Greenwich Bay Initiative</li> <li>▪ Designation of state as "no-discharge zone" for recreational boating</li> <li>▪ Improved planning capacity in RIDEM</li> </ul>	<ul style="list-style-type: none"> <li>▪ Collection of projects not a program</li> <li>▪ State provides no implementation funding</li> <li>▪ CCMP is no longer used or viable</li> </ul>
<b>Salt Ponds</b>	<ul style="list-style-type: none"> <li>▪ Shared zoning policies that balanced tradeoffs among sewers and OSDs</li> <li>▪ Local environmental ordinances</li> <li>▪ Prevented development of undeveloped barrier beaches</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of program to do habitat restoration</li> <li>▪ Lack of collaboration with RIDEM</li> </ul>
<b>Tampa Bay</b>	<ul style="list-style-type: none"> <li>▪ Interlocal Agreement</li> <li>▪ Nutrient Management Consortium</li> <li>▪ Efforts to coordinate monitoring programs</li> <li>▪ State land acquisition programs</li> <li>▪ Stable implementation funding</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of linkage with land use planning</li> <li>▪ Need to address localized water quality problems</li> <li>▪ Need to bring in other local government and instustry partners</li> </ul>
<b>Tillamook Bay</b>	<ul style="list-style-type: none"> <li>▪ Tillamook County Performance Partnership (TCPP)</li> <li>▪ Funding for BMPs in state forests</li> <li>▪ Development of the Tillamook Coastal Watershed Resource Center</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limited financial resouces at the county level</li> <li>▪ TCPP is developing as an organization</li> <li>▪ Flooding events distract public attention and resources from other NPS problems</li> </ul>

Our findings suggest several types of public value accrued at the individual level. Collaborative activities can improve job satisfaction and motivation because it developed new personal relationships and a "team" approach to problem solving. It also allows individuals to learn new skills and use talents that are not utilized in regular job assignments. Other respondents reported that satisfaction was derived from the additional environmental

**Table 5: Potential Sources of Public Value from Collaboration**

<b>Level</b>	<b>Public Value</b>
<b>Individual</b>	<ul style="list-style-type: none"> <li>▪ Increased job satisfaction</li> <li>▪ Increased motivation</li> <li>▪ Learning, adaptation, and change                             <ul style="list-style-type: none"> <li>– Learn new skills (e.g., professional development)</li> <li>– Better decisions &amp; judgment</li> <li>– Improved job performance</li> </ul> </li> <li>▪ Social capital                             <ul style="list-style-type: none"> <li>– Social networks among individuals results in trust, reciprocity, and reputation</li> </ul> </li> </ul>
<b>Organizational</b>	<ul style="list-style-type: none"> <li>▪ Additional policy outputs</li> <li>▪ Learning, adaptation, and change                             <ul style="list-style-type: none"> <li>– Innovation adoption &amp; policy change (e.g., organizational change)</li> <li>– Organizational learning (e.g., collaborative know how)</li> <li>– Policy-oriented learning</li> </ul> </li> <li>▪ Increased organizational capacity                             <ul style="list-style-type: none"> <li>– Increase organizational efficiency/effectiveness (e.g., improved service delivery)</li> <li>– Improved decision making &amp; resource allocation (e.g., improved program management)</li> <li>– Develop new programs or modify mission (e.g., ability to survive and flourish)</li> <li>– Leveraging new resources</li> <li>– Improved internal and external communication</li> </ul> </li> <li>▪ Social capital                             <ul style="list-style-type: none"> <li>– Social networks among organizations results in trust, reciprocity, and reputation</li> </ul> </li> </ul>
<b>Network</b>	<ul style="list-style-type: none"> <li>▪ Additional policy outputs</li> <li>▪ Learning, adaptation, and change                             <ul style="list-style-type: none"> <li>– Innovation generation and diffusion</li> <li>– Policy-oriented learning</li> </ul> </li> <li>▪ Increased network capacity                             <ul style="list-style-type: none"> <li>– Increased communication among network members</li> <li>– Policy integration (e.g., coordination &amp; shared policies)</li> <li>– Leveraging resources for the network or its members</li> <li>– Leveraging policy networks (e.g., improved lobbying)</li> </ul> </li> <li>▪ Social capital                             <ul style="list-style-type: none"> <li>– Social and organizational networks results in trust, reciprocity, and reputation</li> <li>– Institutional infrastructure</li> </ul> </li> </ul>
<b>Societal</b>	<ul style="list-style-type: none"> <li>▪ Improved policy outcomes</li> <li>▪ Policy-oriented learning</li> <li>▪ Social capital                             <ul style="list-style-type: none"> <li>– Social and organizational networks result in trust, reciprocity, and reputation</li> <li>– Institutional infrastructure</li> </ul> </li> <li>▪ Increased civil society                             <ul style="list-style-type: none"> <li>– Citizen involvement in government institutions, volunteerism</li> <li>– Develop new institutions (e.g., NGOs)</li> <li>– Improved political representation and accountability</li> <li>– Citizen satisfaction with government institutions</li> </ul> </li> </ul>

improvements achieved and the fact that collaboration often broke down political and bureaucratic barriers between agencies, frequently a source of frustration for respondents. Since these benefits appeared to improve job satisfaction and motivation, it is reasonable to suspect that it could improve the productivity and job performance. It may also increase an individual's willingness to become engaged in future collaborative activities.

Collaboration also adds public value at the organizational level by enhancing an organization's ability to learn, adapt, and change. Interactions with other organizations encouraged policy-oriented learning (Sabatier and Jenkins-Smith 1999, 1993) and the diffusion of innovations (Rogers 1995). As a result, collaboration can lead organizations to change policies and adopt new practices. Collaboration can also result in "collaborative know how" (Simonin 1997). This is the knowledge learned through collaborative experience that allows organizations to obtain additional benefits from future efforts (Dyer and Singh 1998; Kraatz 1998; Simonin 1997). This includes doing a better job of identifying and selecting potential collaborators, negotiating the terms and structure of agreements, monitoring and managing ongoing collaborative efforts, and making decisions about when to terminate collaboration (Simonin 1997, 1155).

Collaboration can also develop an organization's capacity to solve problems and implement policies (Fredericksen and London 2000; Malysa 1996; King and Olson 1988; and, Honadle 1981). Our data suggests that collaboration can improve communication among organizational sub-units and increased communication with other organizations. Collaboration also improved an organization's ability to make decisions and allocate resources. For example, in Tampa Bay, the development of nutrient reduction goals and a habitat restoration plan allowed individual organizations to use existing resources more effectively. It can also improve service delivery. An excellent example was in Lake Tahoe when TRPA delegated permitting authority to local governments, which reduced the number of permits applicants needed to obtain. Collaborative activities can also leverage new organizational resources, whether provided by network members or other organizations.

At the network level, collaboration adds public value in similar ways. Networks often involve interactions among socially dissimilar individuals, otherwise known as heterophilous communication. This accelerates diffusion between different networks (Rogers 1995, 288). Conversely, collaboration can occur among similar individuals or organizations (i.e., homophilous communication), which facilitates diffusion within networks (Rogers 1995, 287). We believe collaboration has a high potential for diffusing innovations because it often involves both forms of communication. Collaborative organizations also promote innovation adoption and often sponsor demonstration projects that test new policies, programs, or practices, which subsequently can diffuse among network members.

Collaboration can also improve the capacity for collective action and problem solving at the network level (Malysa 1996; King and Olson 1988; and, Honadle 1981). The development of shared policies and other coordination mechanisms improves policy integration. Consequently, existing resources and expenditures are allocated more effectively. The habitat restoration plan developed by Tampa Bay is good example. It redirected projects occurring in

the watershed around a common set of priorities that should lead to greater environmental improvements from existing government expenditures.

The network itself may be able to leverage resources that facilitate collective action. Collaborative organizations can leverage resources to undertake their own implementation activities (e.g., Delaware Inland Bays, Tampa Bay, and Tillamook Bay). They may also leverage resources to organize and facilitate other collaborative activities, thereby absorbing the transaction costs that would otherwise be incurred by the partners.

Collaborative organizations and shared policies can also be important forms of institutional infrastructure that other organizations and collaborative efforts can build upon, which makes them an important source of social capital. For example, the development of shared priority sites for habitat restoration allowed Florida's land acquisition programs and other funding agencies (e.g., SWFWMD) to link their funding priorities to those policies. Meanwhile, the TBEP's staff often represents the network in other collaborative activities. Collaboration may also allow the partners to leverage each other's policy networks and lobby more effectively. The best example is Lake Tahoe where the Tahoe Transportation and Water Quality Coalition created the Lake Tahoe Joint Federal Legislation Agenda such that the individual actors could lobby congress more effectively.

Collaboration can also result in societal benefits. Collaborative implementation activities can improve environmental conditions and stimulate policy-oriented learning such that the policies and practices at the watershed level diffused to other networks. The social and organizational networks generate a great deal of trust and reciprocity. They also provide numerous opportunities for individuals to interact and talk about issues of common interest, which in many cases extends beyond the groups functional interests. Scholars such as Putnam (1995) have argued that this social capital is an important part of our democratic system. Collaborative activities can encourage a civil society by providing opportunities for citizens to volunteer time and become involved in civic institutions. It can also result in new institutions, whether they are collaborative organizations or nongovernmental organizations (NGOs). These institutions ensure that specific political interests (e.g., watershed interests) are represented in future policy deliberations. They also increase accountability for ensuring specific policy outcomes are achieved. This can increase citizen satisfaction with the performance of government institutions.

### *Potential Costs of Collaboration and Other Constraints*

It is also important to recognize that collaboration can create significant transaction costs. It is time consuming, costly, and can stimulate a wide range of strategic behavior with little corresponding public benefit. Common forms of strategic behavior include free riding, rent seeking, social loafing, and turf guarding (Leana and Van Buren 1999; Bardach 1996; Ostrom, et al. 1993). Collaborative efforts are also likely to increase coordination costs.

Our data suggested that there is a wide range of actual or "perceived" costs that also occur at different levels. Collaboration was a source of decreased job satisfaction and motivation for some respondents. Sources of dissatisfaction included: making new friends was not in the

job description; disliked working in teams; frustration with the political nature of these activities; and endless meetings were unproductive and a waste of time. Motivational factors such as increased workload and higher stress coupled with no corresponding increase in pay or recognition by upper management can be strong disincentives for participating in collaborative activities. Utilizing volunteers can increase administrative costs associated with recruiting, organizing, and managing volunteers. The previous history of individual and organizational relationships (e.g., distrust, conflict, turf fights) could also create barriers.

Collaborative activities can generate trust but also result in conflict and distrust. Our data also suggests that a negative experience can have a more profound effect on respondents than a positive effect. In other words, a positive experience may not be a strong rationale for future collaborative activity but a negative experience was frequently used to justify not being engaged in an activity. The public could also be exposed to interagency conflicts and turf fights. This could lead to negative views of government institutions and reinforce damaging stereotypes about bureaucracy and government.

While the polycentric structure of our federal system creates numerous opportunities for collaboration, it also imposes a formidable set of constraints. Many governmental and nongovernmental organizations were created to protect constituencies and advance specific interests. Therefore, some organizations may be reluctant to participate in a collaborative process and fear co-optation. Asymmetries of information, power, or resources can also give one organization control over the effort or allow it to “exit” the process and act on its own, thus undermining collaborative activities. Enabling legislation and constraints placed on agencies by the budget process may limit their ability to adopt new policies or programs. Policy change may require political costs that agency officials are unwilling to incur. Some organizations and individuals will be more innovative than others (Rogers 1995). Thus, commitments to collaboration among network members are likely to vary.

Since collaboration appears to be limited primarily to win-win and win-no-lose situations, respondents also reported that it often involved bargaining to the “lowest common denominator” such that no actor’s interests are threatened. This could result in sub-optimal policies that are unable to effectively address the problem. Moreover, since collaboration is limited to issues of mutual interest, it may have limited utility in addressing controversial issues. It is also possible that capacity will not be developed in the areas where it is needed most.

However, even if the public value outweighs the costs, organizations must have the slack resources (e.g., financial, staff, etc.) necessary to participate in these activities. If no organization can do more than send staff to a meeting, then it is unlikely that the group of organizations can accomplish much. The more successful collaborative efforts proved to be those that allocated staff to support activities and absorb the associated transaction costs. The development of a “culture of collaboration” within participating organizations, which supports and rewards organizational sub-units for engaging in these activities, also appeared to create positive incentives for collaboration. Respondents suggested that the failure to reward organizational sub-units or punishing them when collaboration reduced resources available for core programs was important disincentive for collaboration. Others suggested that top management is sometimes reluctant to share credit with other organizations or fails to recognize

any source of public value beyond environmental improvements. Collaboration is also a risky endeavor since it requires ceding some control, sharing risks, and becoming dependent upon others for success (Himmelman 1996, 28). This may make some organizations unwilling to participate in collaborative activities.

Accordingly, even if collaboration has the potential for adding public value, it can result in significant transaction costs that outweigh these benefits. Formidable constraints also limit an organization's ability to become engaged in collaborative activity. Thus, it is not unusual for the rate of work output to be slower when working collectively rather than individually, a phenomena Huxham (1996b, 4) calls collaborative inertia.

## **Summary and Conclusions**

We concluded that collaboration can be a useful implementation strategy that can add value to the implementation process (e.g., increased communication, trust, etc.) or create new governance mechanisms (e.g., shared policies, collaborative organizations, etc.). While our data did not allow us to determine whether these activities improved policy outcomes (i.e., improved environmental conditions) above what would have occurred by the actors working independently, the data on implementation activities did suggest that such improvements were likely to occur at some point in the future.<sup>8</sup> Thus, these findings are consistent with O'Toole's (1997) argument that collaboration would be a useful implementation strategy for addressing "wicked problems" such as those associated with NPS pollution and habitat protection and restoration.

While our findings suggest that collaboration can be an effective implementation strategy, it was also clear that it is only one strategy and there are clear limits to its use in different contextual settings. Accordingly, we do not count ourselves among the "true-believers" that view collaboration as some sort of magical elixir that will cure all governance problems. Rather, we join with Bardach (1996) and others (e.g., Huxham 1996b) who argue that collaboration is not a panacea. It should only be valued in so far as it produces better organizational performance or lower costs than can be achieved without it. As Bardach (1998, 17) 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."

The most imaginative practitioner will still be constrained by the realities of a federal system that places government organizations at the federal, state, and local level in conflict with one another. There will always be an underlying tension about whether federal, state, regional, or local government priorities should govern decision making at the watershed level, which will be further complicated by various NGOs and their connections and influence on these governmental organizations. Limits also exist in how much different organizations can, or should be, willing to

sacrifice for the sake of collaboration, no matter how noble the goal. Moreover, no amount of creativity will overcome the shortage of resources (e.g., staff, money, etc.) that is an obstacle to collective action (Bardach 1998, 17).

Accordingly, while the portfolio of government programs in various policy arenas creates opportunities for collaboration, there are limits with respect to how much of this collaborative capacity practitioners can or should be willing to utilize. The challenge for practitioners is to find opportunities for collaboration that add public value while at the same time minimizing the problems and transaction costs resulting from these activities. Practitioners are therefore cautioned to use collaboration wisely. When used incorrectly or in inappropriate situations it can create more problems than it solves.

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## **Endnotes**

<sup>1</sup> Our definition is somewhat broader than Bardach's (1998) and explicitly includes nongovernmental organizations (NGOs) who are often involved in these activities as well.

<sup>2</sup> While our interest is primarily on the role that collaboration plays in implementing watershed management plans, all of the cases relied on some form of participatory planning process, which is itself is an IGM strategy.

<sup>3</sup> This paper is part of a larger project that resulted in a report for the National Academy of Public Administration entitled *Environmental Governance in Watersheds: The Importance of Collaboration to Institutional Performance* (Imperial and Hennessey 2000). This report and the six supporting technical reports (i.e., case studies) provide additional information and documentation to support the findings described in this paper. For more information see Hennessey and Imperial (2000a), Imperial (2000a, 2000b), Imperial, et al. (2000), Imperial and Hennessey (2000), Imperial and Summers (2000), and Kauneckis, et al. (2000). Additional documentation and discussion of the research design can be found in our final report to the Academy (Imperial and Hennessey 2000).

<sup>4</sup> However, collaborative activities need not occur in a "nested" fashion and may be unconnected with one another. It is also possible that collaborative activities will be located at only one level. For example, in Narragansett Bay the effort never achieved much more than operational level collaboration.

<sup>5</sup> For example, our findings were consistent with previous research (e.g., Alexander 1995; Hall 1995) arguing that organizational culture (e.g., attitudes towards change), histories (e.g., past conflicts or collaborative experience), organizational structure (e.g., formalization, centralization, task specialization), resources (e.g., slack resources, staff expertise and training, financial resources, organizational capacity), strategy (e.g., innovativeness, boundary spanning), and the symmetries or asymmetries of resources, power, and interdependence are important factors influencing the propensity for collaboration.

<sup>6</sup> The actual determination of the extent to which collaboration improved environmental conditions proved to be a complicated methodological problem. Instead, our analysis focused primarily on identifying those regulatory and nonregulatory activities used to implement watershed management plans that had some promise of improving

environmental conditions, enhancing watershed governance, or producing other societal benefits. These included actions taken individually or collaboratively that offered some promise of direct (e.g., construction of sewers, installation of BMPs, and habitat restoration projects) or indirect (e.g., planning efforts, changes to regulations or decision making processes, public education) environmental improvements. When viewed from this perspective, the watershed management programs generally were quite effective and involved in a wide range of implementation activities that were either collaborative in nature or were individual activities that were influenced by other collaborative activities. For a detailed discussion of the methodological problems and a discussion of the actual changes in environmental conditions in these watersheds see Imperial and Hennessey (2000).

<sup>7</sup> Intangible benefits of collaboration are not limited to the public sector. There are many intangible benefits resulting from networks of private firms as well such as learning and social capital (Simonin 1997).

<sup>8</sup> For a discussion of these methodological problems see Imperial and Hennessey (2000).

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