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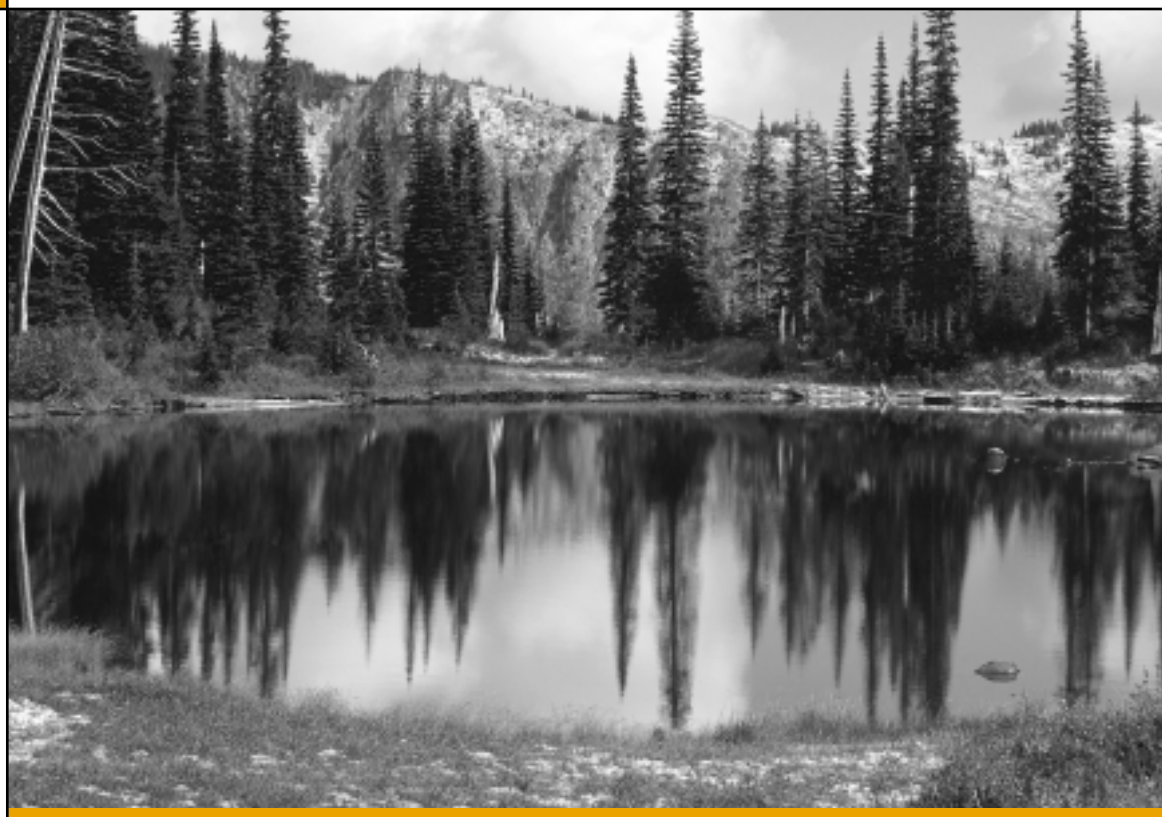
Collaboration and Performance Management in Network Settings: Lessons from Three Watershed Governance Efforts



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IBM Center for
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Collaboration Series

COLLABORATION SERIES

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FOREWORD

April 2004

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, "Collaboration and Performance Management in Network Settings: Lessons from Three Watershed Governance Efforts," by Mark T. Imperial.

This report summarizes insights gained from three case studies in an area noted for complexity and its intergovernmental nature: the management of the nation's watersheds. Professor Imperial provides recommendations for all public managers operating in network settings.

The insights and recommendations presented by Professor Imperial are increasingly applicable to a wide range of public problems faced by government executives. Successful public managers are frequently finding that to deliver results means having to work in a collaborative setting where they may have influence, but not necessarily control, over an outcome. In such an environment, managers are increasingly forming networks and partnerships to achieve objectives that no single organization or entity can achieve alone. Professor Imperial concludes, "… public managers are relying on two mutually reinforcing strategies to improve network governance: collaboration and performance management systems."

When taken together, the strategies of collaboration and performance management systems serve as powerful motivators for action and getting results in addressing complex public challenges. Professor Imperial's report provides a practical primer for all government managers on how to get started. We trust that this report will be useful and informative to all managers, including those managing our nation's watersheds.

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EXECUTIVE SUMMARY

A central challenge for practitioners is finding ways to improve governance where the power and capacity for solving policy problems is widely dispersed, and few organizations accomplish their missions by acting alone. Thus, public managers increasingly find themselves operating within networks of governmental and nongovernmental organizations to deliver services and achieve policy outcomes. In response, public managers are relying on two mutually reinforcing strategies to improve network governance:

- *Collaboration*—two or more organizations working together to deliver services and produce more public value than could be produced when organizations act alone
- *Performance management systems*—systems that include goals, performance measures, monitoring, and reporting processes designed to improve service delivery and enhance accountability

The strategies are mutually reinforcing because collaborative processes can be used to develop performance measures and can improve monitoring and reporting processes. Performance management can motivate organizations to work together to achieve collective goals and encourage partners to adhere to agreements developed using collaborative processes.

This report focuses on the use of collaboration and performance management in network settings. It looks at various ways that collaboration is used to enhance performance management systems. It also discusses the ways that performance management can encourage collaboration, increase accountability, and improve service delivery in network settings. More specifically, the report focuses on two questions: (1) How does collaboration support the use of performance measurement? (2) How can performance measurement encourage and enhance collaborative processes? To answer these questions, the study examines the collaborative activities and performance management systems in three watershed governance efforts: Lake Tahoe (California and Nevada), Tampa Bay (Florida), and Tillamook Bay (Oregon).

This report reveals several important findings of interest to public managers operating within network settings. Since there are many reasons for organizations to work together, collaboration takes many forms and is often oriented toward getting things done by enhancing service delivery and improving environmental conditions. Collaborative activities also make it easier to get things done by pooling resources (e.g., staffing, funding, and expertise) in ways that improve a network's capacity for solving shared problems. Collaboration also supports performance management. Collaboration can improve monitoring programs and produce information necessary for performance measurement systems. The interactive processes at the heart of collaborative processes also promote information sharing and encourage the development of performance measures to enhance accountability.

Since there are many reasons to measure network performance, no single measure or collection of measures is likely to be appropriate for all circumstances. This proved to be the case in all three watersheds, where a variety of measures and monitoring processes are employed that rely primarily on outcome and output measures. Performance management systems also serve a variety of functions in network settings including:

- Evaluation and accountability
- Steering, coordinating, and collective priority setting
- Motivating action
- Promoting and celebrating progress
- Learning and enhanced governance

While performance management serves many useful purposes, it also presents challenges to public managers:

- Establishing performance measures can be controversial when measures highlight conflicting social values
- Overcoming complexity, cost, and attribution problems, which can complicate the development of performance management systems
- Developing performance management systems that find ways to motivate joint action and enhance collaborative processes
- Creating performance management systems that create accountability without imposing disincentives that cause autonomous network actors to resist participation
- Having the leadership necessary to get network members to agree to participate in performance management systems

The study concludes by presenting five general lessons for public managers seeking to use collaboration and performance management systems to improve network governance.

- Recommendation 1: Use collaboration when it produces more public value than can be achieved by working alone.
- Recommendation 2: Use interorganizational partnerships as an effective way to promote collaboration and performance measurement in network settings.
- Recommendation 3: Design performance management systems that serve the needs of network participants.
- Recommendation 4: Build performance management systems that promote and enhance collaborative processes.
- Recommendation 5: Avoid the tendency to be overly ambitious.

Introduction

Overview

Public managers recognize the ubiquitous nature of networks and the important roles they play in social and organizational life.[1] The prevalence of networks is due in part to the tendency for policies and programs to aggregate around challenging public issues. This is particularly true in the area of environmental policy, where a complex array of programs exists at the federal, state, and local levels. This portfolio of government programs varies across state and local governments due to differences in capacity and the policy innovation that is an essential part of our changing federal system of government. Accordingly, a central challenge for public managers is finding ways to improve governance in a world of shared power where the capacity for solving policy problems is widely dispersed and few organizations accomplish their missions by acting alone.[2]

Governance refers to the means for achieving direction, control, and coordination of individuals and organizations that have varying levels of autonomy to advance the interests or objectives to which they jointly contribute. It involves the configuration of:

- Governmental and nongovernmental organizations
- Statutes
- Organizational, financial, and programmatic structures
- Administrative rules and routines
- Resource levels
- Institutionalized rules and norms

It also involves formal organizational structures, personal relationships, and judgment by those individuals working in the complex networks of programs involved in administering public programs. Thus, it is inherently political and involves bargaining, negotiation, and compromise.[3]

Public managers increasingly rely on two mutually reinforcing strategies to improve network governance:

- *Collaboration*—two or more organizations working together to deliver services and produce more public value than could be produced if the organizations act alone
- *Performance management systems*—systems that include goals, performance measures, monitoring, and reporting processes designed to improve service delivery and enhance accountability

The strategies are mutually reinforcing because collaborative processes can be used to develop performance measures and can improve monitoring and reporting processes. Performance management can motivate organizations to work together to achieve collective goals and encourage partners to adhere to agreements developed using collaborative processes.

What Is a Watershed?

A watershed is the area of land that catches rain and snow that drains or seeps into a marsh, stream, river, lake, estuary, ocean, or groundwater. Watersheds come in all shapes and sizes ranging from millions of square miles to just a few acres. Watersheds are also usually part of some larger watershed system. Since watersheds are defined by their hydrology, it is often a logical basis for managing water resources and addressing complex water quality problems like nonpoint source (NPS) pollution. Unlike pollution from industrial and sewage treatment plants, NPS pollution comes from many diffuse sources. Typically, NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants and deposits them in lakes, rivers, wetlands, coastal waters, and groundwater. Watersheds are also a logical unit for addressing other complex ecological problems such as protecting and restoring habitat.

Public managers are focusing increasingly on developing interorganizational partnerships to address environmental problems in watersheds because watershed boundaries rarely correspond to political boundaries. Thus, collaboration is a common strategy used to address watershed problems. It is also common for watershed management programs to utilize performance management systems to measure environmental conditions and document the progress of restoration efforts.

For more information, see http://www.epa.gov/owow/watershed/ and http://www.ctic.purdue.edu/KYW.

Scope and Purpose of This Report

While collaboration is clearly of practical concern, it is unclear how management in network settings differs from that of individual organizations.[4] Moreover, while many advocate the use of performance management techniques, it is unclear how they can be used to enhance collaborative processes in networks. This report examines the use of performance management in network settings. It looks at various ways that collaboration is used to enhance performance management systems. It also discusses ways that performance management encourages collaboration, increases accountability, and improves service delivery in network settings. More specifically, the report focuses on two interrelated questions:

- How does collaboration support the use of performance measurement?
- How can performance measurement encourage and enhance collaborative processes?

To answer these questions, the study examines the collaborative activities and performance management systems in three watershed governance efforts:

- Lake Tahoe, California and Nevada
- Tampa Bay, Florida
- Tillamook Bay, Oregon

Each watershed has a history of governance activities dating back several decades. The watersheds vary in their geographic location, the environmental problems they address, and the complexity of their governance systems. Collaboration is a dominant strategy used to improve environmental conditions and enhance governance in each watershed. Moreover, each watershed has a unique performance management system. These watershed governance efforts are described in greater detail in the Appendix.

Research Design

This report builds on more than 100 field interviews with individuals involved in the governance of the three watersheds conducted as part of a larger study for the National Academy of Public Administration (NAPA) examining six watershed management efforts. These data were supplemented with a wide range of archival records, program documents, and follow-up telephone interviews. Systematic qualitative techniques were then used to examine these data and identify lessons for practitioners.[5]

Watersheds are a useful policy domain for examining collaboration and performance measurement. Problems such as nonpoint source (NPS) pollution and habitat protection are typically addressed by numerous agencies at different levels of government. Programs are further specialized by:

- Medium (air, water, soil, land use, etc.)
- Geographic location (wetlands, coastal zone, tidal waters, agricultural land, forest land, etc.)
- Pollutant (point source, nonpoint source)
- Law (federal and state enabling legislation for different programs)
- Function (permitting, enforcement, public education, installing best management practices [BMPs], issuing grants, etc.)

The corresponding fragmentation of interests, policies, and power creates opportunities for collaboration but also places organizations in conflict with one another.

Accordingly, while many watershed efforts use science to develop effective policies, implementation presents a significant governance challenge.[6] As a respondent in Tillamook Bay noted, "[S]o 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." Moreover, watershed management encourages practitioners to holistically address environmental problems rather than function along traditional programmatic boundaries. Public 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 observed, "To me, the power of the watershed approach is in the collaboration."

Performance management has proven to be an important tool for improving watershed governance.[7] Many watershed problems are the result of the "tyranny of small decisions." Resource management problems associated with NPS pollution and habitat loss often develop incrementally over decades due to a series of small decisions. Reversing the cumulative impacts of poor decisions can require equally long periods of sustained effort using numerous smaller projects to cumulatively produce environmental improvements. Performance measurement provides a means of tracking these activities and determining whether progress has been made. Many watershed problems also have complex cause and effect relationships, so it is important to know whether policies and programs are working and improving environmental conditions.

The following section describes how collaboration is used as a governance strategy, and it identifies some ways that collaboration supports performance management. The report then examines how performance management is used to improve network governance. The final section summarizes the lessons for public managers that can be gleaned from this study.

Acknowledgments

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Acronyms and Abbreviations

APC	Advisory Planning Commission
ASPA	American Society of Public Administration
BMP	Best Management Practice
CCMP	Comprehensive Conservation and Management Plan
EIP	Environmental Improvement Program
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ETCC	Environmental Threshold Carrying Capacities
FDEP	Florida Department of Environmental Protection
FMRI	Florida Marine Research Institute
GIS	Geographic Information System
GPRA	Government Performance and Results Act
IA	Interlocal Agreement
ICMA	International City/County Management Association
IPES	Individual Parcel Evaluation System
LRWQCB	Lahontan Regional Water Quality Control Board
LTIMP	Lake Tahoe Interagency Monitoring Program
MOU	Memorandum of Understanding
NAPA	National Academy of Public Administration
NEP	National Estuary Program
NMC	Nutrient Management Consortium
NPS	Nonpoint Source
NRCS	Natural Resource Conservation Service
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OSDS	Onsite Sewage Disposal System
PIVOT	Performance Indicators Visualization and Outreach Tool
P.L.	Public Law
QA/QC	Quality Assurance/Quality Control
RAMP	Florida West Coast Regional Ambient Monitoring Program
RCWP	Rural Clean Water Program
SWFWMD	Southwest Florida Water Management District
TBEP	Tampa Bay Estuary Program
TBNEP	Tillamook Bay National Estuary Program
TCCA	Tillamook County Creamery Association
TCPP	Tillamook County Performance Partnership
TDR	Transferable Development Rights
TEP	Tillamook Estuaries Partnership
TRG	Tahoe Research Group
TRPA	Tahoe Regional Planning Agency

Lake Tahoe

Lake Tahoe is renowned for its crystalline blue waters. The lake is 22 miles long, 12 miles wide, and covers 192 square miles, making it the largest alpine lake in North America. It is also the third deepest lake in the United States with a depth of 1,636 feet. The watershed spans 506 square miles with approximately two-thirds in California and one-third in Nevada. Sculpted peaks with elevations from 6,200 to 10,800 feet surround the lake. The combination of steep slopes, erodible soils, and the lake's low algal growth make the watershed extremely sensitive to human disturbance. Sedimentation and nutrient loadings have increased as a result of many factors including artificially high lake levels, logging, commercial and residential development, wetland loss, habitat alteration, erosion, stormwater runoff, and atmospheric deposition. Increased sedimentation and nutrient loadings are the main causes of declining lake clarity. In 1968, clarity was measured at 100 feet. It is currently around 70 feet.

Physical environment

Water body	Lake Tahoe (CA, NV)
Area of watershed	501 square miles
Approximate population in the watershed	53,000
Focal problem(s)	Nutrients and sedimentation

Main sources/causes of problem(s)

Stormwater, erosion, and habitat loss from urbanization

Planning process

Initial efforts to improve watershed governance	Early 1960s
Duration of latest planning process	1980–1987 (Regional Plan) 1998–2001 (EIP)
Jurisdictional complexity	High
Level of conflict	High

Implementation efforts

Performance measures	Adopted in 1982
Main coordinating entity	Tahoe Regional Planning Agency

Key stakeholders

The Gaming Alliance, The League to Save Lake Tahoe, Tahoe-Sierra Preservation Council, Tahoe Transportation and Water Quality Coalition, Lahontan Regional Water Quality Control Board, USDA Forest Service Lake Tahoe Basin Management Unit, Nevada Department of Environmental Protection, California Tahoe Conservancy, Placer and Douglas Counties (CA), City of South Lake Tahoe (CA), Washoe and El Dorado Counties (NV), Carson City (NV), Tahoe Research Group

Funding level

High

Source: Photos courtesy of http://www.tahoecam.com/. For more information, see http://www.trpa.org/.

Tampa Bay

Tampa Bay covers 398 square miles extending 35 miles inland from the Gulf of Mexico. The 2,300-square-mile watershed is relatively flat and is formed by four rivers and 40 smaller creeks and streams, the major source of the bay's freshwater. Marsh grass and mangrove trees provide critical habitat to a wide range of species. The estuary also is home to hundreds of recreationally and commercially important species of fish and shellfish as well as bottle-nosed dolphins and the endangered Florida manatee.

The region has undergone explosive population growth since the 1950s and is home to more than 2 million people. This growth resulted in the loss of significant wetland habitat and water quality problems. Fortunately, significant progress has been made in addressing the watershed's environmental problems. Just 30 years ago, Tampa Bay was so polluted that many considered it beyond salvage. Fortunately, water quality began to improve in the early 1980s with measurable gains in sea grass coverage of 18.5 percent observed between 1982 and 1992.[8]

Physical environment

Water body	Tampa Bay (FL)
Area of watershed	2,300 square miles
Approximate population in the watershed	Over 2 million
Focal problem(s)	Nutrient loading and sea grass loss

Main sources/causes of problem(s)

Nutrient loading from diverse sources and habitat loss

Planning process

Initial efforts to improve watershed governance	Early 1970s
Duration of latest planning process	1990–1998
Jurisdictional complexity	Medium
Level of conflict	Low

Implementation efforts

Performance measures	Adopted in 1998
Main coordinating entity	Tampa Bay Estuary Program

Key stakeholders

Hillsborough County, Pinellas County, Manatee County, Tampa, St. Petersburg, Clearwater, EPA, Florida Department of Environmental Protection, Southwest Florida Water Management District, Tampa Bay Regional Planning Council, Environmental Protection Commission of Hillsborough County, Florida Marine Research Institute, Tampa BayWatch

Funding level

Medium

Source: Photos courtesy of the Tampa Bay Estuary Program. For more information, see http://www.tbep.org/.

Tillamook Bay

The Tillamook Bay watershed spans approximately 570 square miles with elevations up to 3,461 feet. It is located in a coastal, temperate rain forest. The bay is shallow but well flushed due to tidal fluxes and heavy rainfall. The watershed is located in Tillamook County, where the population of about 17,000 is skewed toward retirees and the per capita income is well below the national average.

Agriculture, forestry, fishing, and tourism give rise to the county's slogan, "The Land of Cheese, Trees, and Ocean Breeze." There are 150 dairy farms supplying milk to the Tillamook County Creamery Association (TCCA), a cooperative that is one of the region's largest employers. Eighty-nine percent of the watershed is forested, most of which is contained in the Tillamook State Forest. After a series of fires burned over half of the watershed, reforestation began in 1949 on a scale never before attempted. The forest's current value is estimated at more than $8 billion. The fishing industry also remains important to the local culture and economy.

Several environmental problems affect Tillamook Bay. The watershed's 25,000 dairy cows produce about 322,500 tons of manure annually—a main source of bacterial contamination causing a wide range of shellfish closures in the bay. Bacterial contamination is also linked to onsite sewage disposal systems (OSDSs) and wastewater treatment systems. Tillamook Bay is susceptible to sedimentation because it is relatively shallow and over 50 percent of the bay is mudflats at low tide. Human activities (e.g., harvest activities, forest roads, and development) and catastrophic events (e.g., floods and forest fires) exacerbate sedimentation, which hinders navigation, smothers eelgrass, and clogs gravel beds used for spawning. Salmon habitat has been degraded by forestry operations, agriculture activities, hydromodifications, and development activities. Coho salmon, steelhead trout, and chum salmon stocks were listed under the Endangered Species Act (ESA) in 1998.[9]

Physical environment

Water body	Tillamook Bay (OR)
Area of watershed	570 square miles
Approximate population in the watershed	17,000
Focal problem(s)	Shellfish closures, sedimentation, and endangered species

Main sources/causes of problem(s)

Bacterial loading and sedimentation from agriculture, forestry, and urban sources

Planning process

Initial efforts to improve watershed governance	Late 1970s
Duration of latest planning process	1993–1999
Jurisdictional complexity	Low
Level of conflict	Low

Implementation efforts

Performance measures	Adopted in 1999
Main coordinating entity	Tillamook County Performance Partnership/ Tillamook Estuaries Partnership

Key stakeholders

Tillamook County, Tillamook County Creamery Association, Department of Environmental Quality, EPA, Oregon Department of Forestry, Oregon Department of Agriculture, Natural Resource Conservation Service, Tillamook County Soil and Water Conservation District, Oregon State University

Funding level

Low

Source: Photo courtesy of the Tillamook Estuaries Partnership. For more information, see http://www.co.tillamook.or.us/gov/estuary/tbnep/nephome.html.

Using Collaboration as a Governance Strategy

What Is Collaboration?

Collaboration is any joint activity by two or more organizations intended to increase public value by working together rather than separately. It is an interactive process involving an autonomous group of actors who use shared rules, norms, or organizational structures to:

- Solve problems
- Reach agreement
- Undertake joint actions
- Share resources such as information, money, or staff

Relationships cross boundaries defined by organizational or programmatic affiliations, interests, perceptions, geography, or political jurisdictions. Participants are autonomous in that they retain independent decision-making powers even though they may agree to abide by shared rules when collaborating. Power and politics are critical because participants generally have to be convinced to voluntarily work together.[10] Accordingly, collaboration is typically limited to win-win or win-no-lose situations.

There are a number of rationales for using collaboration as a governance strategy.[11] At the heart of each explanation lies the idea that collaboration produces some public value, real or perceived, for organizations participating in these activities. Thus, collaboration should only be used when the activities add public value and produce better organizational performance or lower costs than can be achieved without it.

Collaboration Is a Strategy for Getting Things Done

Since there are many reasons for organizations to work together, collaboration takes many forms. Activities may be permanent, temporary, project based, or ad hoc in nature, and practitioners may be involved in overlapping collaborative activities that influence one another. Collaboration also tends to be a trial and error process in which public managers become engaged in new activities once they learn how to work together. Thus, there is often an evolutionary dimension in which the outcomes of one collaborative effort (e.g., trust) create inputs that facilitate subsequent activities.

Much of the collaborative activity in the watersheds is oriented toward getting things done by enhancing service delivery and improving environmental conditions. As 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." Another 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." An official in Lake Tahoe observed, "We already had

Rationales for Using Collaboration as a Governance Strategy

- **Exercise self-interest:** Individuals and organizations collaborate because they can achieve something that cannot be obtained any other way. This does not imply self-interest at the expense of other organizations.
- **Acquire resources:** Organizations exist in an environment with limited resources and depend to varying degrees on others for critical resources. Collaboration is a way to obtain these resources.
- **Respond to political pressure:** Collaboration is the product of increasing demands from politicians and the public to do more with similar or reduced resources.
- **Reaction to institutional forces:** Participants come to view collaborative processes as an effective way to solve important economic, technical, and strategic problems. Collaboration also provides a process that spreads and institutionalizes rules, resources, and practices among network members.
- **Reduce transaction costs:** Organizations collaborate when transaction costs are low or relationships offer some promise of reduced cost. Conversely, organizations are unlikely to collaborate when they expect others to engage in strategic behavior like free riding and shirking. They are also unlikely to collaborate when coordination costs such as those associated with interagency meetings and negotiation are higher than perceived benefits.
- **Promote democratic values:** Important problems facing society cannot and should not be tackled by a single organization or level of government acting alone. Collaboration is a mechanism for ensuring that a greater range of interests is represented. Thus, it enhances the democratic features of our 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.

allies and never really realized it.... We decided to start facilitating the improvements on the ground and facilitating the projects, which will achieve the improvements we ultimately want to get, rather than putting up hoops for those projects."

A common form of collaborative activity in each watershed was habitat restoration and the installation of BMPs such as stormwater detention ponds and other forms of environmental infrastructure. For example, a typical habitat restoration project may have different organizations providing the funding or land, technical expertise, engineering or design work, construction, maintenance, and management of the completed project. If volunteers were used, another organization may recruit, organize, and manage the volunteers.

Other collaborative activities involve streamlining permitting processes, improving enforcement, and coordinating land acquisitions to improve service delivery. For example, the Tahoe Regional Planning Agency (TRPA) entered into Memorandums of Understanding (MOUs) with local governments to devolve permitting functions and streamline the process. One Lake Tahoe official described the rationale for the effort this way: "Let's identify where we are duplicating and 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 of their MOU this way: "It has become more of a partnership than when we first started. They were the authority figure. I think it has come around to more of a partnership than it was before with us being the 'child' of that relationship."

Public education and outreach activities also focus on training and educating industry officials, permit applicants, and home owners about improved land use practices. For example, Tampa Bay developed a *Boaters Guide to Tampa Bay* through a cooperative effort among the Tampa Bay Estuary Program (TBEP), Florida Department of Environmental Protection (FDEP), and Florida Marine Research Institute (FMRI). The guide contains information on habitats, sport fish, and boating safety. More than 100,000 copies have been distributed through a partnership with county tax collectors who distribute the materials to boat owners renewing their tags.[12]

Collaborative activities also make it easier to get things done. A common complaint among many respondents was a shortage of resources (e.g., staffing, funding, and expertise) to implement watershed plans. One strategy to overcome these problems is pooling resources in ways that improve the capacity for solving shared problems. Various forms of resource sharing were employed. Activities can be relatively informal such as sharing water quality monitoring equipment. Others involve formal relationships such as co-locating staff, allocating staff to support another agency's efforts, or pooling financial resources. For example, the Oregon Department of Forestry (ODF) hired a wildlife specialist from the Oregon Department of Fish and Wildlife (ODFW) to work entirely on habitat restoration in the Tillamook State Forest to expedite restoration activities and improve communication.[13]

Collaboration Supports Performance Management Systems

Collaboration supports performance management in various ways. It generates information that supports performance management and can even improve monitoring programs directly. The interactive processes at the heart of collaboration also promote information sharing and even encourage the use of performance management systems to enhance accountability in network settings.

Generates Information

Watersheds are complex, dynamic, and subject to an immense number of internal and external relationships that change over time. This creates conditions of extreme uncertainty. Resource managers cope with this uncertainty by incorporating additional information into decision making. Collaboration supports these efforts in various ways. When information does not exist, organizations undertake joint research projects to generate information. Participants also spend time reaching agreement on what research means and agreeing to common facts, relationships, or methods used to measure performance. For example, developing nutrient reduction and sea grass restoration goals for Tampa Bay first required reaching agreement on the models underlying the goals. Then the partners had to agree on a system of nutrient reduction credits that would be given for specified actions in order to monitor progress.

Information and technical expertise also reside in different organizations. Organizations minimize asymmetries by working together in ways that combine or synthesize information and put it in a form accessible to decision makers and the public (e.g., resource inventories and characterization reports). Collaboration can also produce shared databases and other technical resources such as geographic information systems (GIS) that improve the network's capacity for solving problems and allow organizations to exploit their technical complementarities. Shared databases and technical resources are also important tools for rational planning, decision making, and resource management.

Enhances Performance Management Systems

Collaboration can improve existing performance monitoring programs. In Tampa Bay a collaborative environmental monitoring program was created to coordinate the watershed's 36 environmental monitoring programs. Previously, there was little coordination—some parts of the bay were not monitored and there was overlap in other locations. Data were stored in various forms, and the agencies often used different quality assurance/quality control (QA/QC) procedures. The results of collaboration in the new coordinated monitoring program have been the following:

- Partners agreed on the new monitoring system's water quality, benthic, fisheries, and habitat components.
- Data collection and storage are standardized so that data are readily synthesized into monitoring reports.
- Sampling sites are coordinated with nearly 70 percent of the 126 monitoring stations included in a statistically valid sampling design based on the Environmental Protection Agency's (EPA's) Environmental Monitoring and Assessment Program protocols.

- The partners use QA/QC procedures advocated by EPA and the FDEP where they exchange samples and compare lab results.
- Participants exchange and borrow equipment.

As one participant noted, "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." The effort proved so successful that they joined forces with Sarasota Bay and Charlotte Harbor to form the Florida West Coast Regional Ambient Monitoring Program (RAMP).[14]

Similarly, the Tahoe Research Group (TRG) developed the Lake Tahoe Interagency Monitoring Program (LTIMP). This expanded the number of monitoring stations and generates information used to evaluate progress toward the TRPA's environmental threshold carrying capacities (ETCCs). Tillamook Bay took a different approach and created a collaborative volunteer water quality monitoring program in which staff in the Tillamook Estuaries Partnership (TEP) work with other state and local officials.

Promotes Information Sharing and Encourages Performance Management

The interactive processes associated with various collaborative activities also promote information sharing and encourage performance measurement. A common form of collaboration was the development of work groups, task forces, and committees that meet on a regular basis. These routine interactions are an effective means of:

- Exchanging information
- Establishing relationships
- Building trust
- Exploring opportunities for joint action

Unlike adversarial processes, collaboration is designed to get more information on the table and find creative solutions that balance multiple objectives. As information is exchanged, it becomes part of the shared knowledge base and is "owned" by all participants. This eliminates information asymmetries, promotes shared definitions of problems, and provides a forum for setting joint goals and objectives. It also promotes the type of policy-oriented learning that leads to policy change.[15] As one Lake Tahoe official observed, "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."

Networks also provide information channels informing politicians about management issues. Conversely, elected officials inform public managers about their concerns.[16] These interactive processes also provide a mechanism for involving a wide range of organizations in the development of performance measures. This is particularly important when measuring performance in network settings because its members are both clients for performance information and accountable for achieving measures.

When individuals and organizations participating in work groups, task forces, and advisory committees begin to embrace collaborative processes, make joint decisions, and act as a single entity, they in effect begin to act as a new organization—an interorganizational partnership. This organizational form goes by many names:

- Partnerships
- Coalitions
- Alliances/strategic alliances
- Consortiums
- Network brokers
- Network administrative organizations
- Collaborative organizations

Prominent examples of this organizational form were observed in each case:

- Tahoe Transportation and Water Quality Coalition
- Tampa Bay Estuary Program
- Tillamook County Performance Partnership/Tillamook Estuaries Partnership

Interorganizational partnerships perform a variety of functions by serving as a convener, catalyst for action, conduit for information, advocate, organizer, funder, technical assistance provider, capacity builder, partner, dispute resolver, or facilitator.[17] For example, the Tampa Bay Estuary Program:

- Serves as a convener for discussing bay issues
- Conducts research and disseminates information to its members as well as other agencies
- Serves as an advocate for protecting the bay
- Organizes projects to address bay problems
- Awards mini-grants to other organizations to address bay problems
- Provides technical assistance to state and local agencies to help address bay problems
- Participates in other interorganizational partnerships

A common characteristic of this organizational form is the absence of formal hierarchies among its members, even though those members may have significant differences in power and authority outside the organization.[18] This limits an interorganizational partnership's ability to address controversial problems because its members rely on consensus building to compensate for imperfections resulting from other decision rules.

Interorganizational partnerships perform prominent roles that support performance management in network settings. For example, in addition to TPEB's roles already noted:

- It adopted a set of shared goals for network members.
- Its network members formally committed to achieve shared goals.
- It synthesizes monitoring information on bay conditions.
- Its membership follows monitoring and joint-reporting processes that assess the partners' collective progress toward shared goals.

Thus, interactive processes at the core of interorganizational partnerships provide a forum for setting collective goals or priorities. As one Tillamook Bay respondent observed, "We are not going to make watershed decisions until we collaboratively define agency priorities."

Conversely, membership in an interorganizational partnership may require adhering to shared goals or priorities or require individual or joint reporting on progress. Interactive processes provide a forum for discussing the results of monitoring processes. Performance measures can be used to set direction and keep the partners focused on a common set of problems or actions. Thus, performance manage-ment performs an important steering function that coordinates activity within a network. Moreover, the promise of future interactions and monitoring generates peer pressure that enforces formal and informal agreements. The following section explores in greater detail the rationales for performance management in network settings and the ways it supports collaborative processes.

Using Performance Management to Improve Network Governance

Much has been written in recent years about the importance of measuring the performance of public agencies, public programs, and nongovernmental organizations.[19] Performance management is now widely advocated within the public administration community by organizations such as the National Academy of Public Administration, the International City/County Management Association (ICMA), and the American Society for Public Administration (ASPA). It has long been promoted by various management and budgetary reforms such as performance budgeting, planning-programming budgeting system, zero-base budgeting, and management by objectives. More recently, it has been promoted by the Government Performance and Results Act of 1993 (GPRA).[20] Not surprisingly, performance management is increasingly accepted among federal, state, and local officials as well. As one state official in Tillamook Bay argued, "We need to be more outcome based, like a business. We need real accountability. 'We spent X amount of money this year and here's what we have to show for it.'"

Somewhat less attention has been given to performance management in network settings. Nevertheless, public managers are often interested in using performance management systems to improve network governance by coordinating the activities of organizations in the network. It is also a useful strategy for encouraging network members to take actions that advance shared goals and objectives. As the old axiom goes, "What gets measured gets done." Thus, performance management systems can create a strong motivator for action that encourages network participants to work together in ways that improve service delivery. Performance management systems also help public managers, politicians, and the public gauge the effectiveness of service delivery by documenting what was accomplished, how well it was accomplished, and what difference these activities made.

Simply put, performance management lets public managers know how they are doing and whether

General Categories of Performance Measures[21]

- **Outcome or effectiveness measure**—a measure that quantifies the extent to which goals are attained, needs are met, and desired effects are achieved.
- **Workload or output measure**—a basic sort of measure of the work performed or service provided.
- **Unit cost or efficiency measure**—a more refined version of an output measure that calculates the monetary expense per unit of output.
- **Productivity measure**—a measure that combines dimensions of efficiency and effectiveness in a single indicator.
- **Service quality measure**—a value-based assessment of management's responsiveness to client needs or expectations.
- **Citizen satisfaction measure**—the extent to which citizens feel that their needs have been met by a program.

their programs are working. This improves the accountability of the network of organizations involved in service delivery. Performance management also assists in program delivery by supporting planning, decision making, and budgeting processes.

Since there are many reasons for measuring network performance, no single measure or collection of measures is likely to be appropriate for all circumstances.[22] As Robert Behn observes:

> Different users want different measures because they have different purposes. But it is the nature of the purpose—not the nature of the user—that determines which characteristics of those measures will be most helpful. The usual admonition of performance measurement is, "Don't measure inputs. Don't measure processes. Don't measure outputs. Measure outcomes." But outcomes are not necessarily the best measure for all purposes.[23]

Accordingly, it is unlikely that any set of measures or monitoring process will be appropriate for all network settings.

Performance Management in Watershed Settings

The watersheds examined in this study developed a variety of measures and monitoring processes focused primarily on outcome and output measures (see Table 1).

Lake Tahoe

Lake Tahoe developed a sophisticated system of outcome measures—environmental threshold carrying capacities, or ETCCs. The Tahoe Regional Planning Agency adopted nine ETCCs for scenic, recreational, water quality, air quality, noise, wildlife, soil conservation, fisheries, and vegetation issues in 1982 that are measured using 36 indicators. Beginning in 1991, and every five years thereafter, the TRPA conducts a comprehensive threshold evaluation to determine the extent to which each threshold is being achieved or maintained. The results of the 2001 threshold evaluation summarized in Table 2 on page 20 note that of the 36 indicators, eight are in attainment. Of the 25 indicators not in attainment, 12 show a positive trend, and seven have a negative trend. The threshold evaluation also includes recommendations to address problem

Table 1: Performance Management Activities in the Three Watersheds

Type of Activity	Lake Tahoe	Tampa Bay	Tillamook Bay
Regular meetings to discuss progress toward goals	X	X	X
Priorities for habitat restoration	X	X	X
Priorities for infrastructure investment	X		
Priorities for land acquisition	X	X	
Formal shared goals	X	X	X
Formal performance targets	X	X	X
Agreement on monitoring protocols and shared QA/QC procedures	X	X	
Joint work plans	X	X	X
Environmental conditions monitoring	X	X	X
Reports on progress using environmental indicators (outcomes)	X	X	
Reports on progress toward targets using programmatic indicators (outputs)	X	X	X

Table 2: Results of the Threshold Evaluations in Lake Tahoe

Thresholds and Indicators	1991	1996	2001	Trend
Air quality				
CO	N	A	A	+
O3	N	N	N	=
Particulate	N	N	A	+
Visibility	A	N	N	–
U.S. 50 traffic volume	N	A	A	=
Wood smoke	N	N	U	+
Vehicle miles traveled	N	N	N	–
Atmospheric nutrient loading	A	A	U	U
Water quality				
Turbidity (shallow)	A	A	A	=
Clarity (winter)	N	N	N	+
Phytoplankton	N	N	N	–
Tributary water quality	N	N	N	+
Runoff water quality	N	N	N	=
Groundwater	N	N	N	=
Other lakes	U	A	U	=
Soil conservation				
Impervious coverage	N	N	N	–
Naturally functioning stream environment zones (SEZs)	N	N	N	+
Vegetation				
Relative abundance and pattern	N	N	N	+
Uncommon plant communities	A	A	A	+
Sensitive vegetation	N	N	N	=
Late seral/old growth (new)	Not in effect	Not in effect	N	+
Fisheries				
Lake habitat	N	N	N	+
Stream habitat	N	N	N	+
In-stream flows	A	A	A	=
Lahontan cutthroat trout (new)	Not in effect	Not in effect	A	+
Wildlife				
Special interest species	N	N	N	+
Habitats of special significance	A	N	N	+
Scenic resources				
Travel route ratings	N	N	N	–
Scenic quality ratings	N	N	N	–
Public recreation area scenic quality ratings	Not in effect	A	N	–
Community design	U	N	N	+
Noise				
Single event (aircraft)	U	N	N	+
Single event (other)	A	A	N	=
Community noise	N	N	N	=
Recreation				
High-quality recreation experience	U	U	N	+
Capacity available to the general public	A	A	A	+

Positive Trend (+), Negative Trend (–), No Trend (=), N = Nonattainment, U = Unknown, A = Attainment

areas within the next five-year period.[24] The TRPA's permitting program and the $1.5 billion Environmental Improvement Program (EIP) that extends through 2016 is currently the vehicle for undertaking the individual and collaborative efforts necessary to attain these indicators.[25]

Tampa Bay

Tampa Bay's planning process produced a series of specific, measurable goals for water quality and habitat restoration, including the following:

- Reduce or preclude additional nitrogen loadings by 17 tons per year to "hold the line" at 1992–1994 levels. This will provide water clarity suitable for the recovery of 12,350 acres of sea grass.
- Reduce bacterial contamination to levels safe for swimming and shellfish harvesting.
- Recover an additional 12,350 acres of sea grass over 1992 levels, while preserving the bay's existing 25,600 acres, and reduce propeller scarring of sea grass.
- Restore the historic balance of coastal wetland habitats by restoring at least 100 acres of low-salinity (oligohaline) tidal marsh every five years, with a total increase of 1,800 acres.
- Preserve and enhance the bay's 18,800 acres of mangrove/salt marsh habitats, including the 28 coastal sites designated as priorities, through purchase or conservation easements.

At the conclusion of the planning process, the partners in the Tampa Bay Estuary Program adopted an interlocal agreement (IA) establishing an independent alliance of government entities pursuant to Chapter 163 of the Florida Statutes. The signatories of the IA agreed to these goals, all of which will be achieved collectively with the exception of the nitrogen reductions allocated to local governments. Each signatory to the IA is required to submit a five-year action plan and annual supplements describing the actions taken to achieve goals. The TBEP also monitors progress toward the goals by using a series of environmental and action (programmatic) indicators. For example, environmental indicators suggest that sea grass acreage has been increasing at about 500 acres per year since 1992. At this rate, the goal will be reached in 25 years. In terms of programmatic indicators, nitrogen reduction targets are being met, and models suggest the reductions will lead to increased sea grass coverage.[26] It also reports on progress to EPA pursuant to GPRA.

Tillamook Bay

Tillamook Bay's planning process also produced a series of goals for restoring critical habitat, erosion and sedimentation, water quality, and flooding. However, the focus throughout the planning process was on action. One respondent recalled that early in the process people were saying, "Oh ... you're going to do another government plan, spend millions of dollars, and put it on the shelf." Accordingly, a great deal of attention was given to developing strategies and measurable targets to achieve the plan's goals. For example, the targets for achieving the plan's critical habitat goals include the following:

- Enhance 200 miles of forested riparian habitat by 2010.
- Manage 90 percent of upland riparian zones to meet state forest habitat conservation plan requirements.
- Enhance 100 miles of upland in-stream habitat by 2010.
- Enhance 500 miles of continuous riparian habitat in the 0 to 500-foot elevation band to healthy condition by 2010.
- Upgrade 50 percent of all tide gates by 2010.
- Conserve and restore 750 acres of tidal wetland by 2010.
- Allow no decline in eelgrass beds due to degradation or loss.
- Achieve an improved climate for fisheries practices and regulatory actions.[27]

The Tillamook County Performance Partnership (TCPP) was established in July 1998 by a resolution of the Tillamook County Board of Commissioners to oversee implementation. In 2002, it was renamed the Tillamook Estuaries Partnership (TEP) and established as a section

Reasons for Performance Measurement in Networks

- **Evaluate:** How well is the program performing?
- **Control/steer/coordinate:** How can you ensure that your subordinates are doing the right thing?
- **Budget:** On what programs, people, and projects should money be spent?
- **Motivate:** How can you motivate line staff, middle managers, potential collaborators, stakeholders, and citizens to do what is necessary to improve performance?
- **Promote:** How can you convince political superiors, legislators, stakeholders, journalists, and citizens that your organization is doing a good job?
- **Celebrate:** What accomplishments are worthy of drawing attention to or celebrating?
- **Learn:** What is and is not working and why?
- **Improve:** What can be done differently to improve performance?

Source: Robert D. Behn, "Why Measure Performance? Different Purposes Require Different Measures," Public Administration Review *63 (no. 5, September/October 2003).*

510(c)(3) nonprofit organization. As one participant recalled, "Our concept is focus on what you want to achieve, get people around the table, and do something. Quit planning." The objective is to "reinvent" government by developing an interorganizational partnership to coordinate the implementation of the wide range of federal, state, and regional plans and policies by focusing on five basic strategies:

- Improving degraded roads in the Tillamook State Forest
- Restoring riparian zones
- Enhancing in-stream conditions
- Improving floodplain conditions
- Applying state-of-the-art technology and training

The TCPP/TEP monitors progress toward the targets and serves as a forum for coordinating agency efforts. An Internet-based performance measurement tool developed by the National Oceanic and Atmospheric Administration Coastal Services Center called Performance Indicators Visualization and Outreach Tool (PIVOT) has also been used to graphically display performance-based information and make it available over the Internet. It also reports on progress to EPA pursuant to GPRA.

Why Measure Network Performance?

Legislators, journalists, program managers, and stakeholders are likely to use performance management for different purposes. Legislators want to demonstrate that programs are working or that tax dollars are being used wisely. Journalists like stories that compare performance of various jurisdictions on measures such as test scores or crime statistics. Stakeholders want measures to hold agencies accountable for their performance or lack thereof.

Public managers typically fear the type of accountability resulting from these processes. In network settings, these concerns can be amplified. Participants cannot be compelled to act, and they typically participate in collaborative activities voluntarily. Accordingly, it is important to be sensitive to pragmatic concerns of cost and complexity as well as to the political implications of holding organizations accountable, particularly when resources needed to achieve measures are beyond the control of the network actors. Nevertheless, many public managers recognize that performance management serves useful purposes. The following sections examine the basic rationales for measuring performance in network settings.[28]

Evaluation and Accountability

Even when performance measures are collected for some other purpose, there is always the possibility that the information will be used in evalua-

tions.[29] Accordingly, it is common to find that some public managers resist performance measurement or making monitoring information widely available even though politicians, journalists, stakeholders, and citizens may desire it. In network settings, this resistance may be amplified when network participants have competing values or objectives. Nevertheless, evaluation and accountability are frequent rationales for measuring performance in network settings, and collaborative processes are often used as a forum for getting network participants to agree on a shared set of policy outcomes or performance measures. Participants also appear to be more willing to accept performance management systems when they are one of many organizations responsible for achieving a policy outcome. In the three watersheds examined in this study, generating information to support evaluation and enhancing accountability were important rationales for performance measurement. As one Tampa Bay respondent noted, "Because we have these numeric goals, it's easy to see if we're meeting them or not. That is probably our most important achievement."

Steering, Coordinating, and Priority Setting

Many elected and appointed officials believe that performance management systems provide a means of controlling the activities of organizations. It also provides a budgeting tool that helps public officials determine where to spend limited resources. In network settings, performance management is unlikely to offer much control due to the autonomous nature of the organizations that compose the many interorganizational networks. Instead, the focus shifts from control to steering, coordinating, and priority setting. Performance management serves a steering function by improving communication among the actors, coordinating actions, and integrating policies such that each organization advances common shared goals or objectives.[30] After all, the closer you get to measuring the results you care about, the more likely you are to elicit desired performance.

The habitat restoration goals in Tampa Bay provide an illustrative example. The Tampa Bay Estuary Program (TBEP) has a goal of restoring 100 acres of wetlands every five years, roughly equivalent to the rate of current restoration activities. However, there are several different types of wetlands in the watershed, some of which are easier and cheaper to restore than others. As a result, restoration efforts were moving further away from the historic balance of wetland habitat. To combat this problem, the TBEP identified and ranked 138 restoration sites and recommended 28 land acquisition sites. Florida's state land acquisition programs, the Southwest Florida Water Management District (SWFWMD), and local governments now use these priorities to coordinate habitat restoration and land acquisition.[31] Similarly, Tillamook Bay uses a series of strategies and measurable targets to coordinate the implementation of a wide range of federal, state, regional, and local programs.

There is also a tendency to go after the "low hanging fruit," to look for opportunities for joint action that are easy to accomplish.[32] This "entrepreneurial" spirit should be applauded and is often appropriate in the early stages of a cooperative effort to demonstrate success; however, when pursued over the long term, it becomes difficult for network actors to systematically address specific problems. This creates the potential for what respondents in Tillamook Bay call "random acts of environmental kindness"—individual projects that produce isolated environmental improvements but are too limited in scale, scope, number, magnitude, or duration to significantly change the underlying problem when viewed over time from the perspective of the larger ecological system.

Making the transition from a series of isolated projects to systematically addressing specific problems is not easy, particularly when watershed organizations rely on funding from the federal or state level where priorities are different from those established by basin actors. One Tillamook Bay respondent described the challenge 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 [TEP] is to help agencies, landowners, interest groups implement the CCMP [Comprehensive Conservation and Management Plan] and other goals."

Performance measures offset these problems by encouraging a systematic, long-term effort to address specific problems. As another Tillamook Bay official observed, "We need to keep measuring our progress as we go and make sure we're meeting our targets over the time frame we've set. We need to make sure we have measurable outcomes.... We tend to spend time on things that are urgent but not important, and not enough on things that are important but not urgent. That's why we need to have discipline and plans."

Motivational Tool

Performance management can also be an important motivational tool. Establishing performance measures that are specific and difficult but realistic and achievable helps:

- Focus attention
- Encourage action
- Mobilize effort
- Increase persistence
- Motivate the search for effective strategies

Thus, performance management grabs the attention of staff, middle managers, potential collaborators, and citizens. Consequently, it can encourage network participants to resolve disagreements and motivate them toward action.[33] 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."

Performance management can also improve job satisfaction of middle managers and staff by providing an opportunity for personal renewal whereby staff move beyond normal organizational routines, develop new relationships, learn new skills, or deploy existing skills in new ways. It can also create the sense that they are breaking down political and bureaucratic barriers between agencies—a frequent source of frustration for many practitioners. Moreover, since these activities improve job satisfaction and motivation for some workers, it is reasonable to conclude that it can also improve their productivity and performance.

Performance management systems not only attract the interest of politicians, stakeholders, and potential collaborators, but they can also provide a way to sustain momentum for collaborative efforts and generate peer pressure to fulfill commitments. For example, in Lake Tahoe there is no shared vision of what the watershed should look like in the next decade, but the review process associated with the ETCCs helps basin actors learn what they do *not* want. As a member of the local business community stated, "I think there is a common vision of what we don't want, and that becomes a very powerful motivator of what we do." It also motivated federal, state, regional, and local governmental and nongovernmental organizations to develop a $1.5 billion EIP to address declining lake clarity. Declining lake clarity also helped basin actors attract considerable federal and state political and financial support for the EIP. Similarly, a respondent in Tillamook Bay noted that their efforts "created awareness and brought groups together that otherwise wouldn't have worked together." In Tampa Bay, a respondent observed that the interlocal agreement "sets up a checks and balances system because there is pressure for the signatories to stick with it and to do the right thing, and I like that."

Clear and understandable goals also provide a strong motivator for citizens to volunteer time to support implementation efforts. For example, in Tampa Bay, the TBEP and Tampa BayWatch have worked together to establish the Bay Conservation Corps to recruit volunteers for restoration activities. More than 3,000 citizens have participated in projects such as salt marsh plantings and island cleanups. Another respondent in Tampa Bay noted that to recruit volunteers all you have to do is say, "You will be helping the manatee."

Promoting and Celebrating Progress

Promoting organizational accomplishments and celebrating successes are also strong rationales for performance management in network settings.[34] Collaboration research is replete with advice to practitioners to "celebrate success" and "promote accomplishments" in order to:

- Give partners a sense of their collective relevance

- Motivate participants
- Promote the work of the collaborative
- Recruit new partners
- Attract resources to support future collaborative efforts[35]

Performance management encourages the celebration of success by marking milestones and accomplishments as the partners progress toward shared goals. Releasing performance reports also provides an opportunity for media coverage and for partners to promote other programmatic accomplishments that demonstrate to politicians, journalists, stakeholders, and the public that they are accomplishing something.

Demonstrating progress toward shared goals can also attract new resources to support collaborative efforts. For example, Tillamook Bay measures performance in order to promote itself in an attempt to attract much needed federal and state funding. One Tillamook Bay respondent described the rationale this way: "We in government—whether federal, state, or local—have a reputation for tying things up in red tape and bureaucracy. With this [TEP], we can put benchmarks and results on the web, so if you're a federal partner or someone giving us money, you can look and see what we've done."

Marking accomplishments and celebrating success also promote the "bandwagon effect." When actors engage in collaborative efforts, a certain amount of "collaborative inertia" has to be overcome, and efforts are often slower than desired or expected. However, once a threshold level of success is achieved, the situation can change rapidly, and the collaborative process takes on a new dynamic whereby collaborative efforts build momentum, gain new members and resources, and expand efforts to address a wider set of issues.[36] Promoting accomplishments and celebrating successes help get the bandwagon rolling and sustain momentum despite changing political, economic, and social conditions.

Lake Tahoe is an excellent example of collaborative inertia and bandwagon effects. After more than two decades of conflict, governmental and nongovernmental actors became increasingly dissatisfied with the costs and problems associated with inaction. This impasse created an incentive for collaboration, and a subset of actors began to work together on what eventually became known as the Tahoe Transportation and Water Quality Coalition. As these organizations experienced some success, they found additional opportunities for joint action. For example, local governments became increasingly willing to work with the TRPA to streamline the permit process. Today, the Environmental Improvement Program (EIP) has a momentum of its own, attracting new partners and resources. Moreover, as the partners learned how to work together to implement the EIP, the pace of activity increased. Organizations overcame their differences and achieved the threshold level of success necessary to develop and implement the EIP.[37]

Learning and Enhanced Governance

Network actors also learn *why* policies and programs are working (or not working) by measuring performance. It also helps practitioners find ways to improve how programs work.[38] This is particularly important in watershed settings, where practitioners are often encouraged to practice "adaptive management" by treating policies as experiments and adapting them in light of changing knowledge and information.[39]

Learning occurs at different levels. Managers and staff can learn a great deal about how their individual policies and programs are working by collecting and analyzing disaggregated data. Performance measures provide information that allows managers and staff to understand how the "black box" that comprises their program transforms inputs into outputs and outcomes. Managers and staff are also better informed and can make better decisions about future actions that benefit their organizations. As noted earlier, the interactive processes at the heart of collaboration enhance these learning processes.

Learning also occurs at the network and societal levels. Organizations often adopt concepts, ideas, policies, practices, and even performance management systems when they are demonstrated to be effective. Thus, performance management can

stimulate innovation diffusion and adoption both within and across networks.[40] It stimulates policy-oriented learning by allowing competing stakeholder interests to have objective evidence about how programs are working (or not working).[41] It stimulates learning within the network of professionals from various disciplines and backgrounds that share normative principles, beliefs, and values. While these individuals often constitute a relatively small proportion of an agency, profession, or policy network, they have a disproportionate effect on organizational learning and behavior due to their influence on the policy process.[42]

Lake Tahoe's threshold evaluation process is an excellent example of how performance management stimulated learning at the network level. Consecutive threshold reviews in 1991 and 1996 revealed disappointing progress toward the TRPA's nine ETCCs (goals) and the corresponding 36 indicators (see Table 2 on page 20). These results indicated that the TRPA's development regulations were unlikely to resolve many of the basin's environmental problems and that greater emphasis on nonregulatory approaches such as habitat restoration, redevelopment, and the installation of BMPs was needed. This led to the search for new nonregulatory approaches and eventually the development of the basin's EIP.

Findings: Performance Management Systems in Network Settings

So what can be learned from these experiences with performance management systems in network settings?

Finding 1: Performance Management Can Raise Questions of Competing Interests and Values

Organizations responsible for "managing" a watershed often have conflicting management objectives and priorities due to different enabling statutes, competing public interests, and the demands of their respective constituency groups. Because there are many legitimate objectives, there is no one answer to the question of how to manage a watershed.

Environmental issues also reflect competing human interests and values about alternative courses of public action. For example, a respondent in Tampa Bay commenting on their sea grass restoration and nutrient reduction goals observed, "People remember the way it was before. They also realize that we are never going to get back to a pristine condition. This is a very urbanized estuary. There are a lot of people, and they aren't going to go away. We wanted to make an aggressive but realistic goal." Accordingly, they chose restoring sea grass beds to 1950s levels because that period marked the introduction of air conditioning and the beginning of an explosive period of population growth. As the same respondent noted, "We want the bay to look like it did when a lot of the people who are in the office now were kids."

Competing interests and values complicate the process of reaching agreement on suitable performance measures. For example, the Oregon Progress Board has a well-developed series of benchmarks in a variety of policy areas. Many values such as reducing teen pregnancy and crime or increasing test scores and per capita income are widely supported. In these instances, it was relatively easy to develop useful performance measures that are widely supported by politicians, agency officials, and the public. Conversely, establishing useful performance measures for environmental programs has been much more controversial. Consider some of the value trade-offs confronting decision makers in Oregon:

- Water rights for farmers versus water needs for endangered species
- Timber harvesting versus public use of forest lands for recreational purposes
- Rights of property owners versus restricting uses of private lands to protect the environment
- Economic development versus impacts on air and water quality
- Hydropower versus impacts on salmon populations

Conflicting interests and values such as these complicate the process of reaching agreement on performance measures in network settings. In these situations, collaboration can often be

a useful strategy for resolving conflicting interests and values. Moreover, when collaboration focuses on issues where interests converge, it may be possible to develop performance measures that motivate joint action, even if network participants disagree on other issues. For example, in Lake Tahoe, declining lake clarity was an issue important to business and casino interests, residents, and environmental groups. Thus, there is wide support for this performance measure, and poor monitoring results continue to be a strong motivator for the collaborative activities contained in the EIP.

Public managers can also use collaborative processes to obtain information about competing values, attitudes, and concerns of various constituency groups. These interactive processes can be used to build concurrence or support for measures that promote a desirable course of collective action. Moreover, interactive processes can be an effective means of determining what is the acceptable level of performance. One respondent in Tampa Bay explained their decision-making process this way:

> It was based on consensus building. Contentious issues came and went. There was productive controversy at best....Virtually every major decision, at least on the board I sat on, was made with nothing short of unanimous approval. So you had almost diametric entities sitting across a table working out solutions in a professional manner. Looking back on it, I am quite amazed at how it did work.

Another characterized it this way:

> The best part of this process is that you sat down with these guys. And it was sort of like a bunch of jagged rocks being thrown into one of those rock tumblers. And we just rubbed each other raw for five years because you thought the other guy is not as big of a jerk as you might have thought.... He's got his problems and I have my problems.

The same was true of the process in Tillamook Bay. As one participant recalled, the process was "a little more painful, but it's worth it because at the end you have a better product and better buy-in.... I think you have to go through the building of relationships and have the committees wrestle with the issues." Another observed, "It [the collaborative process] has created a dialogue. It's created a process. It's created a table for people to come together around, and that's extremely valuable for a community...."

Given the importance of well-managed consensus-based processes, it is important that network participants devote the time, resources, and energy necessary to:

- Resolve conflicts
- Reach agreement on a shared understanding of problems
- Set collective goals for addressing problems
- Establish shared expectations for action

Public managers should also recognize that because decision making in collaborative processes is often based on consensus, there is always the danger that participants will bargain to the lowest common denominator and select performance measures that are easily achieved or inappropriate in order to make their organizations look good to politicians, journalists, stakeholders, and citizens.

Finding 2: There Can Be Complexity, Cost, and Attribution Problems

Aside from the potential for controversy, developing effective environmental performance measures can be complicated by other factors:

- Lack of longitudinal data on environmental conditions
- Complexity of natural processes
- Difficulty in establishing cause and effect relationships
- Long time lags between action and observable environmental changes

- Difficulty of developing computer models to examine data and relationships
- Difficulty in discerning human-induced changes from natural variations in environmental data

For example, while Tampa Bay was able to establish a relationship between nutrient reductions and sea grass restoration using a computer model, Sarasota Bay, an immediately adjacent watershed, was unable to establish similar relationships.

It is important to remember that the three watersheds in this study are atypical in that considerable resources were devoted to support the development of their performance management systems. Accordingly, some watersheds with lower funding levels may have less sophisticated systems. Nevertheless, the three watersheds demonstrate that technical and resource-based problems can be overcome. Moreover, Tillamook Bay demonstrates that performance management can attract resources, which in turn lead to improved measures and monitoring systems.

Attribution problems also impede the development of effective measures because a wide range of government programs at the federal, state, regional, and local levels impacts environmental conditions like water quality. Moreover, actions that take place outside the watershed influence conditions inside the watershed, and network partners may have limited ability to influence these outcomes. For example, actors in Lake Tahoe and Tampa Bay are inherently limited in their ability to reduce nutrient loadings associated with atmospheric deposition because the sources are well outside their political jurisdictions. Thus, performance management is best focused on those problems or elements of a problem that network participants can influence.

Finding 3: Performance Management Systems Can Be Used to Motivate Joint Action

Performance management can be a strong motivator for joint action. The three cases offer some basic guidance on how network actors can develop measures that serve as motivators. Since network actors will be unable to address every problem, it is probably wise to focus performance management on those issues where joint action is desired by stakeholders, politicians, and the general public. Lake Tahoe presents an instructive example. It is the largest alpine lake in North America and renowned for its crystalline blue waters. The decline of water clarity from 100 feet in 1968 to 70 feet today is due primarily to sedimentation and nutrient loadings. This measure motivates joint action because continued declines exacerbate environmental problems, adversely affect quality of life, and negatively impact Lake Tahoe as a tourist destination. Conversely, it focuses attention on opportunities for win-win or at least win-no-lose situations such as redevelopment and transportation improvements that link environmental improvements and economic development needs.

Tampa Bay and Tillamook Bay also identified measures linking environmental and social issues in ways that motivate joint action. Tampa Bay linked nutrient reductions to increased sea grass coverage. These water quality and habitat improvements enhance the use of the bay as recreational and commercial resources, and the bay provides important habitat for the endangered Florida manatee. Tillamook Bay generated goals to restore habitat and minimize the impacts of logging in the Tillamook State Forest. This was particularly important because of declines in coho salmon, steelhead trout, and chum salmon stocks and their subsequent listings under the Endangered Species Act in 1998. Flooding emerged as a critical issue in 1996 after a devastating flood caused over $53 million in damage. Network participants adapted and added a new goal for flooding in order to maintain public support. Moreover, some of the actions suggested to address flooding problems have the potential to restore salmon habitat.

In all three cases, the measures created a shared sense of purpose among network actors. This is a strong motivator for joint action because it creates a sense of urgency, encourages participation in collaborative processes, and helps attract resources necessary to advance shared goals. Performance measures in each watershed are also clear and

understandable to politicians, interest groups, and the general public. This is particularly important when agency officials believe that they will be held accountable for achieving these goals, and it can provide a strong motivator for joint action.

Finding 4: Performance Management Enhances Collaborative Processes

Performance management enhances collaborative processes in other ways, particularly when interactions among network partners are expected to be frequent and repeated over some considerable period of time. Participants' evolving understanding of the personalities, goals, and preferences of other participants can lead to collaboration in new areas. The expectation of repeated interactions also creates a sense of stability that encourages organizations to make investments in network processes, such as shared databases and specialized staff. Actors engaged in frequent, recurring interactions are more likely to develop specialized governance structures like interorganizational partnerships.[43]

Repeated interactions provide the time necessary to develop the personal and interorganizational relationships that produce trust. As one Tillamook Bay participant observed, "Once you develop a relationship with folks, there is a lot more trust." Trust improves network governance in several ways. There is a widespread preference for transacting with individuals or organizations with a known reputation. Information from trusted informants or individuals or organizations with a history of positive transactions is likely to be viewed as more reliable and accurate.[44] This is important in collaborative processes where agreements are followed due to the shared belief that they are fair and will be followed by the other parties. Performance measures and monitoring processes "enlarge the shadow of the future" and make it harder for participants to violate agreements without getting caught. This creates a powerful disincentive for network actors to violate agreements.

Performance management also generates the behavioral norms that govern much of our political and social lives. Relationships between individuals and organizations participating in collaborative processes can be structured by formal agreements, but more often than not they are based on tradition, implicit personal commitments, and shared norms and expectations due to communication processes embedded in interpersonal relationships.[45] These norms provide the foundation for peer pressure at the individual, organizational, political, and public levels to comply with agreements. Thus, it is an important accountability mechanism in networks of autonomous actors. Even in Tampa Bay, where the partners signed a "binding" interlocal agreement, there really is no legal way to compel signatories to implement the agreement. Instead, it relies on peer pressure combined with the threat of formal (removal as a partner) or informal (verbal and nonverbal) sanctions. As one Tampa Bay respondent observed, "I think we have created a meaningful partnership where participants trust each other and where they have a lot of peer pressure to make this work." 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 your attention."

Peer pressure is likely to be enhanced when performance management allows network participants to know how much effort or creativity fellow participants invest in collaborative efforts or goal achievement. This can be achieved by:

- Routine monitoring of environmental conditions
- Individual or joint reporting of programmatic activities
- Preparation of individual or joint work plans
- Regular meetings to discuss progress toward shared goals

Peer pressure is also increased when it becomes possible for politicians, stakeholders, journalists, collaborators, and the public to discern the level

of organizational effort associated with achieving shared goals or measures.

Finding 5: Accountability Is a "Two-Edged" Sword

Performance management provides information that improves accountability by managing the diverse expectations generated within and outside the network.[46] Holding networks accountable for their performance is particularly important when resources are allocated to support network operations or when responsibility for service delivery or achieving policy outcomes is delegated to an interorganizational partnership. However, accountability is a "two-edged" sword. There is a constant tension in networks between organizational autonomy and accountability.[47] On the one hand, monitoring processes help enforce collaborative agreements and reduce strategic behaviors such as rent seeking and shirking. In fact, respondents were quick to note that peer pressure encouraged implementation and adherence to shared goals and measures. On the other hand, excessive monitoring and enforcement create powerful disincentives because collaborators may be unwilling to join the effort when they fear reprisals and criticism. As one Tillamook Bay respondent observed, "We can't order people around or make this so threatening to people that they resist it entirely."

Care must be taken when establishing performance measures and crafting monitoring and reporting processes. If targets are set too low, almost any agency will be able to meet the goals, and the goals will lack meaning. If goals are too difficult to achieve and network participants have difficulty demonstrating progress, then organizations may fear reprisals or feel like they are set up for certain failure. In these situations, organizations may become reluctant to participate in collaborative processes. Thus, developing effective accountability mechanisms is a tricky endeavor and is unlikely to be achieved through a single "standardized" approach. Rather, in networks it is critical to design performance management systems that share credit for success and failure. Public managers are advised to focus on collective goal achievement rather than on specifying the actions agencies will take to achieve goals. As a Tampa Bay respondent observed, "The agreement to goals without dictating actions has been important."

Public managers should be cognizant of the political implications associated with reporting performance information. One way to limit potential political problems is to report formally on collective progress and to avoid singling out particular agencies for criticism. Network members should take advantage of the opportunities available to institutionalize performance measures

Leadership in Collaborative Processes

- **Entrepreneur** tends to view collaborative processes as a way to attract new resources to address local problems.
- **Coordinator** calls meetings and provides a point of contact. He or she keeps the effort going as interest naturally ebbs and flows over time.
- **Facilitator** is trained in facilitation and dispute resolution and is not otherwise part of the collaborative process.
- **Fixer or broker** helps find opportunities for joint action, keeps participants' "eye on the ball," and ensures that they are not sidetracked by peripheral issues.
- **Devil's advocate** challenges the group's assumptions and keeps everyone grounded in political and practical realities.
- **Unsnarler** helps navigate the bureaucratic maze of institutional constraints in order to find ways to conduct desired collaborative activities.
- **Champion** advocates specific courses of action and then uses his or her powers of argument and persuasion to encourage others to commit to a specific course of action.

in other organizational processes (e.g., plans and policies budgeting processes). Public managers are cautioned against devolving too much authority to interorganizational partnerships because it could raise accountability questions within established programs.

Finding 6: Leadership Is Critical

Given the political nature of collaborative processes, it is not surprising that many respondents pointed to the importance of leaders with the political and persuasive skills necessary to encourage organizations to "bend the rules" or "think differently" about a problem, a proposed course of action, or the potential benefits of performance management.[48] While a variety of people perform leadership functions, "champions" are particularly important for encouraging the development of performance management systems. Excellent examples of the constructive roles played by champions are in Tampa Bay and Tillamook Bay, where a few key individuals were instrumental in getting the other network partners to agree to performance management systems and the institutional arrangements overseeing their implementation.[49]

Five Recommendations for Public Managers Operating in Network Settings

Collaboration and performance management are useful strategies for improving network governance. Collaboration provides a mechanism in which two or more network participants can work together in ways that deliver public services and generate more public value than can be achieved when each works alone. Performance management systems relying on shared goals, measures, monitoring, and reporting processes can improve service delivery and enhance accountability in network settings. The two strategies can also be mutually reinforcing. Collaborative processes can be used by network members to develop performance measures and monitoring and reporting processes. Performance management systems can be a useful means of encouraging organizations to work together to achieve collective goals while motivating partners to adhere to agreements developed during collaborative processes. This section summarizes some of the key lessons and advice for public managers seeking to use collaboration and performance measurement to enhance network governance.

Recommendations

1. Use Collaboration When It Produces More Public Value Than Can Be Achieved by Working Alone
2. Use Interorganizational Partnerships as an Effective Way to Promote Collaboration and Performance Management in Network Settings
3. Design Performance Management Systems That Serve the Needs of Network Participants
4. Build Performance Management Systems That Promote and Enhance Collaborative Processes
5. Avoid the Tendency to Be Overly Ambitious

Recommendation 1: Use Collaboration When It Produces More Public Value Than Can Be Achieved by Working Alone

Public managers should avoid the tendency to view collaboration as an end in and of itself. Instead, collaboration is best used when there is a possibility for two or more organizations to generate more public value by working together than by working alone. Public value can be produced in various ways. Collaboration can improve service delivery by sharing information, risk, costs, or resources. It can also improve a network's ability to deliver services through improved communication or coordination or perhaps by taking advantage of economies of scale or technical specialization. Collaboration can result in new programs or changes in decision making that advance the missions of organizations or improve the way resources are allocated. Collaboration could lead to the development of new interorganizational partnerships that enhance the network's capacity for solving shared problems. Thus, collaboration is best viewed as a means to an end when it involves:

- Getting things done
- Coordinating networks

- Improving performance measurement
- Generating other forms of public value

Public managers should avoid embracing collaboration because it makes people feel better than conflict or competition.[50] Some conflict can and should occur because it is an important component of our federal system, which promotes a healthy competition of ideas and stimulates policy change and learning. In fact, in Lake Tahoe, prolonged conflict actually set the stage for a prolonged period characterized by productive collaborative relationships.[51]

Since network actors are relatively autonomous, collaboration is unlikely to be an appropriate strategy for addressing problems involving zero-sum games where some organizations are winners and others are losers. Moreover, while many positive virtues of collaboration have been highlighted throughout this report, it will not solve all network governance problems. Even the most imaginative practitioner is constrained by conflicting priorities and limits on administrative discretion imposed by other organizations. Even if an organization's formal rules do not conflict, its behavioral norms, professional values, knowledge, experience, autonomy, and abilities may limit its willingness to participate in collaborative activities.[52] Moreover, no amount of creativity can overcome the shortage of resources (e.g., staff and money) that creates obstacles to collaboration.[53] One Lake Tahoe described the problem this way:

> The biggest obstacle for me is just the time, the resources. Is it in somebody's work plan? I think some of these groups get formed on such quick notice, and they want your commitment and involvement but I have already been told what I am going to do this year and this isn't it....What we are seeing is a lot of good ideas but the actually "doing" is the challenge.

Fortunately, when collaboration highlights common values and interests, participants often find productive ways to work together. Thus, collaboration is an individually rational strategy for advancing an organization's objectives and a means of collectively improving network governance.[54]

Recommendation 2: Use Interorganizational Partnerships as an Effective Way to Promote Collaboration and Performance Management in Network Settings

Managers interested in encouraging collaboration or performance measurement in network settings should consider establishing a formal interorganizational partnership. While interorganizational partnerships vary in their formality, membership, and complexity, the advantages of formal structures include clear rules governing membership (i.e., access rules), decision making (i.e., decision rules), parameters for action, and conflict resolution. This structure makes the interorganizational partnership less reliant on individuals and personal relationships and thereby helps the partnership endure over time.

Interorganizational partnerships facilitate collaboration and performance management in various ways. The routine interactions provide a means of exchanging information, establishing personal relationships, building trust, and exploring opportunities for joint action. These interactive processes also provide a mechanism for setting collective goals, establishing performance measures, and discussing the data generated by monitoring efforts. Membership in an interorganizational partnership may require individual or joint reporting on progress toward shared goals and measures. Moreover, the promise of future interactions and monitoring joint progress generates peer pressure that motivates network partners to take action.

Recommendation 3: Design Performance Management Systems That Serve the Needs of Network Participants

The three cases demonstrate the many ways to develop useful performance management systems. However, the performance manage-

ment systems appear to share some common characteristics:

- The systems produce information that is useful to network participants.
- The systems focus attention on key problems of common interest to network members.
- The systems are designed to operate within the existing constraints of network members, such as information availability, technical expertise, and resource levels.

Because network actors participate voluntarily, it is important that performance management systems are realistic and sensitive to pragmatic concerns of public managers (e.g., cost, complexity) if they are to endure over long periods of time. Accordingly, it is particularly important for public managers to consider the costs associated with measuring network performance because the resources available for these activities are likely to ebb and flow over time. This includes not only the monitoring costs (e.g., staff, equipment, testing) but also those associated with interpreting data. As one Lake Tahoe official observed, "Ironically, money has been there for data collection, and it has not been there for data interpretation. And that is where the biggest need is." To combat this problem, the United States Geological Survey and the Tahoe Regional Planning Agency created the Lake Tahoe Interagency Monitoring Program to bring together and interpret existing databases before they start adding more monitoring stations and collecting additional data.

It is important to recognize that organizations may be reluctant to participate in performance management systems in network settings when the resources needed to achieve goals and measures are beyond the control of network participants. One strategy for overcoming these concerns is to structure performance management systems so that credit for success and failure is shared by network actors. It also appears to be useful to focus on collective goal achievement and let individual organizations formulate their own strategies for achieving the goals rather than dictating a prescribed set of actions.

The report offers some additional guidance to practitioners seeking to develop performance management systems in network settings:

- Since resources are often limited, simple and cheap performance management systems are likely to be easier to maintain over the long term than costly complicated systems.
- Avoid the tendency to try to measure everything. Instead, be strategic and focus on key issues of interest to most network participants.
- If outputs are measured, they should first be connected to desired outcomes.
- Network participants should be "the client" for the information produced by performance management systems because participants use that information to set joint priorities, make decisions, and allocate resources.

Public managers are cautioned to be careful when selecting performance measures in network settings. Once established, measures can be difficult to change due to the time and energy spent developing them in the first place. Consequently, network participants may be reluctant to participate in another prolonged process to modify the performance measures. Once a measure has shared acceptance, it may become difficult to change because any adjustment is likely to have political consequences. In environmental settings, this can be problematic because it is not uncommon for the science underlying a measure to change. One Lake Tahoe respondent described the problem this way: "The thresholds that were set forth were true educated guesses as to what the environment could hold or not hold, but as happens a lot of times with environmental law, they become the Holy Grail, and any attempt to move them even based on good science is questioned."

Conversely, it is important to avoid setting overly ambitious goals, which can serve as an impediment and reduce motivation. While many Lake Tahoe respondents support the Environmental Threshold Carrying Capacities (ETCC) for water quality and declining lake clarity, they have less support for the goals they perceive as unattainable. As one respondent observed, "The thresholds are lofty goals, and I think they need to be

given continued attention or focus as far as their practicality and attainability, certainly within the given time frame."

Recommendation 4: Build Performance Management Systems That Promote and Enhance Collaborative Processes

This report identifies a number of ways that managers can construct performance management systems that promote and enhance collaborative processes in networks:

- Structure goals and measures that create a shared sense of purpose and motivate network partners toward a specific set of actions.
- Ensure that measures are understandable and easy to communicate to the public.
- Ensure that performance management systems create regular and repeated opportunities for interaction and information exchange to foster peer pressure and develop trust. These interactive processes should be designed to promote learning, adaptation, and change.
- Use performance management systems to steer and coordinate the activities of network participants by improving communication, coordinating actions, and integrating policies so that each organization advances the network's shared goals or objectives.
- Use performance management to celebrate success by marking milestones and accomplishments in ways that promote programmatic accomplishments to politicians, journalists, stakeholders, and the public.
- Use performance management to sustain momentum for collaborative efforts and keep the "bandwagon" rolling by demonstrating that collaborative activities are making progress toward shared goals.
- Use performance management to reduce "random acts of kindness" by moving from pursuing a series of isolated projects to addressing specific problems systematically over a prolonged period of time by focusing action on specific goals or measures.

It is useful to institutionalize performance measures and monitoring in established programs or interorganizational partnerships. This makes performance management systems less reliant on individuals and personal relationships. As a result, performance management is less likely to break down due to staff turnover or changes in organizational leadership. This adds stability and helps maintain the performance management system over a prolonged period of time.

Recommendation 5: Avoid the Tendency to Be Overly Ambitious

A final piece of advice for public managers is to avoid being overly ambitious when planning collaborative activities or designing performance management systems. It is usually better to start small and expand over time. When undertaking collaborative activities, public managers should recognize that it's not uncommon to experience "collaborative inertia." Collaboration tends to be a trial and error process in which outcomes such as trust become precursors for subsequent cooperative efforts. Collaboration requires significant investments of time and effort to build relationships and trust. Some organizations are accustomed to collaborative processes, but others need to learn how to cooperate and work with organizations with differing values, procedures, and processes.[55] However, once relationships are established and network partners learn to collaborate, the number and scope of activities can expand. As early success is achieved, network partners are increasingly willing to support or join future collaborative efforts.

It is common to find that finite resources are available to support collaborative efforts in a network. If public managers are too ambitious when planning collaborative activities, they can outstrip available resources, and organizations may be unable to participate effectively in these efforts. For example, if resources are stretched so thin that public managers can do little more than attend meetings, then not much is likely to be accomplished.

When planning collaborative efforts, public managers are advised to start small, focus on key issues or problems where there is broad support,

and avoid developing overly ambitious expectations among politicians, network participants, and the public. As participants learn to work together and experience success, collaborative efforts can be expanded as the efforts attract new participants and resources. Once a critical threshold level of success is achieved and the "bandwagon" gets rolling, it often becomes easier to sustain the momentum for these efforts.

The same advice applies to public managers designing performance management systems. There may be a tendency for network participants to develop goals and measures for a wide range of issues and then try to measure everything. However, network partners often have finite resources to support performance management. It also takes time for network participants to reach agreement on underlying facts and models, agree to shared goals, develop common performance measures, develop monitoring systems, establish reporting systems, and find ways to quickly and efficiently synthesize and analyze monitoring results. And some measures will be of greater interest than others to politicians, network par–ticipants, and the public.

Public managers should consider designing performance management systems so that they initially focus on the central problem(s) of shared interest to network actors and use the measures to steer and coordinate the actions of network participants in ways that advance shared objectives. This can serve as a motivator for collaborative action among network participants. The performance management system can then be expanded as network participants discover which measures, monitoring processes, and reporting procedures are most useful. Moreover, as politicians, network members, and the public begin to witness the benefits of measuring network performance, they become more likely to devote additional resources to support these efforts.

Appendix: Profiles of Three Watershed Governance Programs

This Appendix describes the three watershed governance efforts. Each spans several decades. Accordingly, the profiles are necessarily brief and highlight management problems, watershed partners, and the planning efforts that led to their performance measurement systems. The profiles also summarize some of the regulatory and non-regulatory collaborative activities used to improve environmental conditions or enhance watershed governance. Finally, the profiles summarize the performance management systems and implementation efforts under way in the watersheds.

Lake Tahoe, California and Nevada

There is a long history of efforts to improve watershed governance in Lake Tahoe.[56] One of the first regional planning efforts occurred when the five counties in the basin created the Tahoe Regional Planning Commission, which released its controversial *Lake Tahoe 1980 Regional Plan* in 1964. During this period, development continued at a rapid pace with almost 20,000 building permits issued, more than half of which were for high-density hotels and motels, and large tracts of land were subdivided to nearly double the total number of parcels.

In response, California and Nevada created the Lake Tahoe Joint Study Committee, which recommended a new bi-state agency. After two years of negotiation, a federal-state compact was approved in 1969 (P.L. 91-148) that established the Tahoe Regional Planning Agency (TRPA), a regional planning agency with broad regulatory authority.

The TRPA was largely ineffective at limiting development and was accused of being either too stringent or too lax. Dissatisfaction with the TRPA propelled the basin's actors to revise the compact in 1980 (P. L. 96-551). As a result, in 1982, the TRPA adopted nine environmental threshold carrying capacities (ETCCs), essentially performance measures, for scenic, recreational, water quality, air quality, noise, wildlife, soil conservation, fisheries, and vegetation issues. The 15-member governing board consists of a collection of federal, state, and local officials and sets policy and approves major projects. A 19-member advisory planning commission (APC) consisting of professionals and lay members from the general public advises the board.

Developing a New Regional Plan

The TRPA also developed a new *Regional Plan*. The TRPA's first attempt met with tremendous resistance and lawsuits by both environmental and development interests. A federal court injunction was issued in 1984 preventing the TRPA from implementing the plan or approving development projects. The TRPA then undertook an effort to resolve the conflict using a consensus-building workshop that brought together the major stakeholders in the basin. The product of the consensus-building process was a series of unique compromises forming the foundation of the revised 1987 *Regional Plan:*

- Individual parcel evaluation system (IPES) ranking all residential lots in the basin in terms of their suitability for development

- Transferable development rights (TDR) program
- Single- and multiple-family houses limited to 350 per year for six years
- Prohibitions on new subdivisions
- Restrictions on commercial development

During the last decade, many of the same governmental and nongovernmental organizations at "war" during the 1970s and 1980s began to collaborate to address basin problems. As one interest group leader recalled, "After several years of working together, we started building up some level of trust amongst the executive directors of various groups." Ideological differences remained, but a mutual understanding that cooperation could be pursued in some areas was achieved. Another interest group leader reported, "On some issues we agree and on others we sue."

One local business representative summed up the shift toward collaboration this way: "All right TRPA, you are not going to go away, we can't sue you out of existence, we can't go to the Nevada or California legislatures and legislate you out of business, we can't go to the Feds and have them do away with you, so we will work with you. OK. That message got into the community by '92—that cooperation was the way to go." Another participant observed, "If you have this process where everyone can veto, what it becomes is an understanding that in order to get 'A' you have to give up 'B.' As a whole we are going to get consensus because everybody needs something, everybody wants something, and everybody is afraid of something." There was also a growing understanding that "there are few projects that can be done by just one agency." Moreover, as one individual active in litigation reported, "We don't want to go back to the days of conflict. From our point of view, it is better to accept some things than go back to fighting.... There is more to be gained from cooperation...."

Some respondents attribute this shift in attitude to the leadership of two TRPA directors. Others attribute it to the directors of The Gaming Alliance and The League to Save Lake Tahoe and their efforts to create the Tahoe Transportation and Water Quality Coalition in 1989, which the local press immediately dubbed the "unholy alliance" because it consisted of The Gaming Alliance, The League to Save Lake Tahoe, and the Tahoe-Sierra Preservation Council. The coalition has since expanded to address new issues, and membership includes a wider range of stakeholders.

Implementation

These early efforts set the stage for a wide range of collaborative efforts. Competing casino operators, Heavenly Ski Resort, South Lake Tahoe, private redevelopment interests, and the TRPA reached agreement on a Coordinated Transit System. A number of collaborative redevelopment projects have also been undertaken. For example, the Park Avenue Redevelopment Project calls for redeveloping aging lodging facilities and small, scattered motels. It includes a gondola to pick up skiers at a central entertainment plaza and transport them to ski runs on both sides of the Heavenly Ski Resort. It also includes scenic improvements and a number of wetlands and stream restoration projects.

The TRPA has devolved and streamlined permitting by entering into over 30 Memorandums of Understanding (MOUs) with local governments, public utility districts, and other federal and state agencies. The TRPA and Lahontan Region Water Quality Control Board (LRWQCB) signed an MOU whereby the TRPA takes the lead in reviewing most residential and some commercial development projects. Conversely, since the LRWQCB has broader enforcement authority, it provides this form of assistance to the TRPA. The TRPA delegated permitting authority for selected activities to local governments. Alternatively, El Dorado County recently placed a planner in the TRPA to review projects for local and TRPA requirements. The MOUs increased trust and communication. As one local planner characterized it, "The confidence level is increasing on both sides." It also increased the capacity of local planning departments, reduced costs for permit applicants, and allowed the TRPA to focus on regional issues.

The key actors now work together to lobby jointly for additional federal support for basin projects by creating the Lake Tahoe Joint Federal Legislation Agenda. The increased spirit of col-

laboration also led to the Lake Tahoe Presidential Forum in 1997—a series of events and community workshops attended by the President and other high-ranking federal and state officials that focused federal attention on Lake Tahoe.[57] The Presidential Forum also focused attention on the Environmental Improvement Program (EIP), a partnership that coordinates restoration efforts designed to achieve the ETCCs. In 2001, the EIP was revised and updated based on additional stakeholder input and technical improvements that made it easier to monitor and track implementation. The updated EIP identifies over 700 projects and programs estimated to cost almost $1.5 billion (in 2000 dollars) within the 20-year time frame 1997–2016.[58] Even a casual review of the proposed activities reveals that most are inherently collaborative.[59] Again, as one agency director observed, "There are few projects that can be done by just one agency."

Over $80 million in capital projects have been funded by governmental and nongovernmental organizations. Collectively, approximately 9 percent of the EIP's projects have been completed. The expectation is that the pace of implementation will quicken and that future projects will be implemented more efficiently now that organizations have learned to work together. Over $185 million in projects were planned for 2001, almost $200 million for both 2002 and 2003.[60]

Unfortunately, it may be difficult to achieve many of the ETCCs by 2007. The threshold evaluation issued in 2001 noted that of the 36 indicators, eight were in attainment and seven were close to attainment. Of the 25 indicators not in attainment, 12 showed a positive trend, and seven had a negative trend. The EIP's success will also be subject to the vagaries of changing political and economic conditions. Nevertheless, the progress that has been made is impressive. These accomplishments are all the more remarkable in that a decade earlier many of the same organizations involved in the EIP were embedded in a nearly constant state of political and legal conflict.

Tampa Bay, Florida

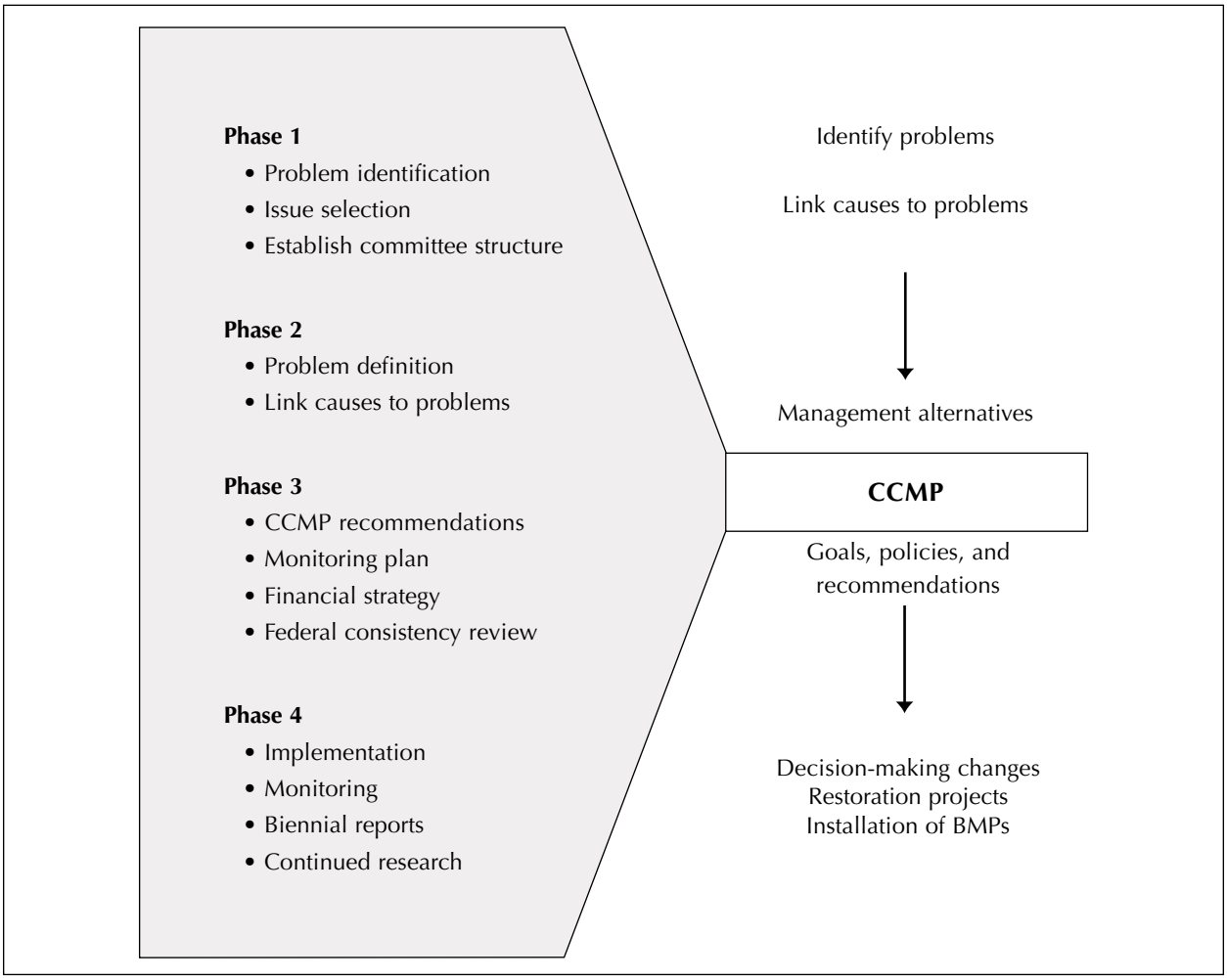
The first major study of environmental problems in Tampa Bay occurred in the late 1960s, and grassroots efforts in the early 1970s led to a series of efforts to upgrade sewage treatment plants in the late 1970s and early 1980s. In 1983, the Tampa Bay Study Commission produced a report entitled *The Future of Tampa Bay*. Although few recommendations were adopted, the report led to the creation of the Agency on Bay Management within the Tampa Bay Regional Planning Council in 1985. It also provided the foundation for the Southwest Florida Water Management District's (SWFWMD's) surface water improvement management plan.

Tampa Bay entered EPA's National Estuary Program (NEP) in 1990. The NEP provides funding for the planning and scientific research necessary to develop a comprehensive conservation and management plan (CCMP) for the watershed using a management conference—a complex advisory committee structure that oversees the plan's development and implementation.[61] Since its inception, the Tampa Bay Estuary Program (TBEP) has been a partnership consisting of six local governments (Hillsborough County, Pinellas County, Manatee County, Tampa, St. Petersburg, and Clearwater) and three regulatory agencies (EPA, Florida Department of Environmental Protection (FDEP), and the SWFWMD. Other organizations also participate to a lesser degree.

Planning Process

Early technical work examined gaps in research and synthesized technical information on the bay's problems. While technical work progressed, the TBEP secured nearly $1 million for demonstration projects to show that it was "doing something" in the midst of all this planning. Many of these projects were collaborative in nature. For example, the TBEP, the Sarasota Bay NEP, and Florida Cooperative Extension Service established the Florida Yards and Neighborhoods Program, which has since been expanded to 18 counties. The program educates home owners about how to reduce nonpoint source runoff. The TBEP also involved volunteers in these efforts. The TBEP and Tampa BayWatch worked together to establish the Bay Conservation Corps to recruit volunteers for restoration activities. More than 3,000 citizens have since participated in projects such as salt marsh plantings and

Figure A.1: The Planning Process in the National Estuary Program



island cleanups. There were also numerous examples of collaborative habitat and stormwater restoration projects during this period.[62]

Gradually, the technical work shifted to developing measurable goals for nutrient reduction, sea grass restoration, habitat restoration, and developing the CCMP. An iterative process was used to review each draft action plan, and the plans were eventually combined into a draft CCMP. In general, the CCMP was well received, and little controversy surrounded its approval in December 1996. However, the process did take a long time, and many respondents characterized it as a "painstaking consensus-building process." However, the same respondents felt strongly that the process was necessary because it allowed them to build relationships and trust.

Implementation

The CCMP's goals for nutrient reductions and habitat restoration are the heart of the plan and drive a wide range of collaborative activity in the watershed. Nutrients were capped at existing levels (1992–1994 average), which equated to reducing nitrogen by roughly 17 additional tons per year or 84 tons per year by 2000. The reductions are expected to allow sea grass beds to return to 1950 levels, an increase of 12,350 acres. In October 1996, a wide range of governmental and nongovernmental organizations created the Tampa Bay Nitrogen Management Consortium (NMC) and established a plan to achieve the non-local government portion of the CCMP's nutrient reduction goals.[63] The CCMP also includes a goal to restore 100 acres of wetlands every five years, roughly equivalent to the

current rate of restoration. To assist in these efforts, the TBEP identified and ranked 138 restoration sites and recommended 28 land acquisition sites.[64]

Once the CCMP was approved, the partners turned to making it more than just a "plan." Due to the leadership of several influential individuals, agreement was reached to develop an independent alliance of government entities pursuant to Chapter 163 of the Florida Statutes, which required developing an interlocal agreement (IA).

Developing an IA with binding commitments involved a complicated process of negotiation facilitated by a team from the University of South Florida. Two overarching issues framed the debate. Regulators were concerned with accountability and wanted local governments to specify projects and provide information on funding, outcomes, and implementation schedules. Local governments were concerned with the level of accountability but were willing to develop five-year work plans and use annual supplements to specify details and changes. Local governments also wanted more flexibility in the regulatory process and efforts to expedite permit reviews for implementation activities.[65]

The IA was signed in February 1998. A policy board comprising eight voting members (Tampa, St. Petersburg, Clearwater, Hillsborough County, Pinellas County, Manatee County, FDEP, and SWFWMD) and one non-voting member (EPA) administers the TBEP. The IA also established a management board, citizens advisory committee, and technical advisory committee similar to those used during the planning process.

Signatories agreed to pursue CCMP goals, all of which are to be achieved collectively with the exception of the nitrogen reductions allocated to local governments. Each signatory is required to submit a five-year action plan and annual supplements describing the actions taken to achieve the goals. The regulatory partners agreed to extend, as appropriate, certain forms of regulatory flexibility and to expedite permit reviews for projects in approved action plans. Each partner is also required to provide financial support to the TBEP.

Significant progress has been made.[66] The initial five-year work plan contained commitments for more than 200 activities. The 105 projects contained in the NMC's action plan are expected to remove or prevent the discharge of approximately 120 tons of nitrogen per year, which exceeds the CCMP's goal by 60 percent. In terms of habitat restoration, the SWFWMD, FDEP, local governments, and other organizations are expected to restore 1,600 acres of habitat including 250 acres of low-salinity habitat, exceeding the five-year goal of 150 acres.

While these accomplishments are notable, the TBEP faces challenges. As one respondent noted, "We're in it for the long haul. The next five years will be harder, and the ones after that even more so. We've done the easy part." Accordingly, there may be diminishing returns and higher costs associated with future nitrogen reductions and habitat restoration projects. It is also questionable whether it will be possible to "hold the line" given current growth projections. As one respondent noted, "You have to bring in the private sector and they have to figure out how to do that effectively.... It has to be more of a feature because EPA is decreasing their funding, which means everybody else has to increase their funding."

Despite these concerns, respondents were hard-pressed to identify substantive problems with the planning process, the CCMP, or the IA. All praised the program, often in glowing terms, like the following comments by a local official:

> [TBEP director] did not pay me to say this either ... but this has been most impressive. I have been in government for more than 20 years, and I have never seen anything like this where you had the support of politicians, scientists, even the commercial side and the residential side, the citizens, all actually wanting to do something so much that they were willing to sit around a table and work it out. I mean it was incredible.

Given the strong political commitments and success in implementing the first five-year action plan, there is reason to be optimistic that the

TBEP will continue making progress toward the CCMP's goals.

Tillamook Bay, Oregon

The first efforts to address environmental problems in the Tillamook Bay watershed occurred in 1979 when the Oregon Department of Environmental Quality identified sources of bacterial loadings. In 1981, Tillamook Bay became one of 21 watersheds in the Natural Resource Conservation Service's (NRCS's) Rural Clean Water Program (RCWP). Approximately $6 million was spent over 15 years to install agricultural BMPs, and Tillamook Bay had the highest landowner participation in the RCWP. This effort decreased fecal coliform levels by 50 percent, although the levels have since increased.[67]

In 1987, local officials created the Tillamook Bay Sanitation Committee. Subsequently, Oregon's Combined Animal Feeding Operations regulations were strengthened and Senate Bill 1010 was passed requiring the Department of Agriculture to develop water quality management plans for rural and agricultural areas failing to meet water quality standards. In 1995, the governor initiated the Oregon Plan for Salmon and Watersheds, and the Oregon Watershed Enhancement Board created over 83 citizen-led watershed councils.

Planning Process

The Tillamook Bay National Estuary Program (TBNEP) entered the EPA's NEP in 1993. Tillamook Bay used a management conference structure with its membership similar to the advisory committees created pursuant to the RCWP and the Bay Sanitation Task Force. As one respondent observed, "The NEP wasn't an immaculate conception. We've been dealing with these issues for a long time."

Previous planning efforts identified bacterial contamination, sedimentation, and degraded salmon habitat as priority issues. Flooding emerged as an issue in 1996 after a devastating flood caused over $53 million in damage. Early planning efforts focused primarily on conducting the research and technical assessments necessary to understand problems. While technical work progressed, the partners continued efforts to install BMPs and restore habitat. A variety of public outreach and education efforts were undertaken, and a volunteer water quality monitoring program was established.

The CCMP's development began in late 1995 when a group of 10 individuals representing landowners and dairy operators developed a preliminary CCMP. This document provided the basis for discussion during 1996 and 1997. A series of public meetings was then held that identified more than 300 recommended actions. Eventually, this list was pared to 24 broadly supported, high-priority citizen actions. An iterative process involving numerous draft plans finally resulted in a draft CCMP that received EPA's approval in December 1999. Despite delays due to staffing problems and "endless meetings," most respondents felt that the time spent was crucial to the CCMP's widespread acceptance and the development of the Tillamook County Performance Partnership (TCPP)—the interorganizational arrangement developed to monitor CCMP implementation.

Implementation

Once agreement on the goals and substance of the CCMP was reached, efforts turned to making the CCMP more than just a "plan." Various implementation structures were analyzed; however, two individuals advocated using a "performance partnership" to implement the CCMP. The performance partnership concept was derived from former Vice President Al Gore's National Partnership for Reinventing Government (NPR, initially the National Performance Review). The objective was to "reinvent" government by developing an organization to coordinate the implementation of the wide range of federal, state, and regional plans and policies that addressed environmental problems in Tillamook Bay.

The Tillamook County Performance Partnership (TCPP) was established in July 1998 by a resolution of the Tillamook County Board of Commissioners. Subsequently in 2002, it was renamed as the Tillamook Estuaries Partnership (TEP) and reorganized as a section 503(c)(3) nonprofit organization. It has a two-tiered administrative structure with an executive board that is a

Federal, State, and Local Policies and Plans Influencing Watershed Governance in Tillamook Bay

- Comprehensive Conservation and Management Plan (CCMP)
- Federal Clean Water Action Plan
- Army Corps of Engineers Challenge 21
- NRCS North Coast Basin Strategic Plan
- Senate Bill 1010
- Oregon Plan for Salmon and Watersheds
- Oregon Northwest Forest Management Plan
- Western Oregon State Forests Habitat Conservation Plan
- Tillamook County SWCD Annual Work Plan 1997–1998
- Tillamook County Flood Mitigation Plan
- Tillamook County Economic Development Council Strategic Plan
- Tillamook Bay Community College Five-Year Strategic Plan

subset of the broader membership consisting of a wide range of governmental and nongovernmental organizations. As one executive board member put it, "Our concept is focus on what you want to achieve, get people around the table, and do something. Quit planning." This emphasis on action allowed the TCPP/TEP to garner stronger community support and positive press coverage. Its implementation strategy also focused on improving communication among stakeholders, coordinating existing programs through shared goals and targets, and then leveraging existing federal and state resources to pay for recommended actions.

Considerable progress has been made in addressing Tillamook Bay's environmental problems since the late 1970s. As one respondent noted, "We've come a long way. In 1977 there were only two manure stacks under roofing in the basin. Now you won't find any that aren't." Nevertheless, significant problems remain, and it will take a sustained effort over many years to achieve the CCMP's goals and targets. Implementation efforts over the next 10 years alone are expected to cost between $80 and $160 million, and obtaining this funding will be a major challenge given Tillamook County's financial situation.

The biggest challenges are likely to be leveraging the necessary implementation funding and maintaining a focus on other goals and targets given shifting political, economic, and environmental conditions. As one respondent cautioned, "The naiveté I see is people saying 'Let's have the agencies pool their resources and we'll have enough to do what we need to.' The idea that this organization and this one have pots of money and we'll throw it together and they'll be happy with how it's being used—well, we'll just see about that." Others noted that federal and state grant programs with different priorities, grant restrictions, and cost-share requirements make it difficult to stay focused on CCMP targets.

Despite these challenges, there is reason to be optimistic because the TCPP/TEP continues to enjoy political and public support. The TCPP/TEP also monitors progress toward its targets on a regular basis. The Oregon Department of Forestry has an ongoing revenue source for restoration projects—timber sales. The partners have attracted a wide range of federal and state resources to address environmental problems. There is also strong support from members of the TCCA to implement BMPs on agricultural lands. Consequently, a great deal of progress has been achieved.[68]

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