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OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA

EVALUATION REPORT

Watershed Management

JANUARY 2007

PROGRAM EVALUATION DIVISION
Centennial Building – Suite 140
658 Cedar Street – St. Paul, MN 55155
Telephone: 651-296-4708 • Fax: 651-296-4712
E-mail: auditor@state.mn.us • Web site: http://www.auditor.leg.state.mn.us
Through Minnesota Relay: 1-800-627-3529 or 7-1-1

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Evaluation Staff

James Nobles, *Legislative Auditor*

Joel Alter
Valerie Bombach
David Chein
Catherine Dvoracek
Jody Hauer
Adrienne Howard
Daniel Jacobson
Deborah Parker Junod
Carrie Meyerhoff
John Patterson
Judith Randall
Jan Sandberg
Jo Vos
John Yunker

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OFFICE OF THE LEGISLATIVE AUDITOR

STATE OF MINNESOTA • James Nobles, Legislative Auditor

January 2007

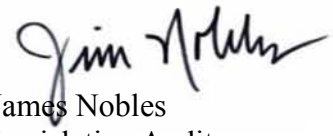
Members of the Legislative Audit Commission:

Water is one of Minnesota's most important resources. Protecting water from the impacts of agricultural, commercial, and residential activities and development is an essential government responsibility. That responsibility is shared by a complex array of local, state, and federal organizations. This evaluation was prompted by concerns that some of the government organizations established to protect Minnesota's water resources are not functioning effectively.

We confirmed many of those concerns. While we found hardworking people dedicated to protecting Minnesota's lakes, streams, and wetlands, we also found that some local water management entities have struggled to carry out their duties. We also found that the Minnesota Board of Water and Soil Resources (BWSR), the state agency primarily responsible for overseeing these local entities, has not adequately held them accountable for fulfilling their goals. We recommend that the Legislature restructure BWSR, give it more authority, and require it to play a stronger role in protecting Minnesota's water resources.

This report was researched and written by John Patterson (project manager), Jan Sandberg, and David Kirchner. BWSR and the numerous local watershed management organizations we contacted cooperated with our evaluation.

Sincerely,



James Nobles
Legislative Auditor

Room 140 Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155-1603 • Tel: 651-296-4708 • Fax: 651-296-4712
E-mail: auditor@state.mn.us • Website: www.auditor.leg.state.mn.us • Through Minnesota Relay: 1-800-627-3529 or 7-1-1

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Minnesota needs a more results-oriented approach to watershed management.

Major Findings:

- Minnesota's watershed management structure is a complex network of multiple federal, state, and local agencies and organizations. At least 14 federal and state agencies provide a wide range of watershed management services, including technical assistance, funding, permits, and some oversight. In addition, 11 different types of local entities carry out "on-the-ground" watershed management activities (pp. 12-21).

- The performance of local water management entities has been mixed. Some entities are performing well by improving water quality and reducing the risk of flooding. In contrast, other entities are struggling to implement their management plans and move beyond general administration and planning tasks (p. 28).

- State oversight of local entities is inadequate. The Minnesota Board of Water and Soil Resources (BWSR), which has primary responsibility for overseeing the local entities, has not (1) established standards for the performance of the local water management entities, (2) systematically monitored their performance, or (3) adequately held them accountable for their performance. This reflects BWSR's limited authority but also its reluctance to fully use the authority it has (p. 43-46).

Recommendations:

- The Legislature should require BWSR to provide greater oversight. Specifically, the Legislature should require BWSR to (1) establish performance and operational standards for local water management entities; (2) collect performance, financial, and activity data from each entity; (3) monitor the performance and activities of these entities; and (4) release public assessments of their performance (p. 56).

- The Legislature should give BWSR a wider range of tools to encourage and compel consistently low-performing local entities to improve their operations and performance (p. 58).

- To ensure that BWSR's actions reflect state goals and priorities, the Legislature should require that its executive director be appointed by the Governor and confirmed by the Senate (rather than appointed by the BWSR board). In addition, the board should become an advisory commission (p. 59).

- The Legislature should ensure that BWSR has adequate resources to perform its new oversight responsibilities (p. 60).

Report Summary

Water is one of Minnesota's most valuable resources. Governor Pawlenty recognized this when he said, "More so than any other state, the quality and quantity of water in Minnesota is central to our way of life. It helps define who we are and what we value."[1] In 2006, the Minnesota Legislature showed its concern for Minnesota's water quality by enacting the Clean Water Legacy Act, an effort to clean up the state's polluted waters. In addition, the periodic flooding that occurs in the Red River Valley and other parts of the state demonstrates the need to prevent and control flooding.

To address these water issues, Minnesota needs to effectively manage its watersheds. A watershed is the area of land from which water flows into a lake, river, or stream. Human activity within a watershed affects the quality and quantity of the water. As water flows over the land, it picks up pollutants. If water is allowed to run off the land too quickly, flooding can occur.

Local units of government have important responsibilities in managing Minnesota's watersheds.

We examined efforts to reduce nonpoint source pollution, which comes from diffuse sources (such as farms or parking lots). We did not examine issues related to point source pollution, which is discharged from specific sources (such as factories or sewage treatment plants). In addition, we did not examine groundwater issues or activities that local units of government conduct to purify water for their drinking water supplies. With respect to flooding, we examined efforts that federal, state, and local government entities have taken to prevent and control it.

Governmental entities use a wide range of tools to manage watersheds. For example, they build levees and sediment ponds and restore wetlands to control flood waters and collect pollutants. They also provide financial incentives to farmers to implement "best management practices" that help keep sediment and pollutants out of lakes, rivers, and streams. These practices include such things as planting permanent vegetation (primarily grass) along the banks of agricultural drainage ditches. Governmental entities also educate the public about good conservation practices and regulate such things as septic systems and feedlots.

Minnesota's watershed management structure is a complex network of government entities.

There are at least 7 federal agencies, 7 state agencies, and 11 different types of local entities involved in managing Minnesota's watersheds. The federal and state agencies provide guidance, technical assistance, funding, permits, and some oversight; and the local entities carry out many of the water management projects and programs "on-the-ground." The key state agencies are the Pollution Control Agency (which addresses water quality issues), the Department of Natural Resources (which manages public lands and waters), and the Board of Water and Soil Resources (which reviews water management plans and provides grants). The local entities include counties, watershed districts, watershed management organizations (WMOs), soil and water conservation districts (SWCDs), and others.

The roles and responsibilities of the local entities are confusing and potentially overlapping. Watershed districts and WMOs manage water within watersheds and have the authority to address most water quality and quantity issues. Under state law, all areas of the seven-county metropolitan area must have either a watershed district or a WMO. In contrast, watershed districts operate in

[1] Office of the Governor, "Clean Water Cabinet," http://www.governor.state.mn.us/priorities/initiatives/cleanwatercabinet/index.htm, accessed October 25, 2006.

Some local water management entities have improved water quality or reduced the risk of flood damage, but others have struggled to perform their duties.

only some parts of outstate Minnesota. Overall, watershed districts and WMOs manage water in about 30 percent of the state.

In contrast with watershed districts and WMOs, counties and SWCDs operate everywhere in the state on a county basis, rather than a watershed basis. Counties prepare comprehensive water plans, regulate, and carry out a wide range of other activities. SWCDs have more limited responsibilities. They primarily encourage private landowners to implement best management practices.

By layering these local entities and responsibilities on top of each other, Minnesota has created a complex and overlapping management structure. In some parts of the state, watershed districts, SWCDs, and counties each play a part in managing water that flows over the same land. Coordination is needed to avoid duplication of effort.

Performance is mixed.

Statewide, the impact of Minnesota's efforts to manage its watersheds is unclear. The state lacks sufficient statewide data on outcomes (such as water quality and flood risk) to fully assess the state's overall performance. For example, only a small portion of the state's waters have been assessed for water quality under the standards of the federal Clean Water Act. However, the waters that have been assessed suggest that approximately 40 percent of the state's waters are polluted enough to be classified as impaired.[2]

At the local level, some water management entities are significantly improving water quality or reducing the risk of flood damage, while other local entities are struggling to implement their water management plans. For example, the Minnehaha Creek Watershed District in Hennepin County has worked with other local units of government to significantly reduce pollution levels in Lake Minnetonka and the Minneapolis "Chain of Lakes." Levels of phosphorus (a pollutant) in these lakes were 1.5 to 3.5 times higher in the 1970s than they are today.

In contrast, the South Two River Watershed District (mostly in Stearns County) has struggled to implement programs and projects that would address water quality and flooding problems in the district. In fact, the district has completed very few, if any, major watershed projects in the 20 years of its existence. Local residents became so frustrated with the lack of activity that they petitioned BWSR to terminate the district, which BWSR voted to do in August 2006.

Successful local water management entities have some common characteristics. They devote a large proportion of their funds to implementation activities that improve water quality or reduce the risk of flooding. In contrast, struggling entities have trouble moving beyond general administration and planning tasks.

BWSR's oversight of local water management entities is inadequate.

Water is a statewide resource and ultimately a state responsibility because it flows across local political boundaries. If an upstream local water management entity is not preventing nonpoint source pollution or controlling flood waters, downstream residents will face the consequence of this poor management. To protect downstream residents, the state needs to ensure that all local water management entities are operating effectively.

However, BWSR is providing inadequate oversight of local water management entities. BWSR has not (1) established standards for the performance and operation of local entities, (2) systematically monitored and evaluated the performance and

[2] This excludes mercury pollution.

BWSR needs to do a better job of holding local entities accountable.

activities of these entities, or (3) adequately held them accountable for their performance. For example, even though the South Two River Watershed District had been quite inactive for nearly 20 years, BWSR did not make a concerted effort to address the situation until 2005.

Lack of authority impedes BWSR's ability to hold local entities accountable. For example, if a poor-performing outstate watershed district does not receive funds from BWSR (which is often the case because watershed districts have independent taxing authority), BWSR has no formal authority to require the district to change its operations.

To improve Minnesota's management of its watersheds, BWSR needs to play a stronger role. The Legislature should require BWSR to establish standards and give BWSR the authority it needs to ensure that these standards are met. To facilitate this stronger oversight, the Legislature should also change BWSR's governing structure. Currently, BWSR is governed by a board that is controlled by representatives of local water management entities.[3] The board then appoints an executive director to administer the daily operations of the agency.

To ensure that BWSR's actions reflect state goals and priorities, its executive director should be appointed by the Governor and confirmed by the Senate; and the BWSR board should become an advisory commission. Finally, the Legislature should ensure that BWSR has sufficient resources to effectively perform these additional oversight responsibilities. BWSR's staffing and funding for internal operations declined by more than 10 percent between 2000 and 2006.

With the Clean Water Legacy Act focusing the state's attention on water quality issues, it is especially important for BWSR to provide effective oversight. If the Legislature continues to fund the Clean Water Legacy Act, a large share of the funds would likely go to local water management entities to address nonpoint source pollution. BWSR needs to ensure that these local entities are operating effectively.

[3] The board is appointed by the Governor, but 9 of the 17 members must by law represent watershed districts, WMOs, SWCDs, and counties.

Introduction

The importance of water in Minnesota underscores the need for the state to manage its water resources effectively. As Governor Pawlenty stated, "More so than any other state, the quality and quantity of water in Minnesota is central to our way of life. It helps define who we are and what we value."[1] The Legislature's 2006 passage of the Clean Water Legacy Act (an effort to clean up the state's polluted surface waters) reflects the importance that the state places on water quality. In addition, periodic flooding in the Red River Valley and other areas of Minnesota demonstrates the need to prevent and control flooding.

Ideally, surface water should be managed on a watershed basis. A watershed is the area of land from which water flows into a lake, river, stream, or wetland. Human activity within a watershed affects the quality and quantity of water that ends up in the lake, river, stream, or wetland. As water flows over the land, it picks up pollutants. If water is allowed to run off the land too quickly, flooding can occur. Consequently, human activities and the water affected by them need to be managed.

In Minnesota, watershed management is carried out by a complex network of federal, state, and local units of government. Some legislators have expressed concerns about the effectiveness of this complex structure. Others have voiced concerns about how well the state is holding local units of government accountable for their watershed management activities. To examine these concerns, the Legislative Audit Commission directed our office in April 2006 to evaluate watershed management in Minnesota.

Our evaluation addressed the following questions:

- **What is watershed management?**
- **How does Minnesota manage its watersheds?**
- **How well is Minnesota managing its watersheds?**
- **Are state agencies providing adequate oversight of local water management entities?**
- **How should the state promote consistent and effective watershed management?**

[1] Office of the Governor, "Clean Water Cabinet," http://www.governor.state.mn.us/priorities/initiatives/cleanwatercabinet/index.htm, accessed October 25, 2006.

To answer these questions, we evaluated performance on two levels. First, we conducted a statewide assessment of watershed management. This involved interviewing officials from the Board of Water and Soil Resources, Department of Natural Resources, Pollution Control Agency, other government agencies, and several statewide interest groups. The statewide assessment also involved analyzing outcome, financial, and activity data that we collected from federal, state, and local units of government. In addition, we reviewed a wide range of literature and documents. The second level of evaluation involved case studies of 15 local water management entities. These case studies provided us with a more detailed understanding of issues and activities at the local level.

Management of Minnesota's water resources is a broad topic, and many concerns could not be addressed by our evaluation. Our focus was limited to issues related to how surface water flows over the landscape and within watersheds. With respect to water quality, we examined efforts to reduce nonpoint source pollution, which comes from diffuse sources (such as farms or parking lots). We did not examine issues related to point source pollution, which is discharged from specific sources (such as factories or sewage treatment plants). In addition, we did not examine groundwater issues or activities that local units of government carry out to treat water for their drinking water supplies. With respect to flooding issues, we examined efforts that federal, state, and local units of government have taken to prevent and control flood waters and prevent flood damage.

Chapter 1 of this report provides an overview of how Minnesota manages its watersheds. In Chapter 2, we examine the state's overall performance and the performance of selected local water management entities. Chapter 3 evaluates how well the state is overseeing the local entities and holding them accountable for their performance. Because resources are needed to manage watersheds, we examine in Chapter 4 how much money is currently being spent in Minnesota and whether additional funds are needed to improve the state's performance. In Chapter 5, we make several recommendations for what the state should do to improve its management of watersheds. Finally, Appendix A provides summaries for eight of the case studies that we conducted.[2]

[2] The appendix includes seven summaries. We combined our assessments of the Sauk River Watershed District and the Stearns Soil and Water Conservation District (two of our case studies) into one summary.

1 Watershed Management in Minnesota

SUMMARY

Minnesota's watershed management structure is a complex network of multiple federal, state, and local agencies and organizations. At least 7 federal agencies, 7 state agencies, and 11 different types of local water management entities are involved. In some parts of Minnesota, water is managed on a county basis; in other parts, it is managed on a watershed basis; and in still other parts, it is managed on both a county and watershed basis.

Water defines Minnesota. Because Minnesota has such vast water resources, it is known as the land of 10,000 lakes and sky-blue waters. According to the Minnesota Department of Natural Resources, Minnesota has 11,842 lakes and 69,200 miles of natural rivers and streams for a total of over 13 million acres of lakes, streams, and wetlands, which is about one-fourth of the state's area. Managing these vast water resources is a challenging and important task.

In this chapter, we address the following questions:

- **What is watershed management?**
- **What are the key watershed management issues in Minnesota?**
- **How does Minnesota manage its watersheds?**

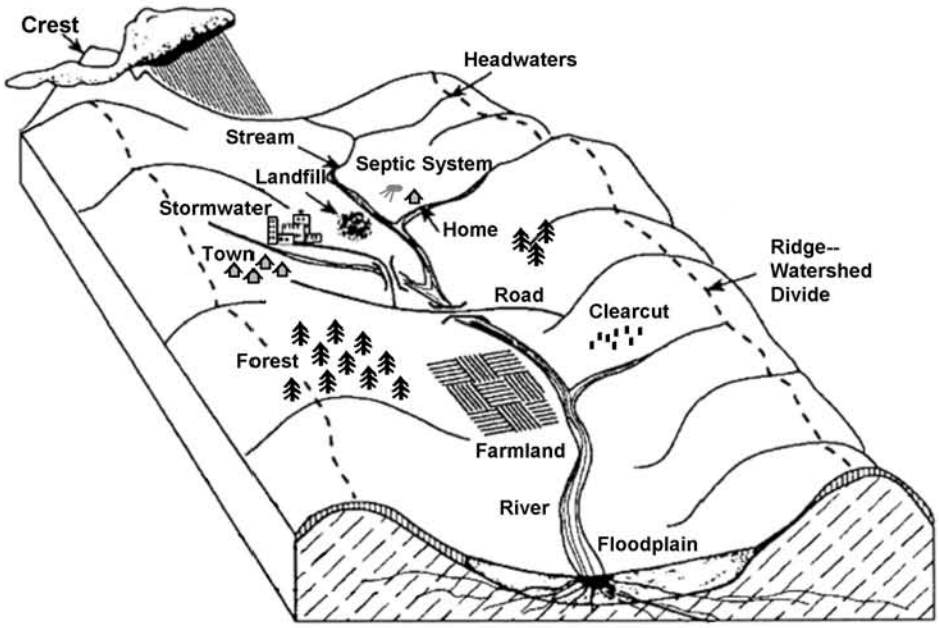
To answer these questions, we reviewed literature and documents and collected data about watershed management. We also interviewed staff from nearly a dozen federal and state agencies. Finally, we collected financial and activity data from local water management entities.

BACKGROUND

The Minnesota Department of Natural Resources defines a watershed as "the total land area from which water drains into a single stream or lake."[1] Figure 1.1 depicts a hypothetical watershed. Rain that falls anywhere within the watershed eventually flows into the river depicted in the figure or seeps into the ground-water. Watersheds can be as small as the land from which water flows into a

[1] Minnesota Department of Natural Resources "Watersheds & Landscapes," http://www.dnr.state.mn.us/rprp/watersheds.html, accessed November 7, 2006.

Figure 1.1: Hypothetical Watershed



SOURCE: Office of the Legislative Auditor's adaptation of image from Washington State University, Whatcom County Extension, www.whatcom.wsu.edu/ag/comhort/nooksack/ipmweb/images/watershed.gif, accessed December 3, 2006.

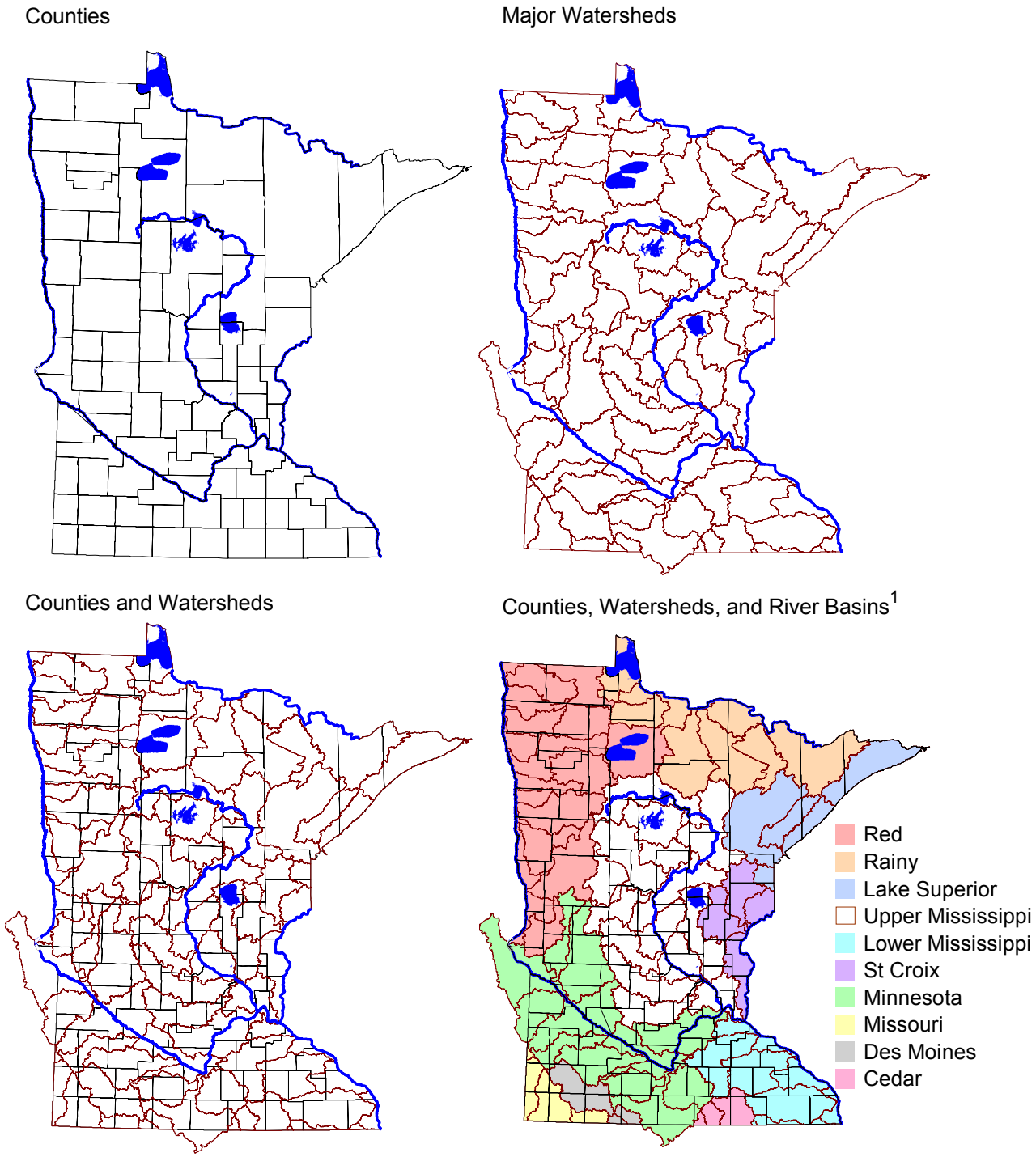
small stream or as large as all the land in the United States from which water flows into the Mississippi River. Thus, there are smaller watersheds within larger ones. The largest watersheds are usually called "basins." Figure 1.2 shows Minnesota's 87 counties, 81 watersheds, and 10 basins.

Human activity in Minnesota's watersheds significantly affects the state's surface waters.

The characteristics and conditions of watersheds affect the water we use for drinking, cooking, bathing, swimming, and other water-recreational sports. They also affect water available for wildlife habitat, agricultural production, and some industrial operations.

As Figure 1.1 shows, many human activities affect the characteristics and conditions of watersheds and, therefore, affect the quality and quantity of water. In agricultural areas, draining of fields causes water to run off the land and into streams and lakes more quickly, bringing sediment, nutrients, and other pollutants along with it. This can lead to flooding and water quality problems. In urban and suburban areas, the construction of impervious surfaces (such as streets, parking lots, and structures) also causes water to run off the land and into streams and lakes more quickly, bringing urban pollutants along with it. In addition, failing septic systems and the loss of wetlands (which retain and filter water) have contributed to water pollution.

Figure 1.2: Minnesota Counties, Major Watersheds, and Basins



[1] This map portrays the basin definition used by the Pollution Control Agency for administrative purposes.

SOURCES: Office of the Legislative Auditor's depiction of data from the Department of Natural Resources and the Pollution Control Agency.

About 40 percent of Minnesota's lakes, rivers, and streams that have been assessed for water quality are polluted enough to be considered "impaired."[2] Common pollutants include E. coli, fecal coliform, phosphorus, nitrogen, and sediments. Under the federal Clean Water Act, the Pollution Control Agency (PCA) assesses water quality by answering three questions about the ability of the water to serve its three key functions – supporting "aquatic life," providing "aquatic recreation," and supporting "aquatic consumption." First, does the water provide acceptable water quality conditions for a wide range of aquatic life? Second, is water an attractive and safe place for people to swim? Third, can people safely eat fish that are caught in the water as often as they wish? If the answer to any of these questions is "no," PCA classifies the body of water as "impaired"—in other words, the water is unable to serve its intended functions. Figure 1.3 shows the waters in Minnesota that are currently identified as failing to meet the standards of the Clean Water Act. As more assessments are carried out, PCA predicts that many more lakes, rivers, and streams will be listed as impaired.[3]

Water pollution and flooding are significant issues in Minnesota.

Flooding has been, and continues to be, a problem in parts of Minnesota. Figure 1.4 shows the number of flood disasters declared by the federal government in each county since 1959. Historically, the Red River Valley in northwestern Minnesota has suffered the most flooding; however, other parts of the state have also experienced a significant number of flood events.

In the following sections, we discuss how Minnesota manages its watersheds. Federal government and state agencies play important roles in protecting water quality and reducing the risk of flooding, but local units of government have much of the responsibility for managing the state's watersheds. At the federal level, the Environmental Protection Agency, Department of Agriculture, Department of Interior, and U.S. Army Corps of Engineers are involved. The state's primary agencies are the Board of Water and Soil Resources (BWSR), Pollution Control Agency (PCA), Department of Natural Resources (DNR), and Department of Agriculture. A wide range of local entities are also involved, including counties, cities, townships, watershed districts, watershed management organizations, soil and water conservation districts, and joint powers organizations. Later in this chapter, we describe the operations of each of these entities.

WATERSHED MANAGEMENT ACTIVITIES

Federal, state, and local units of government carry out a wide range of activities to control the quality and quantity of water that flows over the landscape. In this section, we briefly describe seven activities commonly used in Minnesota: regulating, building structures, purchasing conservation easements, encouraging best management practices, educating citizens, monitoring water quality and quantity, and planning.

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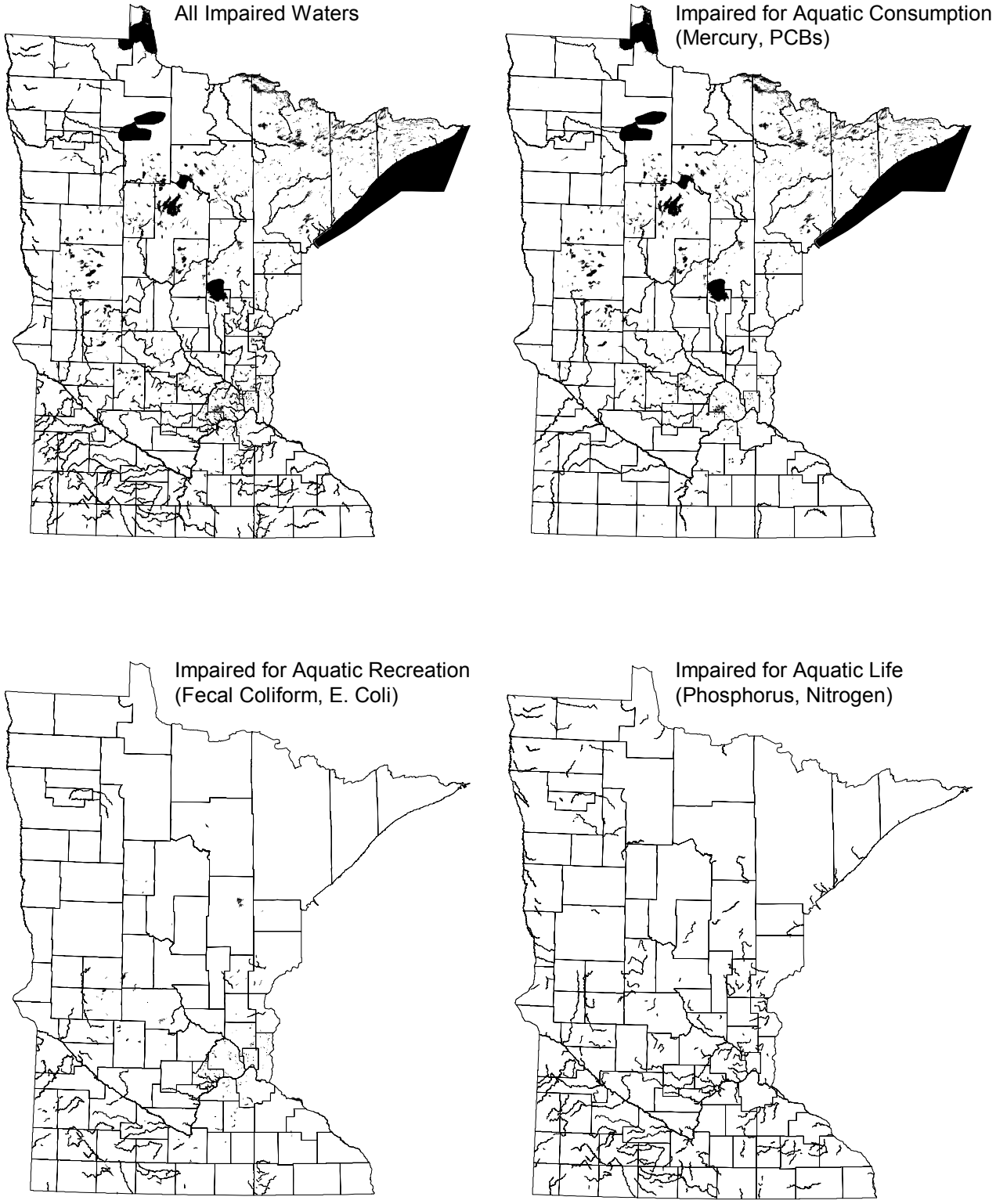
[2] Minnesota Pollution Control Agency, *Watershed Achievements Report* (St. Paul, November 2005), 3, http://www.pca.state.mn.us/publications/wq-cwp8-05.pdf, accessed December 6, 2006. This does not include impairments by mercury, which are mostly due to air pollution coming from outside the state.

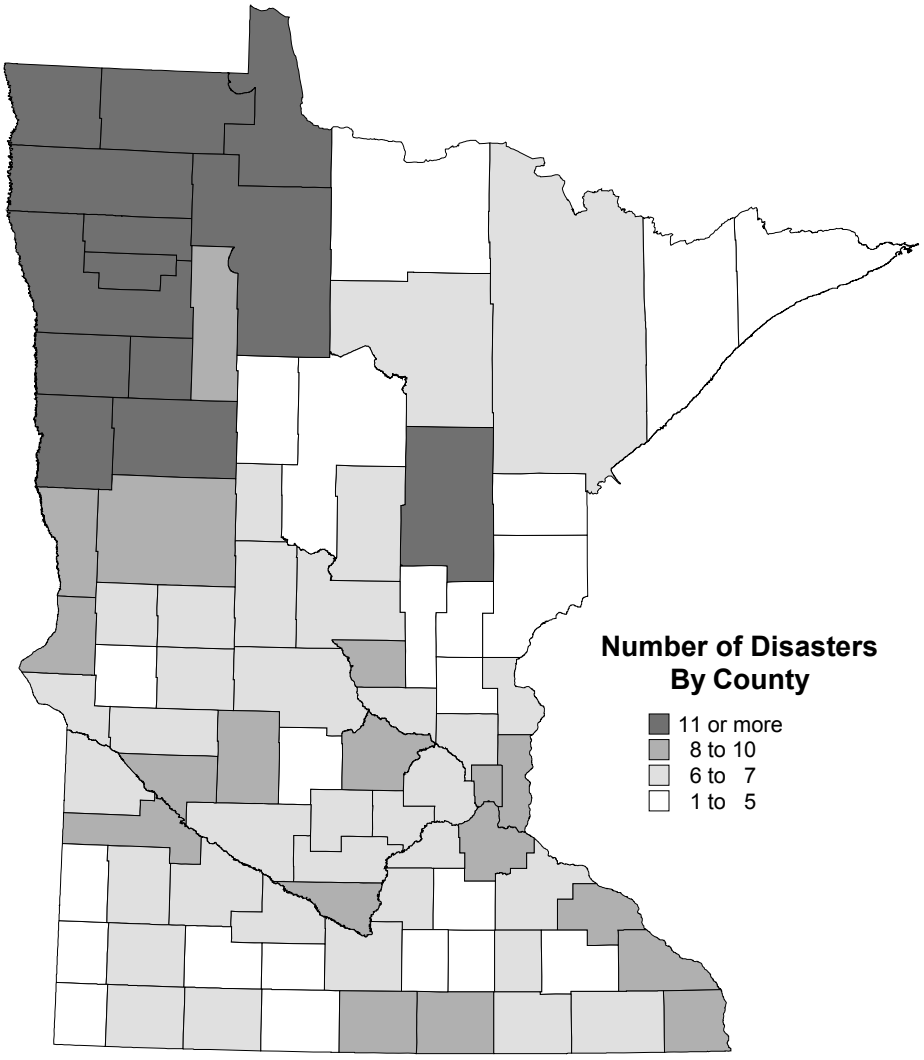
[3] Minnesota Pollution Control Agency, "Why Impaired Waters Are A Priority For Minnesota," (February 6, 2004), 1, http://www.pca.state.mn.us/publications/leg-04sy2-02.pdf, accessed December 5, 2006.

Figure 1.3: Minnesota's Impaired Waters, 2006



SOURCE: Office of the Legislative Auditor's depiction of data from the Pollution Control Agency.

Figure 1.4: Federally Declared Flood Disasters, 1959-2005



NOTE: A single disaster declaration can include multiple counties.

SOURCE: Office of the Legislative Auditor's depiction of data from the Federal Emergency Management Agency.

State and local units of government regulate the activities of citizens and businesses to protect water quality and reduce the risk of flooding. In Minnesota, regulations are imposed and administered through statutes, rules, ordinances, and permits. State agencies directly regulate activities themselves or delegate regulatory responsibilities to local entities. Table 1.1 lists the types of activities that government regulates to limit nonpoint source pollution and reduce the risk of flooding.

Table 1.1: Nonpoint Source Pollution and Flood Risk Regulations

Area Regulated	Description
Land Use	Land use has an impact on how quickly water runs off the land and what pollutants it carries with it. Counties, cities, and townships oversee the use of land by establishing requirements that direct the development of property. For example, a local ordinance might limit the percentage of a parcel covered by impervious surfaces, such as buildings and driveways.
Shorelands	Shoreland ordinances are special kinds of land-use regulation that apply to lands that border lakes, streams, and rivers. How these lands are developed can have an impact the neighboring waters. Consequently, under state law, local units of government are required to have ordinances that regulate the use and development of shoreland property. These ordinances include such things as minimum lot sizes and building setbacks.
Floodplains	Minnesota requires local units of government in flood-prone areas to enroll in the National Flood Insurance Program. To qualify, they must adopt floodplain ordinances that meet or exceed criteria set by the Federal Emergency Management Agency (FEMA). These ordinances reduce the risk of future flood damage by restricting development within floodplains (the areas bordering rivers that are subject to flooding). The National Flood Insurance Program makes federally backed flood insurance available to residents who live in participating communities.
Wetlands	Wetlands help mitigate flooding and water pollution by storing and filtering water. To preserve its wetlands, Minnesota has a policy of "no net loss" of wetlands. For example, the Wetland Conservation Act requires anyone proposing to drain or fill a wetland to first avoid it. If this is not possible, the act then requires the person to replace any lost wetlands. These requirements are administered by local units of government.
Agricultural Drainage Systems	To improve the productivity of their fields, farmers install drainage systems that remove excess water. These systems include drainage tiles that are buried in the soil and drainage ditches that are dug along the sides of fields. Drainage tiles are perforated clay, cement, or plastic pipes that collect and carry water away from the fields. Drainage ditches collect water flowing off the fields or out of the tiling systems and then carry the water to streams, rivers, and lakes. Counties and watershed districts are responsible for enforcing the state's drainage law. For example, they enforce the statutory requirement that 16.5 foot grass strips be planted on the banks of new or improved ditches. These grass strips help keep sediment and other pollutants out of the ditches.
Feedlot Operations	Feedlots are farms with livestock operations. To ensure that pollutants from animal waste do not get into the water, PCA and counties enforce regulations pertaining to the operation of these farms. For example, state rules exclude new feedlots from designated shoreland areas.
Septic Systems	More than half a million housing units in Minnesota are not served by municipal sewage treatment facilities. Most of them have septic systems, which are technically referred to as individual sewage treatment systems. Failing septic systems are a threat to water quality. State law requires local units of government to administer and enforce local septic system ordinances.
Urban Stormwater	Urban runoff can affect water resources physically, chemically, and biologically. Under the federal Clean Water Act, construction sites and many municipalities must obtain permits from PCA and develop plans to address stormwater runoff from impervious surfaces such as parking lots and buildings. The three permit types—construction, industrial, and municipal separate storm sewer—have distinct requirements, and some regulated parties may need more than one permit.

SOURCE: Office of the Legislative Auditor compilation of information from federal and state documents.

Government entities build structures to control the flow of water and improve water quality. Table 1.2 lists several water management structures. Some structures (such as sediment ponds and wetland restorations) serve both roles of preventing flooding and improving water quality. These projects slow down or hold back the flow of water so that pollutants can settle to the bottom of the pond or wetland or be filtered out.

Table 1.2: Construction Projects That Impact Water Quantity or Quality

Construction Project	Description
Dams	Barriers constructed across a waterway to control the flow of water.
Impoundments	Dammed lakes, ponds, and reservoirs that hold water temporarily to control water flow.
Levees	Embankments along the banks of rivers that are designed to contain flood water.
Diversion Channels	Artificial channels that divert flood water around flood-prone areas, such as certain towns.
Sediment Ponds	Ponds that hold back water so that suspended sediment can settle and collect at the bottom of the pond.
Wetland Restorations	Projects that recreate former wetlands.
Re-Meandered Rivers	Modifications to river channels that recreate the meandering nature of the rivers and reduce the speed of the rivers' flow.

SOURCE: Office of the Legislative Auditor.

Building water-control structures, implementing best land-use management practices, regulating, and educating are important watershed management activities.

Conservation easements are legal agreements that protect the environment by giving the purchaser of the easement authority to limit the landowner's use of a piece of property. Government entities buy conservation easements to protect water quality. For example, under the Reinvest in Minnesota program, the state pays farmers to retire land near bodies of water from agricultural production. The land may then be replanted with native grasses or restored as a wetland to prevent soil erosion and improve water quality.

Federal and state agencies have developed or identified many "best management practices" that prevent or reduce nonpoint source pollution coming from farms, forests, lakeshores, and urban areas. Table 1.3 lists examples of best management practices. To encourage landowners to adopt these practices on their land, government entities provide incentives and other assistance to help pay the cost of carrying out these practices.

Government entities educate landowners and the general public about water quality and flood control issues. For example, to benefit high school students, some local water management entities hold area competitions (Envirothons) that are designed to promote natural resources involvement and education. Local entities also use educational materials and direct consultation to inform landowners about the best management practices described in Table 1.3.

Table 1.3: Examples of Best Management Practices

Activity	Description
Agricultural	
Buffer Strips	Strips of grass or other erosion-resisting vegetation that are planted between cultivated fields and bodies of water.
Grassed Waterways	Natural or constructed watercourses that are shaped and planted with suitable vegetation so that erosion does not occur.
Conservation Tillage	A tillage practice that leaves plant residues on the soil surface for erosion control and moisture conservation.
Terraces	Ridges or channels built on sloping farm land so that the land descends in steps rather than a continuous slope. The terraces hold back runoff and sediment and reduce erosion.
Manure Management	A series of farming practices to reduce the amount of manure getting into the water.
Pasture Management	A series of farming practices that keep cattle away from bodies of water and protect vegetative cover.
Stormwater	
Urban Rain Gardens	Landscaped areas that are planted with native plants and receive and soak up rainwater runoff from roofs, driveways, and parking lots.
Sanding and Salting Practices	Calibrated equipment that minimizes the rate at which sand and salt and other de-icing chemicals are applied to road surfaces in winter.
Street Sweeping	Strategically scheduled sweepings to collect debris (such as leaves and sand) that would eventually be washed off streets into the stormwater system.
Permeable Pavement	Surfaces constructed from concrete, asphalt, and plastic that allow water to filter into the ground.
Forestry	
Stream Protection Zones	Buffer areas next to streams that stabilize soil and filter sediment out of water.
Machine Storage and Maintenance	Efforts to minimize spills of fuel, lubricants, and other waste from logging equipment.
Shoreland	
Shoreline Stabilization	Efforts to stabilize shorelines by planting native vegetation, diverting drainage away from the shoreline, and installing erosion control devices.

SOURCE: Office of the Legislative Auditor.

Water quality is monitored to track the health of Minnesota's lakes, streams, and rivers, and water quantity is monitored to assess water supply and flood risk. Government entities also use assessment data to evaluate the effectiveness of the other watershed management activities discussed in this section.

Like other units of government, water management entities use planning processes to assess their needs and problems, set goals and objectives, and then identify strategies and activities to achieve those goals and objectives. These plans help the entities be strategic and systematic in their operations.

This brief description of watershed management activities is illustrative, not exhaustive. Depending on a water management entity's mission and goals, other

activities may be initiated. For example, some entities may take steps to control or mitigate noxious or invasive water-related species. Others may dredge lakes to improve recreational activities.

WATER MANAGEMENT ENTITIES

A number of government entities have some role in managing Minnesota's watersheds. Based on our review of these entities' roles, we found that:

- **Minnesota's watershed management structure is a complex network of multiple federal, state, and local agencies and organizations.**

In the rest of this section, we describe the responsibilities and activities of these entities. We start with the local entities, which conduct much of the work on the ground. We then move onto the state and federal agencies, which largely provide guidance, funding, permits, and some oversight.

Local Entities

A wide range of local entities are involved in watershed management. Table 1.4 lists 11 different types of local water management entities. As we will discuss later, some of them manage water on a watershed basis, while others manage water on a county basis. At times, these entities have overlapping responsibilities.

Table 1.4: Local Entities Involved in Watershed Management in Minnesota

Watershed Districts
Watershed Management Organizations
Soil and Water Conservation Districts
Counties
Cities and Townships
Joint Powers Organizations
Metropolitan Council
Lake Conservation Districts
Lake Improvement Districts
Lake Associations
Nonprofits

SOURCE: Office of the Legislative Auditor.

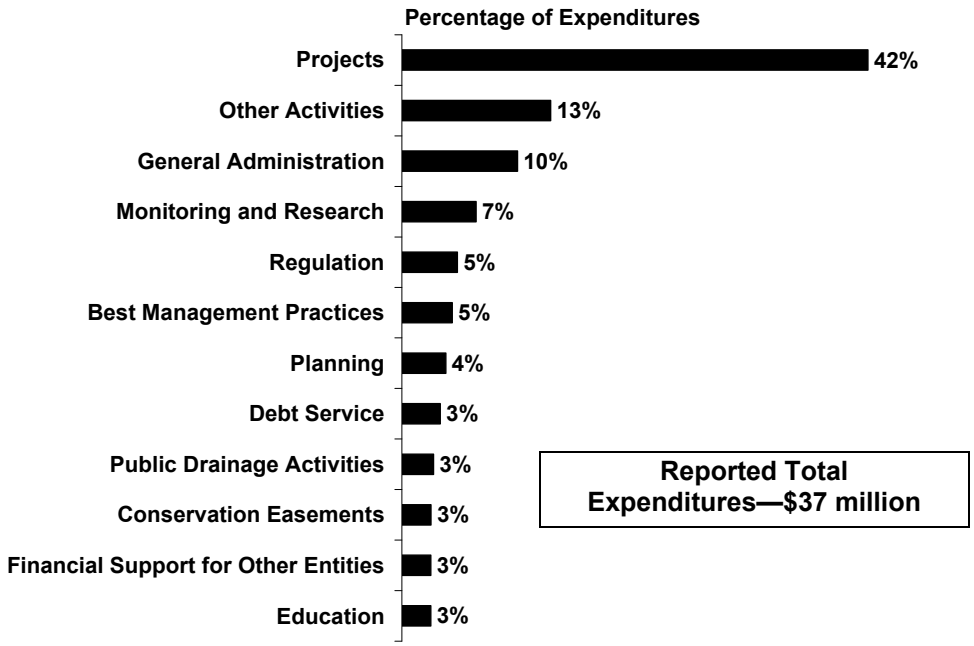
Watershed Districts. Minnesota currently has 46 watershed districts. Districts are usually created when a water management problem crosses county or municipal boundaries. For example, a flooding problem that occurs within a watershed may encompass several counties. Solving the problem requires a coordinated multi-county approach. Watershed districts are supposed to be able to address this type of problem because they are independent, multi-jurisdictional authorities with their own taxing and rulemaking authority. Watershed districts are created by the Minnesota Board of Water and Soil Resources in response to

petitions from local citizens or officials.[4] Once a district is created, county commissioners appoint the board of managers that runs the district.

Watershed districts are often formed to solve problems that cross county lines.

Each watershed district has its own mission and priorities. Some focus on improving water quality, while others work primarily on flood control. As Figure 1.5 shows, watershed districts spend their resources on a wide range of activities but focus their efforts largely on constructing, maintaining, and implementing projects. As Figure 1.6 shows, watershed districts exist in only some parts of the state and vary widely in geographic size. Expenditures for individual watershed districts ranged from $7,000 to $5.7 million in 2005.

Figure 1.5: Watershed District Expenditures by Category, 2005



NOTE: Expenditures reflect data from 34 of the 46 watershed districts in Minnesota.

SOURCE: Office of the Legislative Auditor, *Watershed District Information Request,* July 2006.

Watershed management organizations only operate in the seven-county metropolitan area.

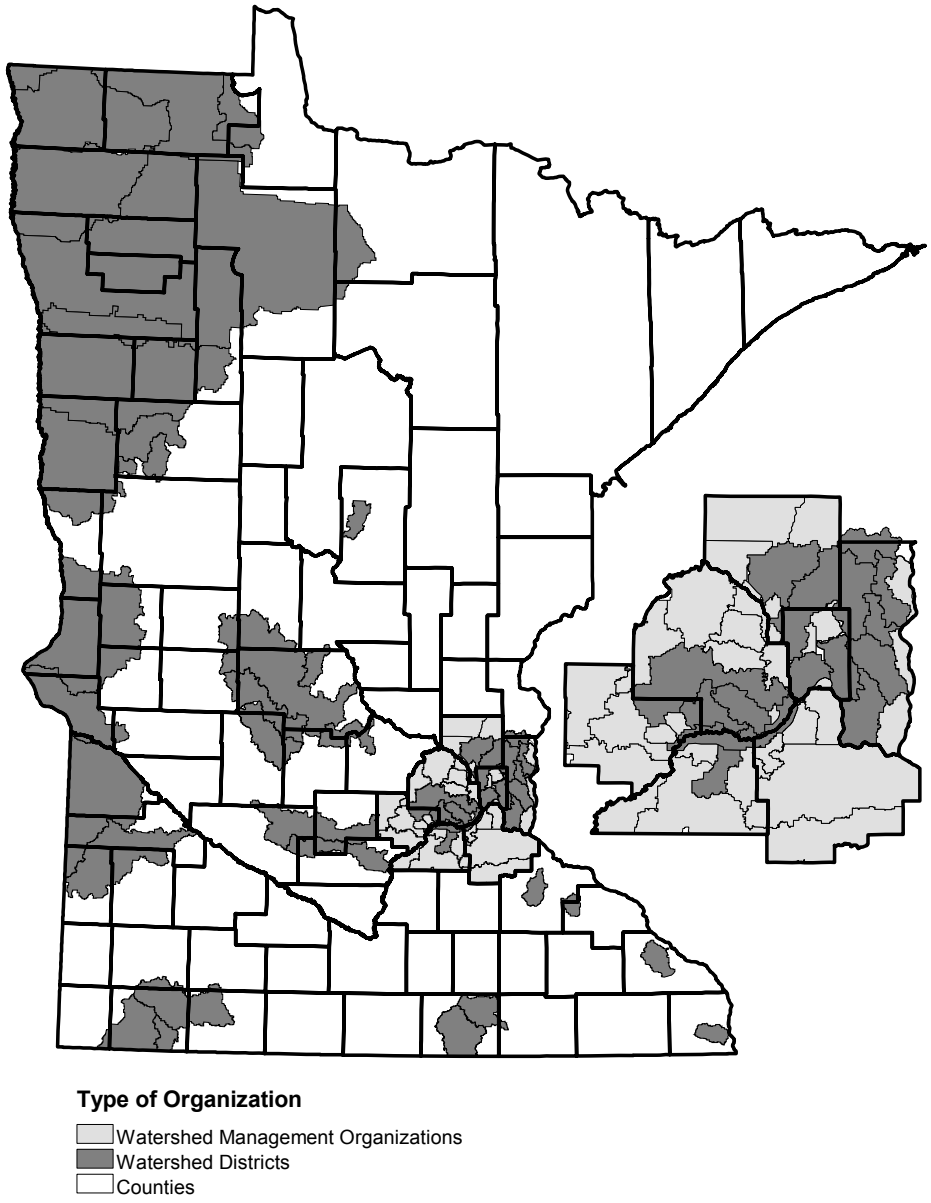
Watershed Management Organizations. Watershed management organizations (WMOs) also manage water on a watershed basis and are found only in the seven-county Twin Cities metropolitan area. Under state law, WMOs must exist in any part of the Twin Cities metropolitan area that does not have a watershed district.[5] Figure 1.6 shows how the metropolitan area is split between watershed districts and WMOs. There are two types of WMOs—joint powers

[4] *Minnesota Statutes* 2006, 103D.205. Subdivision 3 states that the petition's signatures must represent certain counties, cities, or resident owners.

[5] *Minnesota Statutes* 2006, 103B.231, subd. 1.

and county-administered.[6] Joint powers organizations (comprised of cities and townships) operate 20 WMOs, and 3 counties (Carver, Dakota, and Scott) administer their own WMOs. As Figure 1.7 shows, the joint powers WMOs spent their funds largely on general administration, regulation, and planning in 2005. The cities and townships that make up the joint powers organizations are

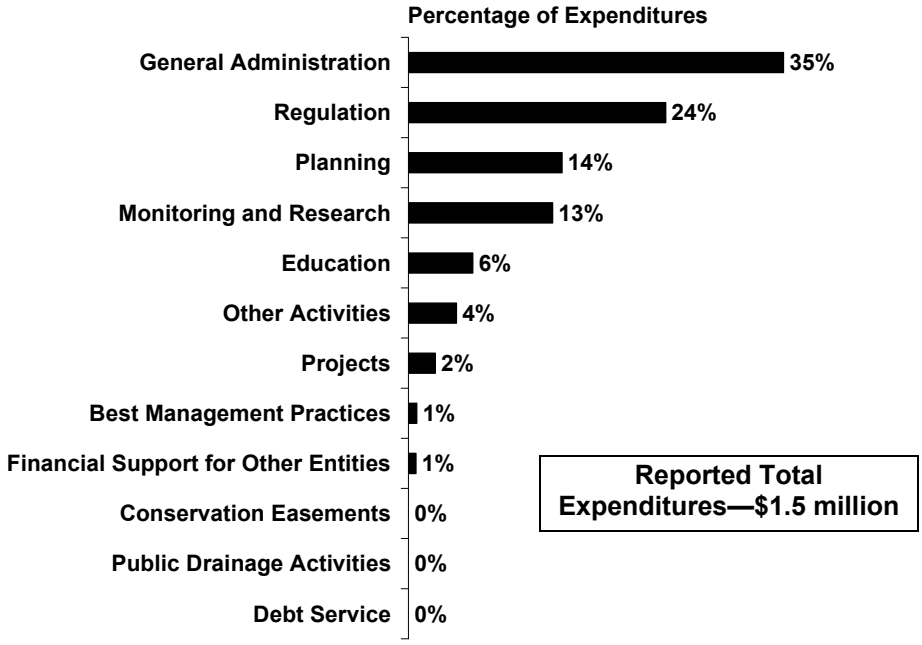
Figure 1.6: Watershed Districts and Watershed Management Organizations in Minnesota, 2006



SOURCE: Office of the Legislative Auditor's depiction of data from the Department of Natural Resources.

[6] Technically, under *Minnesota Statutes* watershed districts in the Twin Cities metropolitan area are also WMOs. To avoid confusion, we refer to watershed districts as watershed districts and joint powers WMOs and county-administered WMOs as WMOs.

Figure 1.7: Joint Powers WMO Expenditures by Category, 2005



NOTE: Expenditures reflect data from 15 of the 20 joint powers WMOs.

This graph does not include expenditures from the Middle Mississippi River WMO, which is an atypical WMO. Under *Minnesota Statutes* 2006, 275.066, the Middle Mississippi River WMO is the only joint powers WMO identified as a special taxing district. Thus, just like watershed districts, it can independently levy taxes. This WMO spends more money than any other WMO with 2005 expenditures of $1.3 million. In addition, it operates more like a watershed district by devoting about half of its funding to capital projects. If the Middle Mississippi River WMO were included in this figure, it would provide a distorted picture of how a typical WMO operates.

SOURCE: Office of the Legislative Auditor, *Watershed Management Organization Information Request,* July 2006.

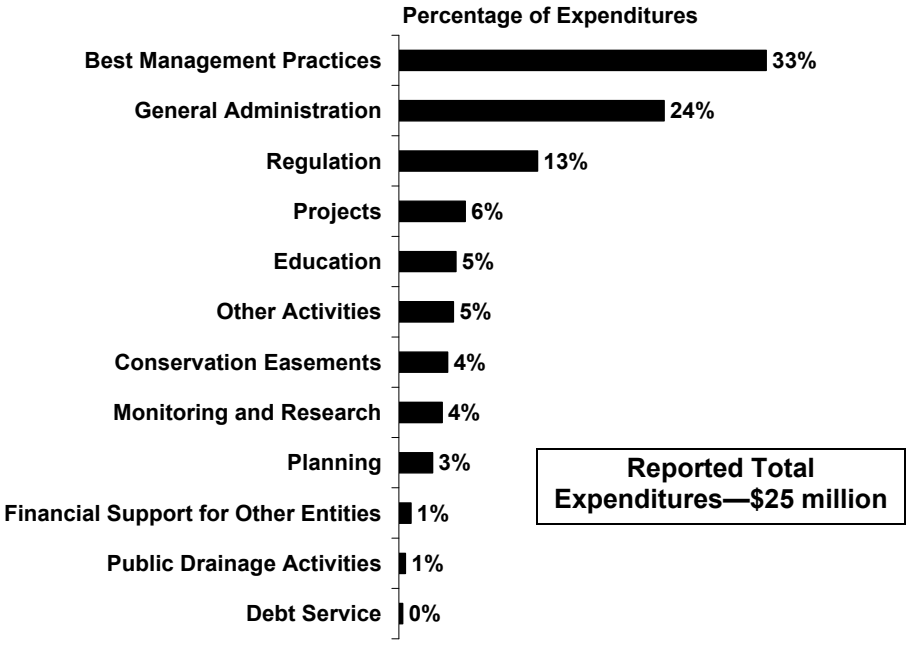
often delegated the responsibility for carrying out projects. Generally, the cities and townships also provide the joint powers WMOs with funding. In 2005, the expenditures for individual WMOs ranged from $11,000 to $1.3 million.

Soil and water conservation districts encourage private landowners to use best management practices.

Soil and Water Conservation Districts. Ninety-one soil and water conservation districts (SWCDs) operate on a county basis throughout the state and are administered by an elected board of supervisors.[7] The districts do not have taxing authority and receive much of their money from their affiliated counties and the state. As Figure 1.8 shows, SWCDs focus their resources on encouraging private landowners to carry out best management practices. In

[7] In 82 of the 87 counties, the boundaries of the SWCD and the county coincide. Otter Tail, Polk, and St. Louis counties are each split into two SWCDs. Marshall and Beltrami counties together have three SWCDs. One SWCD covers part of Marshall County, another covers part of Beltrami County, and the third takes in parts of both Marshall and Beltrami counties.

Figure 1.8: Soil and Water Conservation District Expenditures by Category, 2005



NOTE: Expenditures reflect data from 82 of the 91 soil and water conservation districts.

SOURCE: Office of the Legislative Auditor, *Soil and Water Conservation District Information Request*, July 2006.

2005, the expenditures of individual SWCDs ranged from $31,000 to $1.5 million.

Counties, cities, and townships play important roles in watershed management.

Counties. Minnesota's 80 outstate counties develop water management plans to identify water problems and prioritize solutions. Counties focus their efforts on (1) regulating; (2) constructing, maintaining, and implementing projects; (3) providing financial support to other local water management entities; and (4) planning.

Municipalities. Cities and townships carry out several important watershed management activities. These include land-use planning, zoning, and stormwater management.

Joint Powers Organizations. Rather than creating a watershed district, some local governments have created joint powers organizations to address multi-jurisdictional water problems. The outstate joint powers organizations are not referred to as WMOs; that term is reserved for metropolitan-area organizations.[8]

[8] The Metropolitan Surface Water Management Act, which governs the metropolitan-area organizations, does not apply to the outstate organizations. See *Minnesota Statutes* 2006, 103B.201 to 103B.255.

Metropolitan Council. The Metropolitan Council manages sewage treatment services and regional water supply issues in the seven-county metropolitan area. As part of its responsibilities, the council also reviews the land-use and water management plans of the local entities within the metropolitan area. In addition, the council has provided grants to local entities to carry out their watershed management activities.

Other Local Entities. Other local entities are also involved in watershed management. The other entities include lake conservation districts, lake improvement districts, lake associations, nonprofit organizations, and others. While these entities can play an important role in the management of specific lakes and watersheds, we did not assess their operations in this evaluation.

This complex network of agencies and responsibilities reflects the fact that water law in Minnesota has evolved by adding management authorities over time. In 1937, drought and "dust bowl" problems prompted the Legislature to pass the Soil Conservation Districts Law, which allowed residents to organize Soil and Water Conservation Districts.[9] In 1953, Congress approved the federal Watershed Protection and Flood Prevention Act targeting the management of watersheds, with an emphasis on flooding.[10] Under the act, the federal government provided assistance to local entities having the power of eminent domain and taxing authority. In Minnesota, the SWCDs declined to assume those responsibilities. Consequently, the Legislature enabled the creation of watershed districts with these powers in the 1955 Watershed Law, which allowed citizens or local governments to petition the state for the establishment of watershed districts.[11]

Because so many different entities are involved, Minnesota's approach to watershed management is complex and often confusing.

The Legislature added more entities and responsibilities in 1982 by passing the Metropolitan Surface Water Management Act, which requires the entire metropolitan area to be managed by a watershed district or WMO.[12] Concerns about the performance of local organizations prompted the Legislature to pass the Comprehensive Local Water Management Act in 1985.[13] The act encourages, but does not require, counties outside the metropolitan area to develop and implement comprehensive water management plans.

Minnesota's approach of adding management layers on top of existing ones has resulted in a watershed management structure that is complex and confusing. In the metropolitan area, surface water is managed on a watershed basis by either a watershed district or a WMO. In outstate Minnesota, counties are supposed to develop plans and manage their water resources.[14] However, some outstate areas also have watershed districts. Furthermore, the 91 soil and water conservation districts (SWCDs) overlap Minnesota's 87 counties.

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[9] Currently codified in *Minnesota Statutes* 2006, 103C.

[10] *Public Law 83-566*, the Watershed Protection and Flood Prevention Act of 1953.

[11] *Minnesota Statutes* 2006, 103D.

[12] *Minnesota Statutes* 2006, 103B.231, subd. 1.

[13] Currently codified in *Minnesota Statutes* 2006, 103B.301-103B.355.

[14] *Minnesota Statutes* 2006, 103B.311, subd. 1.

State Agencies

Table 1.5 lists the key state entities involved in watershed management. As we discuss below, coordinating these entities and their activities is complicated.

Table 1.5: State Entities Involved in Watershed Management in Minnesota

Board of Water and Soil Resources
Department of Natural Resources
Pollution Control Agency
Department of Agriculture
Department of Health
Governor's Clean Water Cabinet
Environmental Quality Board

SOURCE: Office of the Legislative Auditor.

The Board of Water and Soil Resources (BWSR) coordinates and supports local water management activities.

Board of Water and Soil Resources. The Minnesota Board of Water and Soil Resources (BWSR) is responsible for coordinating and supporting the state's local water management entities. These entities include 46 watershed districts, 23 WMOs, 91 SWCDs, and 80 water managers from the outstate counties. To support these entities, BWSR provides technical and administrative assistance, reviews management plans, and distributes grant dollars. The agency also administers the Wetland Conservation Act and carries out several other coordinating functions. Water and soil conservation on private land is the agency's primary focus.

BWSR helps finance several types of conservation activities. The agency distributes funds to SWCDs for their administration and operations. BWSR also helps finance (1) best management practices carried out by landowners, (2) conservation easements, (3) feedlot improvements, (4) local administration of the Wetland Conservation Act, and (5) county development and implementation of water management plans.

BWSR is governed by a 17-member board composed of state and local officials – 3 from watershed districts or WMOs, 3 from SWCDs, 3 from counties, and 5 from state agencies (the University of Minnesota Extension Service, Pollution Control Agency, and departments of Natural Resources, Health, and Agriculture). The remaining three board members are citizen representatives. The Governor appoints all 17 board members.[15] About 60 employees operate out of the agency's seven field offices and its St. Paul headquarters. BWSR's executive director is appointed by the board.

The Department of Natural Resources regulates many activities that affect the state's public waters.

Department of Natural Resources. The Department of Natural Resources (DNR) is involved in several watershed-related activities. The department

[15] The state agency representatives are *ex officio* members of the board and are not directly appointed by the Governor to serve on the board, but the Governor does appoint the leaders of these agencies. The Governor's appointment of the BWSR board chair is subject to Senate confirmation.

regulates activities that affect the course, current, or cross-section of "public waters" (most of the state's lakes and rivers as well as some streams and wetlands). These activities include such things as constructing bridges and filling wetlands. DNR also manages a water supply and permitting program that regulates the use of surface and groundwater. DNR operates dams and manages a network of stream gauges that assess water levels and stream flow. In addition, the department oversees the local governments that administer shoreland and floodplain ordinances. Finally, DNR distributes grants to local water management entities for shoreland habitat restoration and flood hazard mitigation. While most of the department's divisions have water-related responsibilities, the Waters Division is the lead unit in DNR on water issues.

The Pollution Control Agency has primary responsibility for water quality in Minnesota.

Pollution Control Agency. The Minnesota Pollution Control Agency (PCA) is the state agency primarily responsible for water quality. One of PCA's major roles is administering federal Clean Water Act programs in Minnesota. Consequently, PCA is responsible for assessing water quality, identifying impaired waters, and improving water quality. As part of its clean water responsibilities, the agency regulates stormwater systems for large and medium-sized municipalities and works with counties to regulate feedlots and septic systems. In addition, PCA provides technical, planning, and financial assistance to local entities that are taking steps to prevent nonpoint source pollution. PCA also regulates entities (such as factories and sewage treatment facilities) that discharge point source pollution and issues permits for runoff from construction and industrial sites.

Department of Agriculture. The Minnesota Department of Agriculture regulates pesticides and fertilizers and tests groundwater for contamination.[16] The department also tries to improve water quality by providing low-interest loans to individuals who implement agricultural best management practices.

Department of Health. The Department of Health is not directly involved in the management of watersheds but has responsibilities for clean drinking water. The department implements the federal Safe Drinking Water Act, which protects public water supplies.

Governor's Clean Water Cabinet. Coordinating the state agencies' watershed management activities presents a significant challenge. To address the challenge, Governor Pawlenty created the Clean Water Cabinet in 2003. The Cabinet brings together the leaders of the state agencies that are involved in clean water issues, including the Commissioners of Pollution Control, Agriculture, Health, and Natural Resources, the Executive Director of the Board of Water and Resources, the Chair of the Metropolitan Council, and a representative from the Governor's office. The cabinet meets monthly to discuss water issues and the projects it sponsors.

Environmental Quality Board. Historically, the Environmental Quality Board (EQB), an independent board housed within the Minnesota Department of Administration, has been responsible for coordinating the state agencies responsible for watershed management. The board is comprised of nine state

[16] Office of the Legislative Auditor, *Pesticide Regulation* (St. Paul, March 2006) examined the department's pesticide-related activities.

agency leaders and five citizens appointed by the Governor and confirmed by the Senate.[17] Much of the EQB's coordination and planning work was once completed through its Water Resources Committee. However, this group has not met for the last few years and has essentially been supplanted by the Clean Water Cabinet. Nevertheless, EQB still has two staff who carry out water planning and coordination activities. This includes providing staff and resources for the Governor's Clean Water Cabinet.

Federal Government

Various federal agencies are also involved in watershed management.

Table 1.6 lists the federal agencies involved in watershed management. As we describe below, they carry out a wide range of activities. Two agencies within the U.S. Department of Agriculture provide watershed management services. The Natural Resources Conservation Service (NRCS) develops and implements soil and water conservation programs that provide funding and technical assistance to landowners who implement conservation and best management practices on privately owned land. The Farm Service Agency primarily administers and manages federal farm commodity, credit, conservation, disaster, and loan programs, but it also provides watershed management services by purchasing conservation easements from farmers under the Conservation Reserve Program.

Table 1.6: Federal Agencies Involved in Watershed Management in Minnesota

- U.S. Department of Agriculture
  - Natural Resources Conservation Service
  - Farm Service Agency
- U.S. Army Corps of Engineers (U.S. Department of Defense)
- Environmental Protection Agency
- Federal Emergency Management Agency
- U.S. Department of Interior
  - Fish and Wildlife Service
  - Geological Survey

SOURCE: Office of the Legislative Auditor.

The U.S. Army Corp of Engineers in the Department of Defense carries out several watershed-related activities. It supports 222 miles of navigable rivers in Minnesota. This includes operating 11 locks and dams and 10 dams and reservoirs. The Corps is also involved in numerous flood and erosion control studies and projects in Minnesota. In addition, the Corps issues permits for projects that affect navigable waters of the United States.

[17] *Minnesota Statutes* 2006, 116C, describes the board and its authority. The board oversees the statewide environmental review program and is also charged with coordinating water management activities and developing the state water plan.

The Environmental Protection Agency (EPA) administers a number of programs related to water, but the Clean Water Act is its primary program related to nonpoint source pollution. Under this act, the federal government requires Minnesota to assess waters for pollutants, identify those that are impaired, and then take steps to clean them up. Under this act, the EPA also distributes funds to state and local units of government to prevent nonpoint source pollution.

The Federal Emergency Management Agency administers the National Flood Insurance Program and the National Dam Safety Program, which provide grants supporting DNR's floodplain and dam safety programs. It is also responsible for emergency evaluation and response to natural disasters.

Two agencies within the U.S. Department of the Interior play a role in managing water in Minnesota. The U.S. Geological Survey (USGS) collects, monitors, and analyzes data about natural resources, including stream flow, water quality, and other water resource issues. USGS prepares numerous reports and conducts large-scale, multi-disciplinary investigations. The U.S. Fish and Wildlife Service manages national wildlife refuges and fishery operations, enforces wildlife laws, protects endangered species, and conserves and restores wildlife habitat such as wetlands.

MANAGEMENT CHALLENGES

According to Minnesota's DNR, water should be managed on a watershed basis:

> Watersheds allow us to evaluate the quality and quantity of our water resources geographically. Only by knowing our local watershed and the system of watersheds in which it resides can we begin to understand why and where small changes can have huge impacts on our state's water.[18]

Minnesota does not consistently manage surface water on a watershed basis.

Despite the importance of watersheds, only 30 percent of the state's geographic area is served by a watershed district or WMO. In the other 70 percent of the state, water is managed by counties and SWCDs, primarily on a county basis. Some SWCDs and counties have created watershed-based joint powers organizations.

Even though water in a large portion of the state is managed on a county basis, state law recognizes the importance of watersheds. Under state law, county water management plans are supposed to address water problems in the context of watershed units.[19] This can be difficult when counties have up to 10 partial watersheds within their boundaries. As Table 1.7 shows, 14 counties have six or more partial watersheds within their boundaries.[20] Conversely, a single watershed usually spans several counties. For example, the Otter Tail River watershed spans five counties—Wilkin, Otter Tail, Becker, Clearwater, and Clay. Each of these counties also contains parts of other watersheds.

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[18] Minnesota Department of Natural Resources, "Watersheds: What Watersheds Are and Why They Are Important," http://www.dnr.state.mn.us/watersheds/index.html, accessed December 7, 2006.

[19] *Minnesota Statutes* 2006, 103B.311, subd. 4.

[20] We based the analysis on the 81 watersheds depicted in Figure 1.2.

It can be difficult for a county to manage the quantity and quality of water when it only has authority over part of a watershed. If the upstream part of a watershed is located in a neighboring county, and excess water and pollutants are flowing out of the upstream county, the downstream county has limited authority to take action. Under state statute, counties are supposed to coordinate their water plans with neighboring counties.[21] Potentially, a downstream county could ask the Board of Water and Soil Resources to withhold approval of an upstream county's water plan if the upstream county was not addressing water quantity and quality problems that affected the downstream county. However, the extent to which an upstream county must address the concerns of the downstream county is statutorily unclear.[22]

Table 1.7: Number of Watersheds in Minnesota Counties

Number of Counties Whose Boundaries Contain Part or All of:	
1 watershed	0
2 watersheds	11
3 watersheds	29
4 watersheds	23
5 watersheds	10
6 watersheds	8
7 watersheds	3
8 watersheds	2
10 watersheds	1

NOTE: Portions of watersheds that were less than 500 acres in a county were excluded from the count. These counts are based on the state's 81 major watersheds as defined by the Department of Natural Resources and depicted in Figure 1.2.

SOURCE: Office of the Legislative Auditor's analysis of data from the Department of Natural Resources.

Overlapping activities among water management entities can result in duplication.

Flooding in the City of Austin provides an example of the need for watershed-wide coordination. Damaging floods in the city have occurred in 1978, 1993, 2000, and 2004. However, the city and Mower County (where Austin is located) have been unable to completely address the problem. The city and county have tried to minimize local damage by doing such things as removing housing from the floodplain. To address water coming from outside Mower County, the county is now working with Freeborn, Steele, and Dodge counties to create a watershed district. The district will allow officials to address the flooding problem from a full watershed approach, rather than a limited county approach.

Minnesota's multiple layers of local water management can also result in overlapping responsibilities. For example, a watershed district and SWCD

[21] *Minnesota Statutes* 2006, 103B.311, subds. 3 and 4a.

[22] *Minnesota Statutes* 2006, 103B.345, enables a local unit of government "aggrieved" by the interpretation or implementation of a county water plan to formally challenge the plan at a hearing of the BWSR board and to appeal the board's decision to the Court of Appeals. It is unclear whether this statutory provision could be utilized by a neighboring or downstream county.

working in the same area may both monitor water quality, educate landowners and the public, and encourage farmers and others to use best management practices on the land. Table 1.8 shows the percentage of local water management entities that carried out various types of watershed management activities in 2005. The majority of all of the types of entities are engaged in monitoring and educating. This overlap creates the possibility of duplication, which requires coordination to avoid.

The potential for duplication depends on the local circumstances. In some parts of the state, watershed districts may focus heavily on water quality and working with farmers to implement best management practices. Because this is the traditional role of SWCDs, coordination is very important. In other parts of the state, watershed districts may focus primarily on water quantity issues and flood control projects. Consequently, coordination with the SWCDs in these areas is less of an issue.

Table 1.8: Percentage of Local Water Management Entities Spending Funds on Various Activities, 2005

	Watershed Districts	Joint Powers WMOs	SWCDs	Counties
Monitoring and Research	85%	81%	78%	76%
Educating	68	75	95	88
Encouraging Best Management Practices	47	13	100	76

NOTE: This data is based on data reported by 34 of the 48 watershed districts, 16 of the 20 WMOs, 82 of the 91 SWCDs, and 17 of the 87 counties.

SOURCE: Office the Legislative Auditor, *Watershed District, Watershed Management Organization, Soil and Water Conservation District, and County Information Requests*, July 2006.

2 Performance

SUMMARY

On a statewide basis, Minnesota's performance in managing its watersheds is unclear. The state lacks sufficient data on watershed management outcomes to fully assess the state's overall performance. For example, only a small portion of the state's waters have been assessed for water quality under the standards of the federal Clean Water Act. The performance of individual local water management entities is clearer. While some local entities have performed well, others have struggled. Successful entities have implemented projects and programs that have significantly improved water quality or reduced flood risk. The struggling entities have had problems implementing their management plans and carrying out their duties.

To protect and enhance the state's water resources, Minnesota needs to effectively manage its watersheds, which can be a complicated and difficult task. As we discussed in Chapter 1, many human activities affect water quality and the risk of flooding. To address water issues, Minnesota has created a complex watershed management structure. In this chapter, we examine how well the current structure is working. Specifically, we address the following questions:

- **How well is Minnesota managing its watersheds?**
- **How well are local water management entities managing their water resources?**

To protect the state's water resources, Minnesota needs effective watershed management.

To answer these questions, we (1) analyzed statewide data on water quality and flooding; (2) conducted 15 case studies of local water management entities; (3) analyzed financial and activity information that we received from most of the state's watershed districts, watershed management organizations (WMOs), and soil and water conservation districts (SWCDs); (4) solicited performance assessments from the Board of Water and Soil Resources (BWSR); and (5) reviewed literature on watershed management performance.

Although the Legislature has provided over $100 million in bonding funds for flood hazard mitigation since 1997, watershed management discussions in Minnesota have focused heavily on water quality in recent years. For example, the Clean Water Legacy Act (an effort to help Minnesota clean up its polluted surface waters) was a central issue during the 2006 legislative session. Because of this emphasis, our performance assessment also focuses heavily on water quality. However, we do evaluate the performance of some water management entities that carry out flood control activities.

STATEWIDE PERFORMANCE

The best way to determine how well Minnesota manages its watersheds is to examine actual outcomes. In other words, rather than look at what entities do to manage watersheds, we should look at how clean the state's water is and how often flooding occurs. Ideally, we would examine outcomes over an extended period of time to determine whether water quality and flood risk are improving, getting worse, or staying the same.

However, when we examined the water quality and flooding data that Minnesota has collected, we found that:

- **Minnesota lacks sufficient statewide data on watershed management outcomes to fully assess the state's performance.**

As Table 2.1 shows, only a small percentage of Minnesota's waters has been assessed for water quality under the standards of the federal Clean Water Act.[1]

Only a small percentage of the state's surface water has been assessed for water quality.

Table 2.1: Percentage of Minnesota's Waters That Has Been Assessed Under the Clean Water Act's Water Quality Standards, 2006

	Number of Lakes	Acres of Lakes[a]	Number of Stream Segments	Miles of Stream Segments
Statewide Total	11,842	3,290,101	9,000	92,000
Percentage Assessed for:				
Aquatic Life	0%	0%	8%	10%
Aquatic Recreation	4	18	3	4
Aquatic Consumption	8	63	5	6

[a] Does not include Lake Superior.

SOURCE: Minnesota Pollution Control Agency.

For example, only 4 percent of the state's lakes have been fully assessed to determine whether they can support aquatic recreation. An even smaller proportion of the state's waters has good historical data to show trends in water quality. To determine how well the state is keeping its lakes, rivers, and streams clean, the state needs to collect and analyze significantly more water quality data.

The assessment data in Table 2.1 do not reflect all of the water quality monitoring that is occurring in the state. For example, the table only reflects data that the Pollution Control Agency (PCA) has collected and recorded in a water

[1] These numbers somewhat understate the amount of the state's knowledge. Assessment standards under the Clean Water Act require three years of monitoring information. However, due to resource constraints, PCA often does not monitor sites for a full three years if measurements show good quality.

quality database (STORET) established by the Environmental Protection Agency. Additional water quality data are collected throughout the state by various entities (such as watershed districts and lake associations), but historically, not all of these data have been entered into STORET.[2]

Estimates suggest that about 40 percent of the state's surface water does not meet water quality standards.

The water quality data that are available raise concerns about how well Minnesota manages its watersheds. For a large proportion of the state's waters, Minnesota is probably not meeting the water quality standards established under the federal Clean Water Act. Once the state has been comprehensively assessed, PCA analyses suggest that approximately 40 percent of the state's waters will be impaired for aquatic recreation and/or aquatic life and that perhaps 90 percent of the waters will be impaired for aquatic consumption.[3]

It is also unclear how well Minnesota is managing the threat of flooding in the state. As shown by Figure 1.4 in Chapter 1, some counties have had numerous federally declared flood disasters since 1959. However, historical data are not always a reliable guide for assessing future flood threats. On the one hand, flood mitigation efforts may reduce the threat of flood damage. For example, according to DNR, since 1969, the construction of flood control measures (such as levees and floodwalls) have helped protect over 50 percent of the approximately 17,500 flood prone structures in urban areas in Minnesota. In addition, over 1,500 high-risk structures in urban and rural areas have been removed from 100-year floodplains. On the other hand, new development and construction of impervious surfaces may increase the potential for flooding and flood damage. While there may be good flood risk assessments for individual localities, the state does not have a good assessment of the current risk of flood damage statewide. In fact, most of the state's maps that identify floodplains are over ten years old and need to be updated.

PERFORMANCE OF LOCAL WATER MANAGEMENT ENTITIES

Minnesota's performance in managing its watersheds is in large part the cumulative performance of hundreds of local water management entities, including watershed districts, WMOs, SWCDs, counties, cities, townships, joint powers organizations, and others. Therefore, we examined the performance of the local water management entities.

This examination presented a research challenge because the state does not assemble a significant amount of information about these entities. BWSR is supposed to collect annual reports and financial audits from watershed districts and WMOs, but the agency does not collect consistent information from each entity or compile it into a database. Through an electronic reporting system (eLink), BWSR collects activity and financial information from SWCDs and counties, but SWCDs and counties are only required to report information about

[2] PCA staff told us that in the last few years they have substantially improved their efforts to obtain data gathered by others.

[3] Unpublished assessment provided by the Minnesota Pollution Control Agency. The assessment was provided by Dan Helwig (Unit Supervisor, Biological Monitoring Program) to the Office of the Legislative Auditor on November 14, 2006.

activities that received BWSR grant funds.[4] ELink often does not include activities that the local entities carried out with other resources. Therefore, to ensure a comprehensive assessment, we had to collect financial and activity information directly from the local water management entities.

We conducted 15 case studies of local water management entities and found wide variation in performance.

To supplement the statewide data, we also conducted 15 case studies of local water management entities. Our goal was to capture a cross-section of watershed management in Minnesota. We examined (1) entities with good reputations and others with poor reputations; (2) entities from different regions of the state; and (3) several types of local water management entities, including six watershed districts, two WMOs, two SWCDs, two counties, two joint powers organizations, and one watershed that is not managed by a watershed district.[5] Appendix A at the end of this report provides summaries of eight of our case studies.

The case studies allowed us to conduct a more in-depth assessment of local watershed management activity. With the financial and activity data that we collected statewide, we could only identify the spending and activity level of each water management entity; we could not assess their actual performance. Spending a large amount of money does not necessarily mean that an entity is effective. The case studies allowed us to assess the specific watershed management needs in each area and the steps that each water management entity took to address them.

We found that:

- **While some local water management entities have performed well, others have struggled.**

As we discuss in more detail in the following section, some watershed districts, SWCDs, and WMOs have significantly improved water quality or reduced flood risk by implementing watershed management programs and projects. These successful entities typically have monitoring programs that allow them to track outcomes and measure their success. As we discussed earlier, good outcome data are often missing for many parts of the state. In contrast to the successful entities, the struggling entities have had problems implementing their management plans and often spend more on general administration and planning and less on implementing programs and projects than their peers. We discuss several examples of successful and struggling entities in the following section. In the section after that, we discuss how counties have varied in the extent to which they enforce water-related regulations.

Watershed Districts, WMOs, and SWCDs

As discussed in Chapter 1, watershed districts, WMOs, and SWCDs are special units of government that were created to manage, conserve, and protect water resources. We evaluated their performance by conducting ten case studies. (The other five case studies that we conducted involved counties, joint powers

[4] SWCDs also submit annual work plans and financial reports. BWSR compiles the financial information into a database.

[5] To identify entities with good and poor reputations, we asked staff from state agencies and interest groups to identify successful and struggling entities.

organizations, and a watershed that is not managed by a watershed district.) To carry out our case studies, we interviewed staff from the entity, BWSR, PCA, and DNR. In many cases, we also interviewed local partners (such as an SWCD) and critics of the entity. We also conducted our own assessment by reviewing a wide range of documents, including management plans, annual reports, financial documents, board minutes, project reports, correspondence, and other documents.

Several of the entities that we examined have significantly improved water quality or reduced the risk of flooding. For example:

- The Sauk River Watershed District and the Stearns County SWCD manage the water that flows into the Sauk River Chain of Lakes.[6] Between 1985 and 2003, phosphorus levels in the chain of lakes were cut nearly in half from 300 to 176 parts per billion. While the chain of lakes is still impaired, the reduction is a significant accomplishment. Reducing the level of phosphorus in the chain has been a central goal of the watershed district since its creation in 1986. Water quality in the chain is a good indicator of water quality throughout the Sauk River watershed. The chain is near the bottom of the watershed and collects the pollutants coming from upstream.

  The watershed district, SWCD, and their partners used a wide range of strategies to reduce the level of phosphorus. To address phosphorus coming from agricultural runoff, manure storage facilities were installed or improved, manure management plans were prepared, feedlot filter strips and retention basins were installed, and conservation easements were established. To prevent erosion along lake shores and stream banks, vegetative buffer strips were planted and shorelines were restored. To address failing septic systems, the entities educated the public about proper system maintenance and provided loans to upgrade septic systems at lakeshore residences and resorts. In addition, in the early 1990s, a watershed-wide phosphorus discharge limit was implemented for sewage treatment plants. (See Appendix A2 for more details.)

- The Minnehaha Creek Watershed District manages the water that flows into Lake Minnetonka and the "Chain of Lakes" in Minneapolis. According to the district, total phosphorus concentrations in these lakes were 1.5 to 3.5 times higher in the 1970s than they are today. In addition, the watershed district worked with partner agencies in the 1990s on an education effort that reduced lawn and garden pesticides levels in stormwater runoff flowing to the Chain of Lakes by 50 percent.

  The watershed district is able to measure the outcomes of its activities because it has an extensive monitoring program. The district collects multiple water samples from over 50 different sites in the watershed each year. In addition, it employs a water quality specialist with a Ph.D. to analyze the data. (See Appendix A1 for more details.)

- The Bassett Creek Watershed Management Commission (a WMO) manages Bassett Creek, which flows through nine cities in Hennepin County and then into a tunnel beneath downtown Minneapolis. Flooding around the creek has

[6] Todd, Douglas, Pope, and Meeker counties and their affiliated SWCDs also play a role in managing these waters because they all include some land within the watershed.

been a problem for decades, and the commission was created in 1968 to address the flooding. Its flood control work culminated with a ten-year, $40 million flood control project that it carried out in the 1980s and 1990s with the Minnesota Department of Transportation, DNR, and U.S. Army Corps of Engineers.

This effort has significantly reduced the potential for serious flood damage within the watershed. In June 2003, a heavy rainstorm dropped 4.7 inches of rain in a 3¼ hour period. Only isolated flooding occurred. According to an analysis performed by the WMO, its flood control structures prevented as much as $20 million in damages to homes and businesses from this storm alone. (See Appendix A3 for more details.)

Some local entities have received national recognition for their successful watershed management efforts.

As these positive outcomes indicate, these local water management entities have had success in managing their waters. In fact, the Sauk River Watershed District, Stearns SWCD, and Minnehaha Creek Watershed District have received national recognition for their efforts. The U.S. Environmental Protection Agency features them on its web site as having successful programs for reducing nonpoint source pollution.[7]

In contrast, our case studies revealed some watershed districts and WMOs that have struggled to implement their water management plans. These plans lay out the goals and objectives that the local water management entities have established for themselves and the activities that they will perform to accomplish them. If Minnesota wants to improve water quality and reduce flood risk, local entities need to implement their plans. However, some entities are struggling to carry out their duties. For example:

- Since its creation in 1986, the South Two River Watershed District, a small district primarily in Stearns County, has completed very few (if any) major watershed management projects. The district was created in 1986 to address various water quality and flooding issues within the district. A particular concern had been periodic flooding in the City of Albany. To address this issue, the district decided in the 1990s to construct a retention pond outside the city to hold back flood water flowing into the city via the South Two River. However, the district was never able to negotiate a purchase price for the required land. To ensure that the project got completed, the City of Albany took the project over in the early 2000s, negotiated a purchase price for the land, and built the retention pond. As of 2005, the district had also failed to make significant progress in carrying out the three main activities outlined in its most recent management plan (which was written in 2002). Those goals are to (1) collect data, (2) identify areas for wetland impoundments, and (3) construct the impoundments.

  Residents of the district became so frustrated with the district's lack of activity that they petitioned BWSR to terminate the district, which BWSR voted to do in August 2006. A significant factor in BWSR's decision was the fact that Stearns County and the district's two cities each submitted a resolution or letter indicating that they no longer supported the district. (See Appendix A4 for more details.)

[7] U.S. Environmental Protection Agency, "Section 319 Nonpoint Source Success Stories," http://www.epa.gov/owow/nps/Success319/, accessed November 6, 2006.

- The Upper Rum River WMO (in the northwestern corner of Anoka County) is struggling to implement important components of its management plan. The WMO operates under the premise that the municipalities that comprise the joint powers organization will regulate water issues and carry out projects. Under its management plan, the WMO is supposed to coordinate and oversee the water management activities of the municipalities. In fact, under state law, the WMO is expected to review the local water management plans developed by municipalities to ensure that they are consistent with the watershed management plan developed by the WMO.[8] However, our examination of the WMO's meeting minutes from 2003 through 2006 revealed that it failed to review the two water management plan updates that were developed by municipalities during that period. In addition, the WMO's minutes reveal very little discussion of municipal issues during the WMO's meetings. While the WMO's primary purpose is to coordinate and oversee the water management activities of its municipalities, it has struggled to perform these duties. (See Appendix A5 for more details.)

- Since its creation in 1999, the Comfort Lake – Forest Lake Watershed District (in the northeastern corner of the Twin Cities metropolitan area) has been slow to initiate projects, regulations, and educational activities. While the district has carried out several studies, it has not completed any major projects. For example, under its 2001 management plan, the district said that it would start working on projects to clean up Comfort Lake in 2004, which the district has not done. In addition, the district indicated in its management plan that it expected to develop rules and permits by 2002, which the district has also not done. In fact, the district is the only watershed district in the Twin Cities metropolitan area that does not have any rules regulating activities that affect water quality and quantity.[9] Finally, the district has a limited public education program even though its management plan says that it will continually provide public education and outreach programs, including newsletters, fact sheets, and flyers. While we do not have a standard for how quickly a watershed district should move forward with projects, regulations, and educational activities, the slow progress of the Comfort Lake – Forest Lake Watershed District raises concerns because the district contains several impaired waters. (See Appendix A6 for more details.)

While these cases studies are informative, they provide a limited statewide picture concerning performance. To gain a broader perspective, we requested financial and activity information from each of the state's watershed districts, WMOs, and SWCDs and received responses from most of them.[10]

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[8] *Minnesota Statutes* 2006, 103B.235, subd. 3.

[9] All the other districts have formal rules except the Lower Minnesota River Watershed District. However, this district has requirements that are similar to rules. The district requires certain activities, such as residential developments that exceed five acres, to go through a review-and-comment process. "Lower Minnesota River Watershed District Project Review Requirements," http://www.watersheddistrict.org/pdf/project%20requirements.pdf, accessed December 3, 2006.

[10] We analyzed data from 34 of the 46 watershed districts, 16 of the 20 joint powers WMOs, and 82 of the 91 SWCDs. Several other watershed districts, WMOs, and SWCDs submitted data, but we did not include them in our analysis because the submitted data were incomplete or contained inconsistencies.

The financial data along with information from our case studies suggest that effective water management entities generally spend a small percentage of their funds on general administration and planning and a large percentage on implementation activities. The implementation activities include (1) monitoring; (2) educating the public; (3) enforcing regulations and permits; (4) establishing conservation easements; (5) constructing, maintaining, and implementing watershed management projects; and (6) encouraging landowners to implement best management practices on their land. As shown in Table 2.2, the effective organizations from our case studies spent a larger percentage of their 2005 funds on implementation activities and a smaller percentage on general administration and planning than most of their peers.

By emphasizing implementation activities, we are not suggesting that planning is not an important part of watershed management. Successful water management entities need to assess their needs, establish goals and objectives, and identify strategies and actions for achieving those goals and objectives. However, in our

Table 2.2: Expenditures Devoted to General Administration/Planning and Implementation Activities, 2005

	Percentage of 2005 Expenditures Devoted to:	
	General Administration and Planning	Implementation Activities
Watershed Districts		
Effective Districts		
Sauk River	8%	92%
Minnehaha Creek	12	88
Median of All Reporting Watershed Districts	19	81
Struggling Districts		
South Two River	67	33
Comfort Lake – Forest Lake	---[a]	---[a]
Joint Powers WMOs		
Effective WMOs		
Bassett Creek	34%	66%
Median of All Reporting WMOs	50	50
Struggling WMOs		
Upper Rum River[b]	91	9
SWCDs		
Effective SWCDs		
Stearns	14%	86%
Median of All Reporting SWCDs	26	74

NOTE: The median figures reflect the median of all the entities that reported financial expenditures to us. Thirty-four of the 46 watershed districts, 16 of the 20 joint powers WMOs, and 82 of the 91 SWCDs reported financial information.

[a] The Comfort Lake – Forest Lake Watershed District did not respond to our information request.

[b] Upper Rum River WMO was developing a new watershed management plan in 2005.

SOURCE: Office the Legislative Auditor, *Watershed District, Watershed Management Organization, and Soil and Water Conservation District Information Requests*, July 2006.

Struggling local entities have trouble moving beyond planning and general administration.

case studies, we found that some local water management entities have had trouble moving beyond the planning phase of their operations. They have not carried out many activities that will actually improve water quality and/or reduce the risk of flooding. The South Two River Watershed District, Upper Rum River WMO, and Comfort Lake – Forest Lake Watershed District are good examples of entities that have had this problem. The Comfort Lake – Forest Lake Watershed District did not respond to our information request. Thus, we could not include their spending breakdown in Table 2.2. Nevertheless, our case study examination revealed that the district appears to spend a significant amount of its funds on administrative duties. (See Appendix A6 for details.)

The statewide financial data that we collected suggest that a number of water management entities around the state may have trouble moving beyond the general administration and planning phases of watershed management. Overall, 6 watershed districts and 11 SWCDs reported spending more than 50 percent of their funds on general administration and planning and less than 50 percent on implementation activities in 2005.[11] In contrast, the data also reveal that a number of entities appear to be actively managing their watersheds by focusing their resources on implementation activities. Overall, seven watershed districts and seven SWCDs reported that they each spent more than 87.5 percent of their funds on implementation activities and less than 12.5 percent on general administration and planning in 2005.

Effective local entities focus on implementation.

Of the 16 joint powers WMOs that provided us with financial information, exactly half reported spending more than 50 percent of their funds on general administration and planning. This high proportion partially reflects that some WMOs operate under the premise that they provide planning and oversight while the cities and townships that comprise the joint powers organizations carry out the projects and other implementation activities. The financial and activity data that we collected from WMOs only included their operations, not the operations of their member cities and townships.

The financial breakdown presented here needs to be taken with some caution. In collecting the financial data, we asked the entities to break down their expenditures into 12 categories. (See Figure 1.5 for the categories.) While we tried to provide specific instructions on how to allocate the expenditures among the categories, judgments had to be made by the local entities. For example, we asked the entities to divide up their staff expenditures (salaries and benefits) across all the categories. If a staff person spent 65 percent of his or her time on best management practices, 20 percent on regulatory activities, and 15 percent on general administration, we asked that the reported data reflect this breakdown. However, we realized that the accounting systems of many local entities do not record staffing expenditures by activity, but rather lump all of the staffing costs together. In these cases, we asked the local entities to provide us with their best estimate of how the staffing expenditures should be allocated. The accuracy of these estimates probably varied among the entities. Consequently, we decided not to focus on the specific numbers reported by any entity but examine broad, statewide patterns, such as the variation in funds devoted to general

[11] Watershed districts and SWCDs may temporarily spend a higher proportion of funds on planning activities when updating their management plans. However, temporary high spending on planning is not the issue with these 17 entities. All but one of them spent more than 50 percent of their funds on general administration alone.

administration and planning. On the other hand, Table 2.2 shows specific numbers from entities that were included in our cases studies because we feel comfortable with the relative accuracy of these figures. They are consistent with what we observed in the case study examinations.

Finally, to obtain additional statewide information concerning watershed management performance, we asked BWSR to provide us with examples from across the state of local water management entities that have performed well and others that have struggled. While BWSR was willing to provide us with examples, they did not want their ratings of individual entities made public. Nevertheless, BWSR identified 17 watershed districts, WMOs, and SWCDs that have performed well and 13 that have needed "more success."

Counties

We were unable to make a detailed assessment of county performance for two reasons. First, we only included 2 counties in our 15 case studies. Second, the financial and activity data we received from counties as part of our statewide information request was incomplete for a high proportion of the counties. However, we did examine and assess data that we received from DNR, PCA, and BWSR about county regulatory activities.

Counties have a key role in enforcing water-related regulations.

While counties perform several roles with respect to water management, a key role is enforcing regulations related to wetlands, floodplains, shorelands, drainage ditches, feedlots, and septic systems. These regulations help ensure that nonpoint source pollutants stay out of Minnesota's waters and that the risk of flooding is minimized.

The data that we gathered suggest county enforcement of these regulations is at times inconsistent. For example, counties are supposed to enforce a statutory requirement that 16.5 foot grass strips are planted on the banks of new or improved public drainage ditches.[12] These grass buffer strips help keep soil and other pollutants out of the ditches. However, statewide, only 72 percent of the required ditches have a strip currently in place.[13] This varies from 100 percent in 22 counties to 25 percent in one county.

As another example, county efforts to ensure that septic systems are not contaminating Minnesota's waters appear to be inconsistent. For example, three neighboring counties in southwestern Minnesota have reported very different compliance rates to the PCA. One county reported that 5 percent of its septic systems pose an imminent threat to public health, the second county reported that 44 percent pose an imminent threat, and the third county reported that 75 percent pose an imminent threat. This information is hard to interpret. One conclusion is that some counties have done a good job of ensuring that their septic systems are in compliance while other counties have not. An alternative explanation is that some counties are reporting high compliance rates because they are unaware of systems that are actually posing an imminent threat to public health. In any

[12] *Minnesota Statutes* 2006, 103E.021.

[13] Minnesota Board of Water and Soil Resources, *Public Drainage Ditch Buffer Study* (St. Paul, February 2006), 2. These data are self-reported by the counties that have ditch management responsibilities.

event, either explanation raises concerns about the steps that Minnesota counties are taking to ensure that septic systems are not polluting the state's waters.

CONCLUSION

Because local entities are largely responsible for managing the state's watersheds, Minnesota's management performance is really the sum of how well each of the local entities is performing. In this chapter, we found that the performance levels of the local entities vary around the state. Some local entities have achieved successful outcomes, while others have struggled to implement their management plans. If Minnesota wants to protect and enhance its water resources, all local entities need to perform well. In the next chapter, we examine what state agencies are doing to hold the local entities accountable and ensure that they are performing at a high level.

3 Accountability and Oversight

SUMMARY

Both local and state agencies play critical roles in managing Minnesota's watersheds. Watershed management requires familiarity with local conditions and culture that local entities can best provide. But water is a statewide resource that flows across political boundaries. To protect downstream residents, the state must ensure that all local water management entities operate effectively. However, the Board of Water and Soil Resources, the state agency with the greatest oversight responsibility, provides inadequate oversight. Furthermore, the state often relies on grant requirements to hold local entities accountable. If an entity does not receive state grants, it receives little oversight.

Water flows over the landscape without regard for traditional political jurisdictions. Decisions about watershed management made upstream affect water quality, flood risk, and watershed management decisions downstream. Thus, the inconsistent performance we documented in Chapter 2 is of statewide concern. In this chapter, we address the following questions:

- **What role should the state play in watershed management?**
- **Are state agencies providing adequate oversight of local water management entities?**

To answer these questions, we examined the steps that state agencies have taken to monitor and improve the performance of water management entities in our 15 case studies. We also interviewed officials from the Board of Water and Soil Resources (BWSR), the Department of Natural Resources (DNR), and the Pollution Control Agency (PCA) about their roles in ensuring effective performance by local water management entities. Finally, we reviewed state statutes and rules and agency documents that address state oversight of local entities.

LOCAL RESPONSIBILITIES AND STATE INTERESTS

A critical policy question for Minnesota is how much control the state should assert over local water management entities. Based on our review of watershed management in Minnesota, we concluded that:

- **While local units of government must play key roles in watershed management, water is inherently a state concern and requires strong state involvement.**

As we discuss in the following sections, some key responsibilities are best addressed by local-level entities. However, when local entities fall short, effective state oversight systems should be in place to identify problems and rectify them.

Local Responsibilities

The state is relying on local entities to help solve significant water concerns.

Minnesota's water problems require effective local-level management. Like many other states, Minnesota began its efforts to improve water quality mostly by addressing point source pollution, such as discharges from sewage treatment facilities and industrial plants. These efforts have primarily involved permitting by state agencies.[1] However, as point source pollution has decreased due to these efforts, the proportion of pollution originating from other sources has grown. According to PCA, 86 percent of Minnesota's water pollution now comes from nonpoint sources, the combined effects of runoff from individual land parcels.[2] Further, more rapid runoff can also cause flooding.

Locally-based entities are better positioned than state agencies to work with individual landowners to address runoff. First, land-use planning and regulation, which are local functions in Minnesota, have a large impact on nonpoint source pollution and flooding. Second, local officials are often better equipped than state officials to work with local landowners and encourage them to reduce runoff by carrying out best management practices on their land.

As a substantial body of research has shown, the quality and quantity of surface water is directly tied to local land-use decisions. One research study concluded:

> The results showed that, unequivocally, land use was related to many water quality parameters… From the model results, it was apparent that runoff from agriculture as well as impervious urban land use had much more nitrogen and phosphorus. This was the case especially after rain storms… Hence, future land development and management shall be considered with care. This is especially the case if the land is going to be changed to agriculture or impervious urban lands. With better land-use planning, we may be able to contain some of the water quality problems.[3]

Land-use planning and management are clearly local functions in Minnesota. Under chapters 394 and 462 of *Minnesota Statutes* 2006, counties and municipalities share authority over development, planning, and zoning. Efforts to improve water quality and reduce flooding are most effective if coordinated with land-use management decisions. In the past, the Legislature has recognized the importance of such coordination by designating local units of government as the primary implementers of local water planning, cost-share programs, and wetland conservation.

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[1] See Office of the Legislative Auditor, *Water Quality: Permitting and Compliance Monitoring* (St. Paul, January 2002).

[2] Minnesota Pollution Control Agency, *Watershed Achievements Report* (St. Paul, November 2005), 1, http://www.pca.state.mn.us/publications/wq-cwp8-05.pdf, accessed December 6, 2006.

[3] Susanna T.Y. Tong and Wenli Chen, "Modeling the relationship between land use and surface water quality," *Journal of Environmental Management* 66, n. 4 (December 2002), 391.

Furthermore, the land-use activities of private landowners must be a major component in any watershed management effort. More than 77 percent of Minnesota's land is privately owned. According to BWSR's strategic plan,

> Successful resource management (stewardship) is based on landowners embracing attitudes and methods that preserve and enhance resources for the benefit of themselves and others.[4]

According to many of the state and local officials we interviewed, local officials who understand local circumstances and culture are better equipped to work with local landowners and encourage them to pursue best management practices.

State Interests

However, water is a state resource, and local water management entities must be accountable to statewide interests and standards.

Although the nature of watershed management requires local-level management, the state has a clear interest in monitoring the performance of local entities and holding them accountable. Minnesota has more surface water than any of the other lower 47 states. Minnesota's $10 billion tourism industry is heavily dependent on the state's water resources. Over the last century, the legislature has repeatedly found that regulation and protection of the state's waters are in the public interest. Current law states:

> Maintaining and enhancing the quality of soil and water for the environmental and economic benefits they produce, preventing degradation, and restoring degraded soil and water resources of this state contribute greatly to the health, safety, economic well-being, and general welfare of this state and its citizens. Land occupiers have the responsibility to implement practices that conserve the soil and water resources of the state. Soil and water conservation measures implemented on private lands in this state provide benefits to the general public by reducing erosion, sedimentation, siltation, water pollution, and damages caused by floods.[5]

In addition to state policy, the federal Clean Water Act requires that Minnesota assess, restore if necessary, and protect the waters of the United States. If a stream or lake is impaired, the state must conduct a study that identifies the sources of the impairment. In addition, to reduce the pollutants that are causing the impairment, the state must set a target for the maximum amount of the pollutants that will be allowed into the stream or lake on a daily basis. This daily target is known as the Total Maximum Daily Load (TMDL). Waters that are not impaired should be managed to limit the risk of future degradation.

It is not possible to improve water quality or reduce flood risk without coordinating across local jurisdictional lines. As shown in Figure 1.2 in Chapter 1, water flows across political boundaries and water management decisions in one part of the state affect water conditions in another part.

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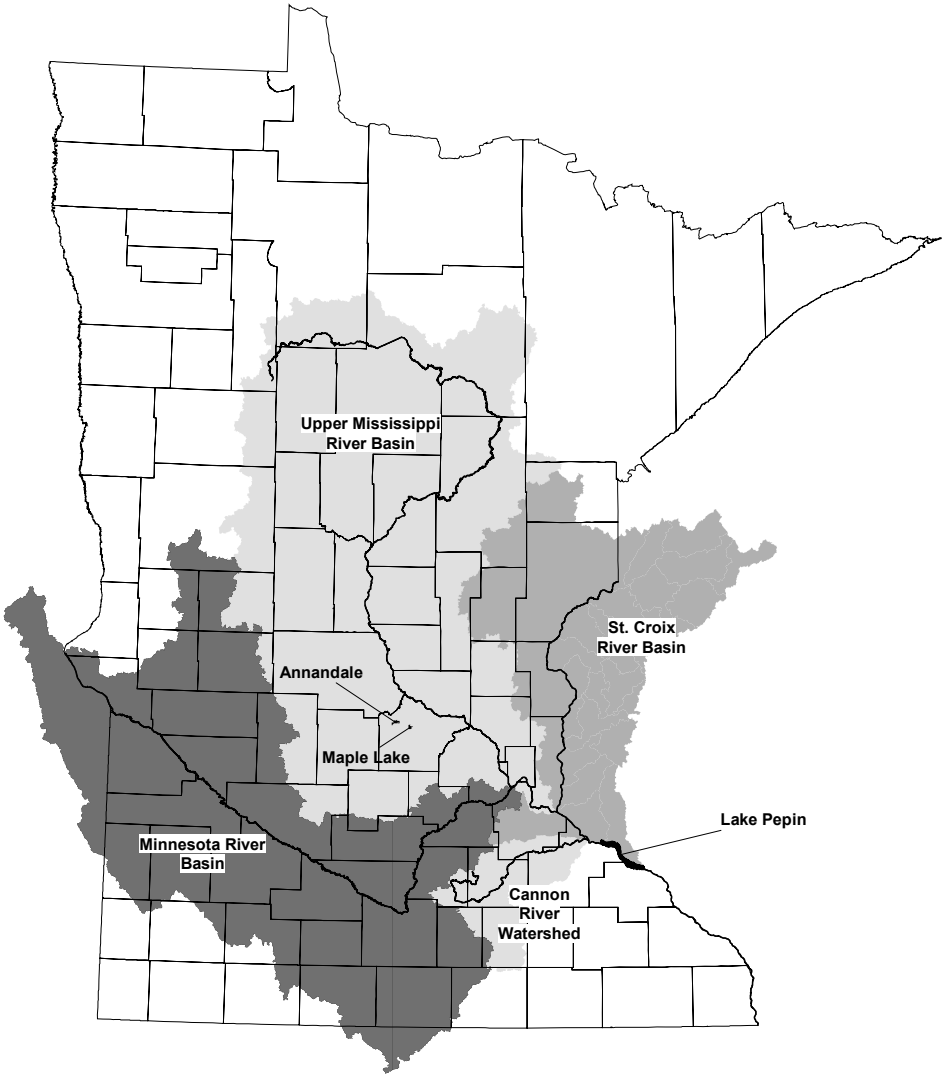
[4] Board of Water and Soil Resources, *Strategic Plan: State and Local Government Working Together* (St Paul, 1997), 7.

[5] *Minnesota Statutes* 2006, 103A.206.

For example, Lake Pepin (a natural lake on the Mississippi River to the southeast of the Twin Cities metropolitan area) has an abnormally high concentration of phosphorus, and PCA has designated it as impaired. Since three large river basins contribute water to Lake Pepin (the Upper Mississippi, Minnesota, and St. Croix), water from a large number of local jurisdictions eventually flows into the lake and affects its phosphorus level (see Figure 3.1). Hundreds of local water management decisions have thus combined to impair Lake Pepin. Furthermore, because of the impairment, these local decisions will now have an impact on communities throughout the three basins. In August 2005, the Minnesota Court of Appeals blocked PCA from issuing a permit for a new sewage treatment facility to serve Annandale and Maple Lake (located to the northwest of the Twin Cities) because Lake Pepin is impaired and the facility would discharge

Figure 3.1: Lake Pepin Watershed



SOURCES: Office of the Legislative Auditor's depiction of data from the Minnesota Department of Natural Resources and the Wisconsin Department of Natural Resources.

additional phosphorus.[6] This decision calls into question the future expansion of sewage treatment facilities in an area covering half the state.

The Red River basin in northwestern Minnesota presents another example of local decisions having an impact across multiple jurisdictions. Communities along the Red River have been subject to severe floods since they were first settled. In the past, watershed districts in the basin addressed flooding by constructing localized projects that benefited local landowners, such as building a levee. However, these projects likely did little to reduce flooding further downstream in the Red River Basin. Also, the effects of these local-interest projects taken together threatened wildlife habitat, water quality, and recreation and tourism resources downstream. During the 1990s, there were frequent disagreements among watershed districts in this region and other agencies over the most effective and least environmentally destructive methods to reduce flood damage. In 1997, the Legislature funded a mediation process that resulted in a basin-wide approach to planning and implementing flood control projects.

ASSESSING MINNESOTA'S APPROACH

An effective state oversight system should include standards, monitoring, and consequences.

For Minnesota's state-local system of shared responsibility to work effectively, it should include: (1) clearly defined *performance standards* by which local entities will be measured, (2) consistent *monitoring* of local entities to assess whether those standards have been met, and (3) a set of *consequences* applied by the state to encourage better performance. In our review of the state's watershed management efforts, we found that the presence of these characteristics varied. Overall, we concluded that:

- **State agency oversight of local water management entities is inadequate, unclear, and inconsistent.**

We identified two factors that contribute to the state's inconsistent oversight: (1) BWSR provides limited oversight, and (2) the state uses grant requirements to hold local entities accountable. If an entity does not receive state grants, it receives little oversight. We discuss each of these factors in the following sections.

The Board of Water and Soil Resources

BWSR is the state agency most directly responsible for overseeing local water management entities. Although state law gives BWSR several oversight tools, its key authority comes from approving local management plans. See Table 3.1 for a summary of BWSR's authority over local entities.

Under state law, watershed districts, WMOs, SWCDs, and counties periodically submit management plans to BWSR. The plans lay out the entities' goals,

[6] In re City of Annandale, 702 N.W.2d 768 (Minn. Ct. App. 2005).

Table 3.1: BWSR's Oversight Authority Under Current State Law

	Outstate Watershed Districts	WMOs and Metropolitan Watershed Districts	SWCDs	Counties
Comprehensive management plan missing or inadequate	Districts cannot initiate projects.	BWSR can force counties to assume control of the WMO or force the creation of a watershed district. BWSR may ask other state agencies to (1) withhold state funding for water programs and stormwater drainage facilities; (2) deny delegation of regulatory authority to districts, WMOs, or member municipalities; and/or (3) suspend the issuance of water-related permits.	Plan is not statutorily required, but SWCDs cannot receive BWSR-administered grant funding without an approved plan.	Plan is not statutorily required, but counties cannot receive BWSR-administered grant funding without an approved plan. State agencies may not delegate water-related permitting to county unless a plan is approved.
Annual report missing or inadequate	No specific enforcement authority in statute.[1]	No specific enforcement authority in statute.[1]	*Not applicable.*	*Not applicable.*
Annual work plan missing or inadequate	*Not applicable.*	*Not applicable.*	BWSR can withhold grant funding.	*Not applicable.*
Audit missing	No specific enforcement authority in statute.[1]	No specific enforcement authority in statute.[1]	No specific enforcement authority in statute.[1]	*Not applicable.*
Poor ongoing performance; failure to serve public interest	BWSR can deny grant applications. After receiving a petition requesting it, BWSR can terminate a district. BWSR hears appeals of some district decisions.	If an approved comprehensive management plan is not being implemented, BWSR can apply the same penalties as above for a missing or inadequate plan. BWSR can deny grant applications. After receiving a petition requesting it, BWSR can terminate a district.	BWSR can withhold grant funding. After receiving a petition requesting it and a referendum vote supporting it, BWSR can terminate a district, but only if a plan exists for another entity to provide services.	BWSR may be able to withhold grant funding.[2]

[1] BWSR has discretion to consider annual reports and audits when assessing ongoing performance.

[2] The statutory language is somewhat unclear. BWSR is directed to make grants to counties in *Minnesota Statutes* 2006, 103B.321, without any conditions specified. However, BWSR and other state agencies may withhold or revoke funding for grants given under section 103B.3369.

SOURCE: *Minnesota Statutes* 2006, 103B-103D. Table does not reflect more specific procedures outlined in agency rules.

objectives, and activities for the next five to ten years.[7] By statute, these entities may not conduct some of their core activities until they have an approved plan. For example, without an approved plan, watershed districts cannot initiate projects; WMOs may be denied state funding and permits for all water-related programs; and SWCDs cannot receive grant funding from BWSR.[8]

These penalties are onerous enough that essentially all local entities submit plans for BWSR's approval. BWSR can require changes to the plans to bring them more in line with Minnesota's water management policies before it will give its approval.

However, once a plan is approved, meaningful oversight stops. BWSR does not actively assess the performance of local entities as they carry out their plans. BWSR holds local entities responsible for what they plan, but not for what they do. In our review of BWSR's operations, we found that:

- **BWSR has not (1) established standards for the performance of local entities, (2) systematically monitored the performance of local entities, or (3) adequately held them accountable for their performance.**

Standards

BWSR has no established standards for evaluating performance by local entities.

Other than planning guidelines and grant administration rules, BWSR has no established standards for what constitutes effective performance by local entities.[9] For example, it has no standards specifying the amount of water quality improvement or flood risk reduction that should be achieved by local entities. In fact, it has no standards specifying that local entities should monitor water before and after projects are completed to determine whether the projects have made any difference at all. Consequently, BWSR cannot systematically assess the performance of local water management entities.

Our report is not the first to conclude that Minnesota lacks performance standards. A study funded by the Legislative Commission on Minnesota Resources recommended that the state develop a standardized evaluation to assess watershed authorities.[10] Washington County, in an extensive review of its local watershed management entities, found that state agencies "have not given

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[7] For watershed districts and WMOs, plans are required at least every ten years. Counties are encouraged to submit plans at least every ten years. However, entities may file or amend plans more frequently if they wish to do so. SWCDs are not required to submit comprehensive plans within a specific time period, but new plans must be approved before their previous plans expire or they risk losing their BWSR-administered funding. According to BWSR officials, most SWCDs submit comprehensive plans every five years. See *Minnesota Statutes* 2006, 103D.401-411 (watershed districts); 103B.231, subd. 3 (WMOs); and 103B.311 (counties).

[8] *Minnesota Statutes* 2006, 103D.701 (watershed districts); 103B.231, subd. 3g (WMOs); and 103C.401, subd. 1(4), and 103C.501, subds. 2-3 (SWCDs).

[9] BWSR has set specific performance standards for local entities (primarily counties) with regard to their implementation of the Wetlands Conservation Act. (See, for example, *Minnesota Rules* 2006, 8420.0550 and 8420.0630.) However, these standards cannot be used to assess the performance of counties with regard to their other water management duties.

[10] Environmental Ground, Inc. (principal investigators Kathryn Draeger, Shanaz Padamsee, and Jessica Nelson), *The State of Watershed Water-Quality Management in Minnesota* (funded by the Legislative Commission on Minnesota Resources and the McKnight Foundation, undated), 53-54.

clear guidance to local organizations on their expectations for water and natural resource management."[11] The county subsequently created its own set of criteria to assess the performance of WMOs.

Monitoring

BWSR does not systematically collect data on the activities of local entities.

Even if BWSR did set clear standards, BWSR's inadequate monitoring of local activities would prevent the agency from determining whether local entities meet them. BWSR does not systematically or comprehensively collect data on the activities of local water management entities so that their performance and activities can be compared with one another and against standards. BWSR collects annual reports from watershed districts and WMOs, but the information provided by these entities is not consistent. For example, some entities provide a detailed budget in their annual report while others do not. This variation in information reported makes it impossible for BWSR to compile the information into a database for tracking purposes, and it does not do so. BWSR requires SWCDs and counties to report some financial and activity information through a database called eLink. However, for the most part, the data in eLink only applies to activities funded with BWSR-administered grants. There is no requirement that SWCDs and counties report to BWSR water management activities that are funded through other means.

A lack of statutory authority to collect data has contributed to BWSR's poor monitoring of local entities. For example, in outstate Minnesota, BWSR has no statutory authority to impose penalties on watershed districts for failing to file an annual report. In two of our four case studies that involved outstate watershed districts, BWSR did not have annual reports on file for several years. BWSR administrators told us that frequently the agency's sole response to a watershed district's failure to file an annual report is a letter to the district.

Furthermore, even when BWSR has specific statutory authority to monitor the performance of local water management entities, it does not do so in a systematic fashion.[12] Within the seven-county metropolitan area, BWSR has explicit authority under state law to monitor the performance of watershed districts and WMOs in implementing their management plans.[13] Despite this mandate, BWSR administrators told us they do not monitor or evaluate implementation of local watershed management plans in the metropolitan area unless they receive a formal complaint. BWSR does encourage watershed districts and WMOs in the metropolitan area to prepare self-assessments of their past performance when submitting a new ten-year management plan.

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[11] Washington County, *Report for Water Governance Study, Washington County, Minnesota* (Stillwater, 1999), 25.

[12] BWSR does have an assessment process to evaluate the operations of local entities, but this process is usually voluntary and it is rarely used. When BWSR is concerned about the performance of a particular SWCD or watershed district, its staff may spend months persuading a district to undergo an assessment.

[13] *Minnesota Statutes* 2006, 103B.231, subd. 10b.

Accountability

Even if BWSR did set clear standards and adequately monitor local entities, state statutes do not give BWSR many options for taking action against entities that are not performing well. Furthermore, when BWSR does have enforcement authority, it is reluctant to use it.

Outside the Twin Cities metropolitan area, BWSR's statutory authority to penalize poor performance is limited.

Outside of the seven-county metropolitan area, BWSR's statutory authority to penalize poor performance is limited to two options. It can withhold grant funding (but only if the entity is receiving BWSR grants); and, with certain limitations, it can terminate the entity. To terminate a watershed district, BWSR must first receive a petition from citizens or local units of government asking for the entity to be terminated.[14] To terminate an SWCD, BWSR must receive a petition and the petition has to be followed by a local referendum supporting termination.[15] BWSR does not have the authority to dissolve counties.

Within the metropolitan area, BWSR has a wider range of enforcement options. If a watershed district or WMO is not performing well, BWSR can ask other state agencies to withhold funding or permits for practically any water-related program or project. BWSR can also unilaterally terminate a joint powers WMO if it fails to create or implement a management plan.[16] Although BWSR has formally terminated a WMO only once, it has used the threat of termination several times to force WMOs to disband, allowing their functions to be taken over by a watershed district or a county.

Nevertheless, BWSR is often reluctant to take actions against local entities. While BWSR staff and administrators were willing to provide us with their assessments of the performance of individual local water management entities, they do not believe it is their job to tell local entities how well they are performing. BWSR administrators told us that the agency's primary role is to provide guidance, support, and facilitation. They do not believe BWSR should exercise punitive oversight of local entities. Even though BWSR's rules authorize its regional staff to initiate the termination of a WMO, in practice they refrain from doing so. Instead, the agency prompts local stakeholders to make a formal complaint so it can react.

Some local water management entities would prefer more communication from BWSR about their performance. The Upper Rum River board chair acknowledged that BWSR has expressed dissatisfaction with his WMO's level of activity, but said that BWSR has not provided it with clear expectations or examples of how it should improve its performance. The board chair of the Bassett Creek Watershed Management Commission told us that his reaction to our review of its operations was, "Oh good – maybe someone will tell us if we're doing a good job." BWSR administrators told us that a few entities request a BWSR assessment of their operations, but that these are usually high-performing entities that do not really "need" an assessment.

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[14] *Minnesota Statutes* 2006, 103B.221 and 103D.271.

[15] *Minnesota Statutes* 2006, 103C.225, subd. 4.

[16] *Minnesota Statutes* 2006, 103B.231, subds. 3(b) and 3(c).

In conducting our case studies, we found some examples where BWSR did not provide adequate oversight of local entities. For example, although the South Two River Watershed District had been quite inactive since its creation in 1986, BWSR did not make a concerted effort to improve the operations of the district until September 2005, when it started preparing a formal assessment of the district. In January 2005, the only annual report that BWSR had in its files from the district was from 1991.

We found examples where BWSR did not provide adequate oversight of local entities.

The Upper Rum River WMO provides another example of poor oversight by BWSR. This WMO has not reviewed recent updates to the water management plans of its member cities, even though it is expected to do so under statute.[17] It also did not send annual reports to BWSR between 1999 and 2005.[18] Yet despite this entity's failure to perform these responsibilities, BWSR took no action to penalize the WMO until 2006, when its management plan update was due. Although BWSR has indicated that it may not approve the plan update, its sanctions would be based on the inadequacy of the plan itself, and not on the entity's ongoing struggles to carry out its duties.

Our evaluation of BWSR focused primarily on its oversight role. We did not fully evaluate its efforts to provide guidance and support to local entities, which BWSR administrators and staff view as the central focus of their mission. However, our review produced some evidence suggesting that when local entities do seek assistance, they generally find BWSR staff and administrators to be a valuable resource. We also did not examine BWSR's role in administering the Wetlands Conservation Act, which is the most time-consuming responsibility of its field staff. Some of the local officials that we interviewed strongly praised BWSR's wetlands administration policies and practices.

Grant-Based Evaluation

As a result of BWSR's poor oversight, local water management entities are not assessed on how well they perform except when applying for grants or other funding from state agencies. Local entities become eligible for grants by complying with voluntary standards and grant conditions. Thus, to some extent, local entities are able to choose how closely they will be evaluated.

When we examined the state's grant-based evaluation system, we found that:

- **The level of oversight that local water management entities receive largely depends on how reliant they are on competitive grant funding, not on how well they perform.**

To some extent, local entities can choose how closely they will be evaluated by state agencies.

Once BWSR approves a management plan, the state's ability to influence the behavior of local entities derives primarily from its role as a source of grant funds. BWSR, PCA, and DNR all administer competitive grant programs in which local entities are more likely to receive a grant if they have a strong track record of accomplishment. Local entities that receive clean water grants from PCA, shoreland habitat restoration grants from DNR, or water management

[17] *Minnesota Statutes* 2006, 103B.235, subd. 3.

[18] The WMO eventually submitted a combined annual report covering 1999-2005 in 2006.

"challenge grants" from BWSR must file reports specifying how the money has been spent.

BWSR also administers several noncompetitive grants that are not based on performance. Nearly all SWCDs and counties in the state receive money from BWSR for these programs, with the amount determined by a formula based on several factors, such as the estimated need for water management work in each jurisdiction. Grantees are required to report information about their expenditures on a regular basis through eLink, the electronic reporting system discussed earlier.

The state's use of grants as a key accountability tool leads to two consequences. First, the local entities that are the most active (i.e., those that seek and obtain competitive grants) are also those with the greatest accountability to state agencies. An inactive entity that receives little, if any, competitive grant funding would receive less scrutiny than a highly ambitious entity that develops innovative, grant-funded programs.

One example of a closely scrutinized entity is the Redwood-Cottonwood Rivers Control Area (RCRCA), a joint powers organization of eight counties and their affiliated SWCDs in southwestern Minnesota. Almost 85 percent of RCRCA's expenditures are funded by competitive grants, most of which have come through PCA.[19] RCRCA has been repeatedly successful in grant applications because it has demonstrated that the work it performs with its partners has made a measurable difference in water quality. In contrast, the South Two River Watershed District does not receive grant funding and has carried out very few, if any, major projects.

Because watershed districts can raise funds by levying taxes, they are subject to less state scrutiny.

Second, different types of entities have different levels of accountability based on their need for external sources of funding. SWCDs, whose options for raising money are limited, are expected to report on an ongoing basis to their chief sources of funding – in most cases, BWSR and their affiliated county boards. On the other hand, watershed districts can raise their own funds by levying taxes. Thus, their activities are subject to less state scrutiny. Our examination of local watershed management finances indicated that, on average, watershed districts obtain 78 percent of their funds from internally generated sources, such as levies and interest income. Many districts receive no money at all from BWSR or other state agencies. As a result, there is no ongoing assessment of their performance.

The linkage of grant funding to oversight is demonstrated in our case study of the Comfort Lake - Forest Lake Watershed District (see Appendix A6). In 2005, the district decided to refuse a $76,570 clean water grant funded by the Environmental Protection Agency. It has now begun a water quality study with its own resources that includes some of the work the grant was originally intended to fund. By self-funding the water quality work through tax levies on its residents, the district will no longer be subject to scrutiny from EPA for how it spends the money to carry out this study.

[19] RCRCA has also received major grants from sources other than state agencies, including the nonprofit Northwest Area Foundation.

CONCLUSION

In Chapter 2, we found that some water management entities have struggled to implement their management plans and carry out their duties. In this chapter, we conclude that the state has not adequately addressed this problem because it has a weak system for assessing the performance of local entities and holding them accountable. In particular, BWSR has neither the statutory authority nor the inclination to carry out effective oversight of local watershed management activities. In Chapter 5, we will offer recommendations for changing the relationship between BWSR and the local entities to increase accountability. However, we first examine whether Minnesota is devoting sufficient resources to watershed management in Chapter 4.

4 Financing

SUMMARY

In 2005, federal, state, and local units of government spent at least $300 million in Minnesota to manage the state's watersheds. However, it will be difficult for the state to meet current water quality standards without additional resources. Some experts estimate that the state annually needs another $75 to $100 million to clean up its waters. A significant portion of this money would likely go to local water management entities to reduce nonpoint source pollution. Yet, the Board of Water and Soil Resources, the state agency responsible for overseeing these local entities, had its operating resources reduced over the last several years.

If Minnesota is committed to preserving and enhancing its water resources, it needs to provide sufficient financial resources to ensure that its watersheds are effectively managed. Local water management entities need financial resources to implement programs and projects that improve water quality and reduce flood risk. In addition, BWSR needs resources to ensure that these entities are performing at a high level.

In this chapter, we address the following questions:

- **How much is currently being spent in Minnesota to manage its watersheds?**
- **Is Minnesota's watershed management system adequately funded?**

To answer these questions, we collected financial information from federal, state, and local agencies. We also interviewed state and local officials and reviewed various financial documents and reports.

CURRENT SPENDING

Federal, state, and local units of government spend funds on a wide range of watershed management activities.

As part of our evaluation, we estimated how much is currently being spent in Minnesota on watershed management. For the purposes of this estimate, we defined watershed management as the range of activities that governmental entities carry out to control the quantity and quality of surface water that flows within a watershed. This would include (1) establishing and enforcing rules, regulations, and permits; (2) building structures and moving earth; (3) setting aside land for conservation; (4) providing landowners with incentives and other assistance to carry out best management practices; (5) educating landowners and the general public; (6) monitoring water quality and quantity; and (7) planning. Our examination addressed efforts to reduce nonpoint source pollution coming off the land and to prevent flood damage. Because water and soil conservation are tied closely together (eroded soil can end up in lakes, rivers, and streams), we included the soil conservation efforts of SWCDs and the U.S. Natural Resources Conservation Service in our spending estimates. Our estimate did not include

efforts to control point source pollution coming from such sources as industrial and sewage treatment facilities.

Based on the financial information that we gathered:

- **In 2005, federal, state, and local units of government spent at least $300 million in Minnesota to manage the state's watersheds.**

This figure is a minimum estimate, as we were unable to collect spending from all sources.[1] For example, the figure does not include all of the relevant spending by cities and townships. Among other water management responsibilities, cities and townships are responsible for land-use regulation and stormwater management. We did not have the time or resources to collect this information from the state's 854 cities and 1,790 townships. In addition, the financial information that we received from most counties was incomplete. Many only reported a portion of their water management activities.[2]

Local water management entities spent less than one-third of the funds that we identified. Of the more than $300 million in overall spending, local water management entities spent over $80 million.[3] The federal and state governments spent the rest, over $220 million. The U.S. Department of Agriculture (which spent over $150 million paying private landowners to implement best management practices or put land into conservation easements) accounted for a large share of the federal and state spending. The federal and state figure also

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[1] The spending in this estimate includes funds from **BWSR** (Area II projects, Challenge Grants, Conservation Reserve Enhancement Program, Farm Bill Assistance, General Services Grants, Natural Resources Block Grants, Nonpoint Engineering Assistance, Reinvest in Minnesota, State Cost Share, Wetland Road Replacement, and other BWSR funds, including internal operations); **DNR** (Dam Safety Grants, Environmental Conservation Partnership Grants, Flood Hazard Mitigation Grant Assistance, Metro Greenways, Minnesota Lake Superior Coastal, Observation Wells, Shoreland Habitat Restoration Grants, and the Division of Waters' internal operations); **PCA** (Section 319 grants (EPA), Clean Water Partnership Grants, Clean Water Partnership Loans, Minnesota River, and internal operations related to watershed management); **Minnesota Department of Agriculture** (best management practice loans and internal operations related to watershed management); **Metropolitan Council** (MetroEnvironment Partnership Grants, Watershed Outlet Monitoring Program, Twin Cities Water Quality Initiatives, MCES Operating Fund Grants, and internal operations related to watershed management); **U.S. Department of Agriculture** (Conservation Reserve Program, Conservation Security Program, Environmental Quality Incentive Program, Farm and Ranchland Protection Program, Wetlands Reserve Program, Wildlife Habitat Incentives Program, and internal operations), and **Army Corps of Engineers**. The estimate also includes internally generated funds from **watershed districts**, **WMOs**, **SWCDs**, **counties**, and **municipalities** (only the funds that the municipalities contribute to WMOs).

[2] In addition, we were unable to include all federal and state spending. Federal and state agencies (such as the U.S. Fish and Wildlife Service) spend funds on habitat restoration (including wetlands), which have an impact on watershed management. Because it is difficult to determine how much of these funds are for water-related benefits versus other benefits, we did not include them.

[3] When breaking out local spending from federal and state spending, we classified grants and loans that the federal and state governments provide local water management entities as local spending. It is the local entities that actually spend these funds on watershed management. The federal and state governments are simply providing financial assistance to these local entities.

includes over $30 million spent by the U.S. Army Corps of Engineers on flood and erosion control projects.[4]

FUTURE SPENDING

In this section, we examine whether Minnesota needs additional resources to more effectively manage its watersheds. The discussion focuses exclusively on water quality because a considerable amount of information exists about what needs to be done on a statewide basis to more effectively improve the quality of the state's waters. In contrast, we were unable to identify comparable information on flood-prevention needs.

In Chapter 2, we discussed the fact that a high proportion of Minnesota's waters are impaired. Once Minnesota has comprehensively assessed its waters, PCA expects that approximately 40 percent of them will be impaired for aquatic recreation and/or life and that perhaps 90 percent of them will be impaired for aquatic consumption (i.e. eating fish). Consequently, we conclude that:

- **It will be difficult for the state to meet current water quality standards without additional resources.**

In 2005, a broad-based group of 16 organizations estimated that Minnesota needs an additional $75 to $100 million per year to comprehensively assess the state's waters, develop plans to control pollution discharge, and carry out the necessary restoration projects.[5]

Experts estimate that Minnesota will annually need an additional $75 to $100 million to clean up its polluted waters.

This estimate came from a credible source. Starting in 2003, the Minnesota Environmental Initiative pulled together a working group of 16 organizations to address the state's obligation to clean up its impaired waters under the federal Clean Water Act. This working group included representatives from four state agencies (Pollution Control Agency, Board of Water and Soil Resources, Department of Agriculture, and Department of Natural Resources), five associations that represent local water management entities, three environmental groups, two agricultural groups, and the Minnesota Chamber of Commerce (which had two representatives). This group (which became known as the "Group of 16" or "G-16") brought together a very broad and divergent set of interests and was able to develop consensus recommendations.

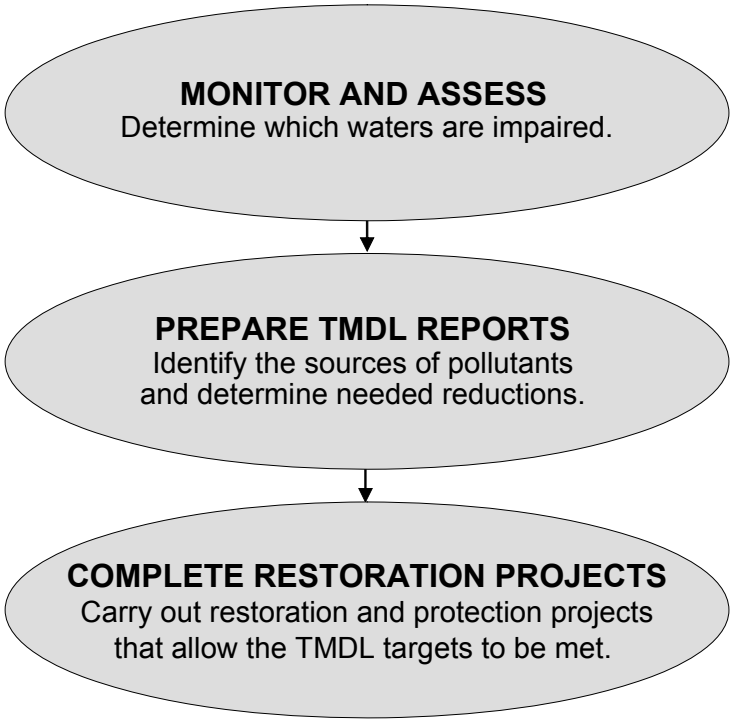
The G-16 examined the additional activities Minnesota needs to implement to comply with the federal Clean Water Act's provisions concerning impaired waters. The Clean Water Act has a three-step process for impaired waters, which is shown in Figure 4.1. In the first step, states comprehensively monitor and assess their waters to determine which do not meet the act's water quality standards. In the second step, states prepare Total Maximum Daily Load

[4] Our estimate of watershed management expenditures excludes expenditures by the U.S. Army Corps of Engineers for lock and dam operations. Navigation (which is not in the scope of our study) is a primary function of these operations.

[5] Minnesota Environmental Initiative, *Impaired Waters Stakeholder Process (July 2003-January 2005) Policy Framework* (undated), 7-8 and 21.

(TMDL) reports. TMDL reports identify the sources of pollutants (point and nonpoint) causing the impairment and determine the amount of discharge reduction that is needed to bring the bodies of water back within the act's water quality standards. The amount of discharge is referred to as the load, and each pollution source is allocated a maximum daily load. In the third and final step under the Clean Water Act, the state needs to fund and/or carry out restoration projects (such as sewage treatment facility improvements, wetland restorations, and agricultural best management practices) that allow the TMDL targets to be met.

Figure 4.1: Three-Step Process for Cleaning Up Impaired Waters Under the Clean Water Act



NOTE: TMDL stands for "Total Maximum Daily Load."

SOURCE: Minnesota Environmental Initiative, *Impaired Waters Stakeholder Process (July 2003-January 2005) Policy Framework* (undated).

In its study, the G-16 broke down the amount of additional funding that will be needed for each of the three stages. For example, as shown in Table 4.1, the G-16 proposed that an additional $78 million be made available in state fiscal year 2009. This would include $7 million for monitoring and assessment, over $5 million for TMDL reports, $29 million for nonpoint source restoration and protection, and $36 million for point source projects. According to the G-16, these funds will be needed over and above the funds already being provided for these activities.

Table 4.1: Additional Clean Water Funding Proposed by the Group of 16 (in millions)

	2006	2007	2008	2009
Monitoring and Assessment	$2.14	$4.55	$6.75	$7.09
Total Maximum Daily Load Analyses and Allocations	1.90	3.29	4.55	5.46
Nonpoint Source Restoration and Protection	2.96	28.23	28.90	28.90
Point Source Restoration and Protection	4.40	39.43	36.46	36.15
Total[a]	$11.40	$75.50	$76.66	$77.60

NOTE: The G-16 is a group of 16 entities that developed a plan for Minnesota to clean up its impaired waters.

[a] Total excludes about $4 million per year in administrative costs that the Group of 16 estimated would be incurred to collect proposed fees that would pay for the additional expenditures listed in the table.

SOURCE: Minnesota Environmental Initiative, *Impaired Waters Stakeholder Process (July 2003-January 2005) Policy Framework* (undated).

The G-16's recommendations were proposed to the Legislature as the Clean Water Legacy Act. During the 2006 session, the Legislature enacted an amended version of the G-16's proposal and appropriated nearly $25 million for the act's first year.[6] While the $25 million fell short of the amount that some parties were hoping for, other stakeholders felt that the act and its first year of funding represented a good start for addressing the state's polluted waters.

A large share of new clean water funds would likely go to local water management entities to address nonpoint source pollution.

If Minnesota decides to continue to increase funding for water quality improvement, a significant portion of the funding will likely go to local water management entities. Under the G-16's proposal, $29 million would be dedicated in 2009 to restoration and prevention projects that address nonpoint source pollution. According to the G-16, "State funding should be channeled to local government units to develop and implement restoration and prevention activities."[7] This approach acknowledges the fact that local water management entities are primarily responsible for controlling nonpoint source pollution in Minnesota. Under the G-16 plan, local entities are also expected to receive some of the assessment and TMDL funds.

However, as discussed in Chapter 2, the performance of local water management entities varies. Some entities are not well-equipped to turn additional funding into effective and efficient activities and projects that will improve water quality. The G-16 appears to have been aware of this situation. According to the group, watersheds with local entities that have sufficient human, technical, and financial resources should have priority for receiving TMDL funds. However, we believe that all watersheds should have local entities with sufficient human, technical, and financial resources to address water quality and quantity issues.

[6] *Laws of Minnesota* 2006, chapter 251.

[7] Minnesota Environmental Initiative, *Impaired Waters Stakeholder Process (July 2003-January 2005) Policy Framework* (undated), 15.

BWSR's resources for overseeing local water management entities have declined.

As discussed in Chapter 3, BWSR is not doing enough to ensure that local water management entities throughout the state are operating effectively. BWSR is not systematically tracking the performance of individual entities, has not established performance standards for them, and is not adequately holding them accountable. According to BWSR officials, the agency lacks the funds to play a more active role. For example, BWSR officials told us that they have considered assessing the performance of all local entities on a three-year cycle, but the agency does not have the resources to do this. After adjusting for inflation, BWSR's funding for internal operations declined by 13 percent between state fiscal years 2000 and 2006. In addition, the number of full-time-equivalent employees dropped from 70 to 62 during that period.

Furthermore, according to BWSR's senior staff, the Wetland Conservation Act (WCA) has become the agency's "800-pound gorilla." Under WCA, the state has a policy of no-net-loss of wetlands. The act requires anyone proposing to drain or fill a wetland to first avoid it. If a wetland cannot be avoided, the person draining or filling it must replace it. These requirements are administered by 350 local units of government, including counties, SWCDs, cities, townships, watershed districts, and WMOs. BWSR is responsible for coordinating these local units of government, providing technical and financial assistance, and resolving disputes. BWSR staff described the act as a Cadillac regulatory system that nobody wants to pay for. Consequently, it has diverted a sizable share of BWSR's resources. According to BWSR's senior staff, WCA takes about 50 to 80 percent of their field staff's time. This does not leave much time for other issues, such as overseeing the other watershed management activities of watershed districts, WMOs, SWCDs, and counties.

5 Recommendations and Policy Options

SUMMARY

To help ensure that local entities effectively manage the state's watersheds, the Legislature should require the Board of Water and Soil Resources (BWSR) to provide greater oversight and hold local entities accountable for their performance. To take on these new responsibilities, BWSR needs a new governing structure. An executive director appointed by the Governor and confirmed by the Senate should administer the agency. In addition, the current board should be changed from a governing board to an advisory commission. Finally, the Legislature should ensure that BWSR has sufficient resources to perform its new oversight responsibilities.

In Chapter 2, we concluded that some local water management entities are struggling; and in Chapter 3, we concluded that BWSR has not adequately overseen the local entities. Given these conclusions and the possibility that the state will annually spend millions of dollars on watershed management over the next decade, we think the Legislature needs to strengthen Minnesota's approach to watershed management. In this chapter, we address the following question:

- **How should the state promote consistent and effective watershed management?**

This question is difficult to answer because of the wide range of watershed issues that state and local agencies must address and the complexity of Minnesota's watershed management system. On the one hand, changes to the current structure could increase the accountability of local entities and integrate related tasks that are now performed by different agencies. On the other hand, many local entities are performing well, and a reorganization of the state's watershed management system could disrupt or even dismantle organizations that are currently doing important work to protect Minnesota's waters.

In this chapter, we take a dual approach to identifying proposals for improving watershed management. First, we make several recommendations regarding the oversight that BWSR provides local water management entities. Although these recommendations propose that BWSR take on some additional responsibilities and have a somewhat different governing structure, they do not include extensive structural change in state- or local-level organizations. Second, we discuss a series of policy options that the Legislature may want to consider, some of which would result in dramatic changes in how Minnesota manages its watersheds. We do not have sufficient evidence to recommend or not recommend these options, but we do identify potential advantages and disadvantages of each course of action.

RECOMMENDATIONS

To improve the oversight of local water management entities, we make the following recommendations.

RECOMMENDATION

The Legislature should require BWSR to provide greater oversight of local water management entities and hold each of them accountable for their performance. Specifically, the Legislature should require BWSR to:

1. ***Establish performance and operational standards for watershed districts, WMOs, SWCDs, and counties;***
2. ***Collect performance, financial, and activity data from each entity;***
3. ***Monitor the performance and operations of the entities and compare them with the established performance and operational standards; and***
4. ***Release public assessments of each entity's performance.***

We are not recommending specific standards because we believe that BWSR is in a better position to establish these standards. The agency works with local water management entities on a regular basis and understands its own and the entities' capacities.

BWSR needs to establish performance standards.

Establishing performance and operational standards will be challenging for BWSR. The standards will have to be consistent and fair but also flexible enough to take into account the different circumstances of each local entity. For example, some entities have significant local resources to address their watershed management issues, while others do not. Some entities will only need to carry out relatively simple projects to address their water problems, while others will have to take on complex and costly projects.

At a minimum, BWSR should hold local water management entities accountable to the goals and objectives that these entities establish for themselves in their management plans. In these plans, the local entities articulate the goals and objectives they would like to achieve over the next five to ten years and the actions they will pursue to achieve them. BWSR could formally establish these locally-defined goals and objectives as performance and operational standards that need to be met. BWSR reviews and approves these management plans before they go into effect.

However, as we discussed in Chapter 3, BWSR's oversight largely stops after it has approved the plans. It does not systematically track the activities and performance of the local water management entities or hold them accountable to the goals and objectives that they have set for themselves. BWSR needs to go further. It needs to track the activities of the local entities and determine whether they are achieving their own goals and objectives. On a periodic basis (such as every two or three years), BWSR could issue assessments of each entity. The assessment could be as simple as (1) "making adequate progress toward

achieving goals and objectives," (2) "struggling to make adequate progress," and (3) "failing to make adequate progress."[1]

BWSR should respect local goals but also pursue state-defined objectives.

We think that BWSR can and should do more than just use the locally-defined goals and objectives as the standard against which the local entities will be assessed. BWSR should establish state-defined standards that that local entities are expected to meet.[2] Ideally, these standards should establish specific outcomes (such as water quality improvements and flood risk reductions) that need to be achieved. With respect to water quality, the TMDL process should facilitate the establishment of outcome-based standards. For example, if a TMDL report determines that phosphorus loading along a stream segment needs to be reduced by 50 percent, the local entities that manage the water that flows into that stream segment should be expected to meet that goal.

Establishing and enforcing outcome standards will be difficult for two reasons. First, it can take years for positive outcomes to become apparent. For example, even if a local water management entity significantly reduces the level of phosphorus getting into a lake, the level of phosphorus in the lake water may not decline for a long time. Phosphorus accumulates in the sediment at the bottom of polluted lakes and is recycled back into the water over time. Even if a water quality program reduces the level of new phosphorus entering the lake, the lake bottom will continue to add phosphorus to the water over time. Second, it can be difficult to attribute positive or negative outcomes to a specific entity, program, or project. As we have discussed throughout this report, multiple entities often implement multiple programs and projects to manage a single lake or stream. It is difficult to apportion credit for outcomes among these entities, programs, and projects. In addition, human activities that are not entirely within the control of local water management entities, such as development, affect water quality and flood risk.

Even with these concerns, outcome-based assessments are possible. For example, to measure the impact of a water quality project along a stream, a local water management entity could measure water quality above and below the project site at two different times – before and after the project. These measurements would help isolate the impact that the project had on pollutants getting into the stream. However, this type of outcome-based assessment requires extensive monitoring, which can be expensive.

If outcome-based assessments and standards are not feasible, BWSR could establish operational standards. For example, we found that struggling local entities appear to devote a large share of their resources to planning and general administration. BWSR could establish a standard for the maximum amount that should be spent on these activities.[3] If a standard of this type is established, some

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[1] To ensure that the local management entities are establishing goals and objectives that are adequate, BWSR needs to ensure that its standards for reviewing and approving local water plans are set sufficiently high. In this evaluation, we did not evaluate the adequacy and rigor of BWSR's current standards.

[2] There could be different standards for each type of entity. For example, watershed districts could have one set of standards, while joint powers WMOs could have another.

[3] The standard for the maximum amount that should be spent on planning would need to be adjusted upward when a local entity is establishing or updating its management plan. In addition, BWSR would have to develop (1) a detailed definition of planning and general administration expenditures and (2) a mechanism for accurately reporting expenditures to BWSR.

flexibility should be added. There may be perfectly acceptable reasons why a watershed district, WMO, or SWCD is spending a large portion of its funds on general administration and planning. BWSR may want to use the standard as a threshold that triggers further inquiry. For example, BWSR may want to examine more closely the operations of any watershed district that devotes more than 50 percent of its funds to general administration.

Because local entities operate in very different circumstances, BWSR may want to develop "peer groups" when assessing performance. For example, one group could include watershed districts that operate in agricultural areas and are primarily concerned with water quality issues. BWSR could then establish separate performance and operational standards that reflect the particular circumstances of each group.

BWSR should periodically assess the performance of local water management entities and make the assessments public.

Citizens, legislators, and executive branch officials are entitled to more consistent reporting on the performance of local management entities. Public assessments would increase awareness of Minnesota's watershed management system. Local stakeholders could use the assessments to hold underperforming local entities accountable, and entities that perform well would be able to make a stronger case for local support.

To ensure effective implementation of this recommendation, the 2007 Legislature should require BWSR to report back to the 2008 Legislature on the performance and operational standards and measures that it has developed.

RECOMMENDATION

The Legislature should require BWSR to identify and propose to the 2008 Legislature additional enforcement tools that it will need to encourage and compel consistently low-performing watershed districts, WMOs, SWCDs, and counties to improve their operations and performance. The Legislature should then give BWSR the authority to use these additional tools.

As we discussed in Chapter 3, if a local water management entity is performing poorly, BWSR has limited authority to hold it accountable, particularly in outstate Minnesota. The actions that BWSR can take against low-performing entities vary between the metropolitan area and outstate Minnesota. In outstate Minnesota, BWSR has two options: it has the authority to withhold grant funding (if the entity receives grants) or terminate the entity. As we discussed in Chapter 3, BWSR's authority to terminate entities is limited.[4] In the metropolitan area, BWSR can take additional action against watershed districts and WMOs. For example, if BWSR determines that a watershed district or WMO in the metropolitan area has not implemented its management plan,

[4] Under state law, BWSR has the authority to terminate watershed districts, WMOs, and SWCDs, but it does not have the authority to dismantle counties. In addition, BWSR is not able to take unilateral termination action unless a joint powers WMO fails to create or implement a management plan (*Minnesota Statutes* 2006, 103B.231, subd. 3b – 3c). To terminate a watershed district, BWSR must first receive a petition from citizens or local units of government asking for the entity to be terminated (*Minnesota Statutes* 2006, 103B.221 and 103D.271). To terminate an SWCD, BWSR must first receive and review the results of a locally passed referendum that calls for the termination of the SWCD (*Minnesota Statutes* 2006, 103C.225, subd. 1-4).

BWSR can ask other state agencies to stop issuing water-related permits within the watershed.[5] Across the state, we believe that BWSR should have the discretion to pursue a wider range of enforcement actions, so that the agency can provide assistance or impose penalties as warranted by a particular situation.

We are not recommending specific enforcement tools because we believe that BWSR is in a better position to identify them. However, we are particularly concerned about the lack of authority that BWSR has over outstate watershed districts, especially those that do not receive any funding from BWSR. Other than approving their management plans and having the authority to terminate them, BWSR has little authority over outstate watershed districts.

RECOMMENDATION

The Legislature should change the governing structure of BWSR. Specifically:

1. ***The agency should be administered by a director who is appointed by the Governor and confirmed by the Senate; and***

2. ***The BWSR board should change from a governing board to an advisory commission.***

The Legislature should change BWSR's governing structure to make it a more effective executive branch agency.

Under current law, BWSR is governed by a 17-member board. While the Governor appoints the members, nine of them (a majority) must represent counties, SWCDs, watershed districts, and WMOs.[6] The board sets policy and chooses the agency's executive director.[7] We think this structure should be changed.

We anticipate that some people and organizations—including BWSR—will probably oppose these changes. They believe that BWSR should be structured as an "advocacy organization" that brings together the various state and local entities and interests to discuss and resolve issues before state action is taken. They have told us often that BWSR is "unique" and should not be organized like other state agencies.

We agree that BWSR has produced good results in some areas. In addition, we did not find evidence that board members have acted inappropriately to overtly impede BWSR's executive director or staff. Nevertheless, we think the water issues facing the state could be more effectively addressed if BWSR was more accountable to elected state officials.

BWSR will certainly have to continue to work closely and cooperatively with local water management officials, but we think it should also be better equipped and more willing to take prompt and effective action when local water management entities are not adequately protecting the state's water resources. We think that kind of action is more likely if the head of BWSR is appointed by the Governor and confirmed by the Senate.

[5] *Minnesota Statutes* 2006, 103B.231, subd. 3g(3).

[6] *Minnesota Statutes* 2006, 103B.101, subd. 2.

[7] *Minnesota Statutes* 2006, 103B.101, subd. 4.

In addition, we do recommend keeping a forum for local water officials to offer their perspectives and advice to the head of BWSR, but their role should be advisory. We simply do not think a state agency should be run by a multimember board that is controlled by local officials, particularly an agency charged with protecting such an important state resource. In short, we think the state should manage its responsibilities for water resources like it manages all other key responsibilities – transportation, education, human services, and natural resources – with ultimate accountability to the Governor and Legislature.

RECOMMENDATION

The Legislature should ensure that BWSR has adequate resources to perform its new oversight responsibilities.

BWSR may need additional authority and resources to ensure that local water management entities perform effectively.

Our evaluation did not include an overall assessment of BWSR's operations to determine whether the agency could assume the additional oversight responsibilities that we have recommended with existing resources or whether the Legislature would need to appropriate additional funds. However, it is possible that BWSR will need additional resources. As we described in Chapter 4, BWSR has lost more than 10 percent of its internal resources and staff over the past six years without a reduction in responsibilities. If BWSR needs additional funds to perform its new responsibilities and the Legislature continues to fund the Clean Water Legacy Act, the Legislature may want to direct a small portion of these funds to BWSR for its oversight responsibilities. As we discussed in Chapter 4, a significant portion of the funds for the Clean Water Legacy Act will likely go to local water management entities. Consequently, the state needs to ensure that these entities are operating effectively.

POLICY OPTIONS

As we described in Chapter 1, Minnesota manages its watersheds through the combined actions of a complex network of state and local agencies working cooperatively with the federal government. The recommendations we made above are directed toward improving the performance of the current system in Minnesota. However, the state has several other options for improving performance and accountability, some of which would be a dramatic change.

In the following sections, we examine some of these other options. We present them as policy options without recommendation and identify some potential advantages and disadvantages of each option. It is unclear from the evidence that we gathered whether the identified advantages would outweigh the disadvantages.

Sunset Provisions

As we have discussed, outstate watershed districts are independent and often face little accountability from the state. They have appointed rather than elected boards, have independent taxing authority, and are generally not reliant on grants. Thus, after BWSR has approved the districts' management plans, the only authority that the state has over them is the threat of termination. However, under current law, terminating an outstate watershed district is an extended

Under current law, it can be difficult to terminate an outstate watershed district.

process that requires considerable effort by local citizens. Opponents of the district must collect the signatures of 25 percent of the resident homeowners on a termination petition. Only after this condition is met will BWSR hold a hearing to determine whether the district benefits the public interest.[8] Short of legislative action, there is no state-initiated way to terminate a watershed district.

Outstate watershed districts could be held accountable through a statutory sunset provision that would require them to be reauthorized periodically in order to continue operations. The sunset provision could be structured in several different ways. For example, reauthorization decisions could be made by BWSR, by county boards, or through a referendum. Requiring regular reauthorization could improve the accountability of watershed districts by requiring them to justify their value at regular intervals.

However, a requirement for regular reauthorization could reduce the effectiveness of watershed districts by discouraging them from carrying out necessary but controversial actions. Watershed districts' independence may allow them to make unpopular decisions and remain somewhat insulated from the political process. Making watershed districts more accountable to voters and county boards will reduce their independence. Furthermore, a sunset provision might make long-term planning by state and regional agencies more complicated, since there would be less certainty about the long-term stability of important local partners. Finally, sunset proceedings may be time consuming and disruptive for all of the parties involved.

Selection of Board Members

There are good arguments for and against electing board members to local water management entities.

Watershed districts and SWCDs have different methods for selecting board members. Watershed districts have regulatory and levy authority, but they are not directly accountable to voters because their board members are appointed by county boards and not elected. In contrast, SWCDs have no real authority other than the ability to distribute funds and staff resources. Yet, their boards are elected. We considered two possible alternatives: (1) elect, rather than appoint, watershed district board members, and (2) appoint, rather than elect, SWCD board members (particularly in metropolitan counties).

Election of watershed district board members would make districts more accountable to their constituencies. The election process could also increase the visibility of districts. However, as noted above, a possible advantage of watershed districts is that they have the autonomy to make necessary but politically unpopular decisions. Another possible consequence of a shift to elected boards could be greater difficulty in recruiting prospective board members, who may be reluctant to go through the campaign and election process.

Furthermore, elected boards do not necessarily increase accountability or improve performance. As described in Appendix A7, the Hennepin SWCD was considered "one of the best" in the state in the 1990s. But in November 2000, a former employee who had been fired was elected to the district's board, and board meetings rapidly became contentious. The other board members even brought lawsuits against the new board member, charging that she had publicly

[8] *Minnesota Statutes* 2006, 103D.271.

disparaged the district. The new board member countersued. In response to fears that continuing turmoil and dysfunction would prevent the conservation district from carrying out its duties, Hennepin County withdrew all funding from the district in 2003 and took over many of its duties.

Several people we interviewed in the metropolitan area suggested that SWCD board members should be appointed rather than elected because the election in highly populated counties is nothing more than a lottery. They contend that the races have low visibility and candidates do not have the funding to inform the large numbers of voters about their qualifications and ideas. In the most populous counties, the barriers to adequate voter education are particularly large. Each candidate for the Hennepin SWCD appears on the ballot in part or all of 32 legislative districts. On the other hand, some people that we interviewed argued that there were advantages to having a separately elected board. SWCDs with an elected board are independent of the county and may be better able to interact with the landowners who elected them.

Eliminate WMOs

As we discussed in Chapter 1, WMOs exist only within the seven-county metropolitan area. The 1982 Metropolitan Surface Water Management Act requires that all land within those counties be under the jurisdiction of a WMO or a watershed district.[9] Previous studies have found that WMOs are generally less effective than watershed districts.[10] While our study did not closely examine all WMOs in the metropolitan area, our observations were generally consistent with these earlier studies.

The Legislature may want to replace watershed management organizations with watershed districts.

The Legislature could eliminate the WMO model, replacing all WMOs with watershed districts. This would simplify the system by mandating only one organizational type. Critics of joint powers WMOs contend that they are weaker than watershed districts because they are governed by a joint powers board, which is subject to parochial infighting. These critics contend that some WMO board members vote in the interest of the city or township that they represent rather than in the interest of the overall watershed. Because counties appoint the boards of the watershed districts, the converted organizations would potentially be less prone to such internal conflicts.

However, a wholesale elimination of all WMOs may not be a good idea. It would eliminate not only the struggling WMOs but also effective WMOs, such as the Bassett Creek Watershed Management Commission (see Appendix A3). Another approach would be to lower the threshold for disbanding poor performing joint powers WMOs. Under current law, if a joint powers WMO fails to implement a watershed management plan in accordance with BWSR rules, BWSR can effectively terminate the WMO by forcing the county to

[9] *Minnesota Statutes* 2006, 103B.231, subd. 1.

[10] Kathryn Joanne Draeger, *Defining and Evaluating Watershed Organizational Effectiveness* (A doctoral thesis submitted to the University of Minnesota, September 2001), 55, 58, and 106-110; and Washington County, *Report for Water Governance Study, Washington County, Minnesota* (Stillwater, 1999), 20, 23-24, and 33.

assume its management or turn it into a watershed district.[11] However, because BWSR has not set clear standards for performance, its ability to declare that a WMO is not implementing its plan is somewhat ambiguous. BWSR's rules do not define what non-implementation means. As an alternative to eliminating all WMOs, BWSR could more clearly indicate that weak performance by WMOs would be grounds for county takeover or replacement by a watershed district.

In addition, the weak performance of WMOs may not be entirely due to the joint powers organizational structure itself. It may have more to do with how they were created. Unlike joint powers organizations in outstate Minnesota, which were created at the initiative of the local entities that comprise the organization, the state created some of the joint powers WMOs from the "top down" with the passage of the Metropolitan Surface Water Management Act.[12] The state-created WMOs may struggle because they lack local commitment to watershed management. In contrast, the Bassett Creek Watershed Management Commission, a locally-created WMO, has been successful. This WMO was created long before the Metropolitan Surface Water Management Act by local officials who saw the need for an effective organization to address an identified water management problem. (See Appendix A3 for more details on Bassett Creek.)

Consolidation at the Local Level

One of the characteristics of Minnesota's current watershed management system is a complex network of authorities that have jurisdiction over the same geographic area. Counties, SWCDs, WMOs, and watershed districts all make decisions that can affect the quality and quantity of water in a watershed. The watershed management functions of all of these separate entities could be combined into a single watershed-based local entity with regulatory and levy authority. Less ambitiously, the state could merge SWCDs into county governments.

Consolidation at the local level would simplify the current structure but create other management challenges.

The argument in favor of consolidation into a single local entity is that it would streamline local government, making it easier to understand, coordinate, oversee, and hold accountable. It would also centralize decision-making at the watershed level, creating an entity designed to balance upstream and downstream needs and preferences.

However, consolidation within watershed boundaries would also create a number of management and coordination challenges. Currently, in most parts of the state, water and land-use planning are both done at the county level. Under this option, water planning would be done on a watershed basis throughout the state, but land-use planning would likely remain a county function. Placing water management within a different type of jurisdiction than land-use planning would likely create new coordination issues.

Furthermore, although some federal environmental agencies have emphasized watershed-based management, the U.S. Department of Agriculture continues to

[11] *Minnesota Statutes* 2006, 103B.231, subd. 3b - 3c. If a WMO fails within Hennepin or Ramsey counties, a watershed district must be created. The county cannot take over the functions of the joint powers WMOs.

[12] *Minnesota Statutes* 2006, 103B.231, subd. 1.

administer its programs on a county basis. In most counties, the U.S. Natural Resources Conservation Service and SWCD offices are located in the same building and closely coordinate their activities. They frequently share office space, equipment, and even staff. If Minnesota were to carry out soil and water conservation activities on a watershed basis, this coordination and sharing could be lost or drastically reduced. This is important because our analysis shows that in 2005 the Natural Resources Conservation Service spent $63 million on water and soil related activities in Minnesota.

Merging SWCDs into counties would not present the same difficulties as consolidation into watershed jurisdictions. There is some precedent for merging SWCDs with counties in Minnesota. Six counties have functionally merged SWCDs into their government structure, and about half of Minnesota's counties already delegate their county water planning responsibilities to SWCDs.[13] However, a separate local entity with specific responsibility for conservation issues may increase the visibility of environmental issues at the local level. SWCD boards may be more likely to attract candidates with a strong environmental focus than county commissioner races. Furthermore, as noted above, independent SWCDs may be better positioned than county governments to reach out to local landowners.

Consolidation at the State Level

Consolidation at the state level would be difficult to achieve.

The interrelationships among the various state agencies responsible for water management in Minnesota are familiar to those who work full-time on water issues but are frequently confusing for citizens and legislators to navigate and understand. No single agency is responsible for the overall management of Minnesota's surface waters. Some people have recommended consolidation of all water-related programs into a single, state-level agency responsible for water policy. This would involve merging the separate water management functions now housed in BWSR, DNR, PCA, and Agriculture.

However, such an overhaul would be disruptive during the transition and cost the state considerable time and money. While a consolidated state management structure might provide better accountability, there is no persuasive evidence that it would clearly produce better outcomes in terms of improved water quality and reduced flooding. Furthermore, we found some examples of good coordination across state agencies but also found some examples of weak coordination within a single state agency. This suggests that consolidation into a single management structure does not automatically improve coordination.

Improved coordination might be achieved with far less disruption by simply devoting more resources to coordination, possibly by giving greater resources and statutory authority to the Environmental Quality Board (EQB). For example, the Legislature could require that water-related programs, activities, and budgets at the agency level conform to the state's water plan (which is prepared by EQB). However, there are practical disadvantages to such an approach. The current state water plan was not written with this purpose in mind. It focuses on broad, overarching goals and does not focus on issues of statewide oversight and accountability. Thus, it would be awkward to implement this requirement before the next water plan is developed.

[13] The six counties are Cass, Faribault, Hennepin, Olmsted, Pipestone, and Rock.

List of Recommendations

- The Legislature should require BWSR to provide greater oversight of local water management entities and hold each of them accountable for their performance. Specifically, the Legislature should require BWSR to:

    1. Establish performance and operational standards for watershed districts, WMOs, SWCDs, and counties;

    2. Collect performance, financial, and activity data from each entity;

    3. Monitor the performance and operations of the entities and compare them with the established performance and operational standards; and

    4. Release public assessments of each entity's performance (p. 56).

- The Legislature should require BWSR to identify and propose to the 2008 Legislature additional enforcement tools that it will need to encourage and compel consistently low-performing watershed districts, WMOs, SWCDs, and counties to improve their operations and performance. The Legislature should then give BWSR the authority to use these additional tools (p. 58).

- The Legislature should change the governing structure of BWSR. Specifically:

    1. The agency should be administered by a director who is appointed by the Governor and confirmed by the Senate; and

    2. The BWSR board should change from a governing board to an advisory commission (p. 59).

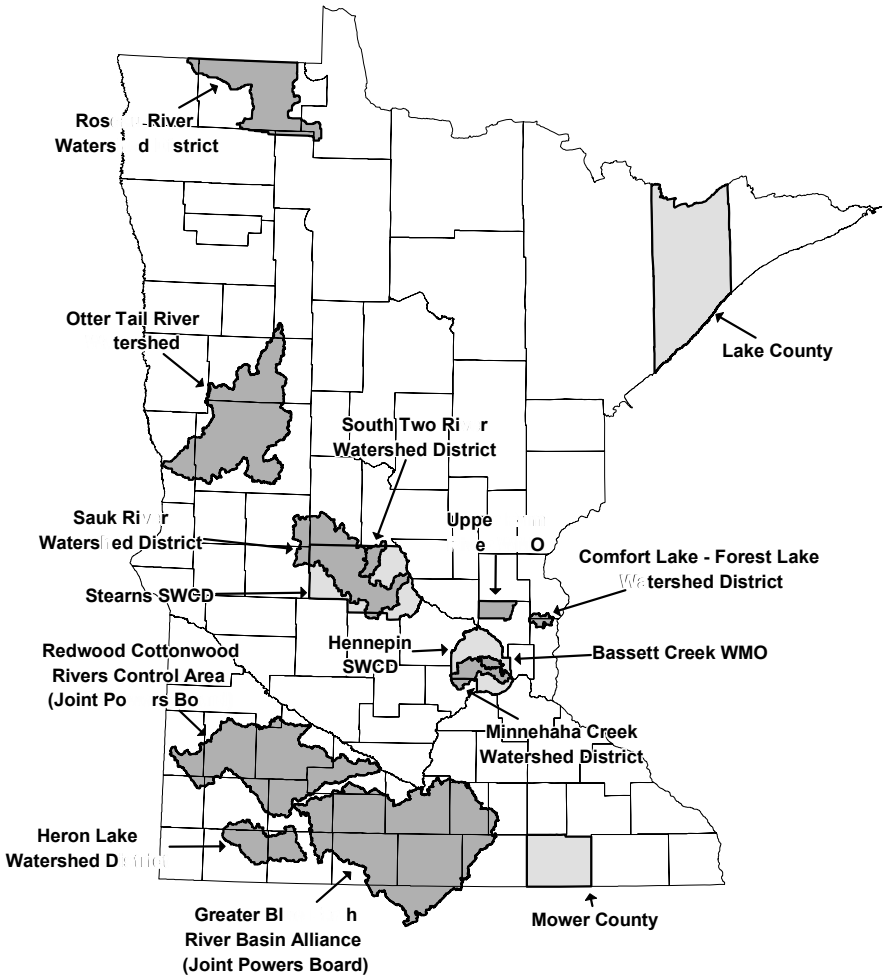
- The Legislature should ensure that BWSR has adequate resources to perform its new oversight responsibilities (p. 60).

Case Studies of Local Water Management Entities

Appendix A

To gain insight into the activities of local water management entities in Minnesota, we conducted 15 case studies. The entities that we examined come from different regions of the state and represent several types of entities, including six watershed districts, two WMOs, two SWCDs, two counties, two joint powers organizations, and one watershed that is not managed by a watershed district. Figure A.1 shows the location of each entity that we examined.

Figure A.1: Watershed Management Case Studies



SOURCE: Office of the Legislative Auditor.

In the rest of this appendix, we provide summaries of 8 of the 15 case studies. The eight illustrate entities that are performing well and entities that are struggling. The higher performing entities include Minnehaha Creek Watershed District, Sauk River Watershed District, Stearns SWCD, and Bassett Creek Watershed Management Commission (which is a WMO). We combined the Sauk River Watershed District and Stearns SWCD into one summary because the two organizations have a close partnership and carry out activities together. The struggling entities include South Two River Watershed District, Upper Rum River WMO, and Comfort Lake – Forest Lake Watershed District. The Hennepin Conservation District (which is an SWCD) provides an interesting example because it experienced significant turmoil over the last several years. In this case study, we did not evaluate the district's performance but rather examined the cause and nature of the turmoil.

To carry out our case studies, we interviewed officials from the entity, BWSR, PCA, and DNR. In many cases, we also interviewed local partners (such as an SWCD) and critics of the entity. We had staff from the state agencies and local partners rate each entity's performance regarding the activities listed in Table A.1.

Table A.1: Performance Ratings Provided by State and Local Government Partners

	Average Rating						
	Minnehaha Creek	Sauk River	Stearns SWCD	Bassett Creek	South Two River[1]	Upper Rum River	Comfort Lake – Forest Lake
Monitoring and Assessing Needs	High	High	---[2]	High	Low	Low	Low
Planning to Determine the Best Way to Meet Needs	High	High	High	High	Low	Low	Low
Carrying Out Programs and Projects that Address Needs	High	High	High	High	Low	Low	Low
Spending Funds Efficiently	High	High	High	High	Low	Low	Low
Educating the Public	High	High	High	High	Low	Low	Low
Incorporating Public Input	High	High	High	High	Low	Low	Low
Coordinating with Local Partner Agencies	High	High	High	High	Low	Low	Low
Coordinating with State Agencies	High	High	High	High	Low	Low	Low

NOTES: The state and local staff rated each activity on a scale of 1 to 5, with 1 representing very low performance and 5 representing very high performance. Because these assessments are subjective and were provided by only three to six individuals for each entity, we only report whether the entity received an average rating that was high (over three) or low (three or below).

Hennepin County presented such a unique situation that we did not solicit performance ratings.

[1] These ratings are based on the district's historical performance. Some of the people we interviewed gave the district higher ratings for its performance over the last year.

[2] Stearns SWCD relies on watershed districts and the county for most of its monitoring. Interviewees told us that a rating is not appropriate for this case.

SOURCE: Office the Legislative Auditor interviews with staff from state and local water management entities.

Because these ratings are subjective, we asked the staff to provide specific examples and evidence to support their perceptions. We also conducted our own independent assessments by reviewing a wide range of documents, including management plans, annual reports, board minutes, project reports, correspondence, and other documents.

Again, from our 15 case studies, we selected 8 to illustrate the range of performance that we found. The four that we have characterized as high performing entities were actively engaged in watershed management and have produced successful outcomes. In contrast, the other four entities either struggled to perform the tasks laid out in their management plans or experienced significant turmoil. The management plans identify the goals and objectives of the entities and the activities that the entities will conduct to achieve these goals and objectives. To implement these plans, the state has granted watershed districts the right to levy taxes and provided SWCDs with grants.

Minnehaha Creek Watershed District

Appendix A1

The Minnehaha Creek Watershed District encompasses 178 square miles of land from which water flows into Minnehaha Creek. The district includes part or all of 27 cities, parts of 2 townships, and some of the most highly visible recreational water bodies in the state, including Lake Minnetonka, the "Chain of Lakes" in Minneapolis, and Minnehaha Falls. The district's mission is to protect, improve, and manage the surface waters and affiliated groundwater resources within the watershed. Its operations are overseen by a seven-member board, with Hennepin County appointing six members and Carver appointing one. The district's 2005 expenditures were $3.3 million.

Like most watershed districts in the metropolitan area, this district's greatest challenges stem from urban and suburban development, particularly stormwater runoff, which affects both the quality and quantity of the water that flows through the watershed.[1] Flooding has been a problem in the watershed in the past, but the major water quantity issue now involves balancing community desires for high water levels in Lake Minnetonka against the need for a consistent base flow in Minnehaha Creek to provide an adequate habitat for aquatic life.

Since its formation in 1967, the watershed district has taken an active role in managing the water resources within its jurisdiction through monitoring, planning, regulating, educating, and constructing capital projects. Its newest comprehensive management plan sets separate goals and objectives for each of twelve sub-watersheds within the district's area, including specific measurable targets to show whether or not the district's activities have positively affected water quality. The plan describes a long list of capital improvement projects that would cost over $80 million in 2005 dollars if all were implemented.[2] To assess whether it is meeting its goals, the district analyzes water samples collected weekly or biweekly from over 50 different sites in the watershed.

In contrast to the slow pace of monitoring in the rest of the state (which we described in Chapter 2), the watershed district and its partners have assessed a high proportion of the district's waters under the standards of the federal Clean Water Act. As a result of this more complete assessment, the district has more listings on the state's 2006 list of impaired waters than comparable jurisdictions. Eleven lakes in the watershed appear on the state's 2006 list of impaired waters

[1] The western part of the watershed still has some agricultural use, particularly in the small portion that lies in Carver County.

[2] This figure does not include projected maintenance costs.

due to excess nutrients, and Minnehaha Creek is impaired for aquatic life.[3] The district has petitioned to have two of the lakes removed from the list because of water quality improvements, and it is carrying out federally mandated studies to assess the best approach to improving water quality in the other nine. The watershed district has also identified an additional 12 water bodies which do not currently meet clean water standards for nutrients and may be listed as impaired after further monitoring.

The district's ambitious programs are made possible by its ability to levy taxes on a well-endowed tax base. Its net tax capacity is more than double that of any other watershed district in the state. This enables the district to spend over $700,000 per year on staff expenses alone, including a water-quality specialist with Ph.D.-level training and an educational coordinator that the district hired from the DNR.

The district's activities have led to measurable improvements in water quality over time. According to the district, total phosphorus concentrations in Lake Minnetonka and the Chain of Lakes were 1.5 to 3.5 times higher in the 1970s than they are today. Education efforts conducted jointly with partner agencies in the 1990s led to a 50 percent reduction in lawn and garden pesticides observed in stormwater runoff flowing to the Chain of Lakes.[4]

State and regional officials who have the opportunity to compare the Minnehaha Creek Watershed District with many other watershed districts consistently rate it as one of the best in the state. They cite its extensive monitoring programs, expert staff, excellent planning and research, and strong educational programming. In addition, they point to innovative initiatives like (1) the purchase of land to conserve highly sensitive areas, (2) the creation of a grant program to provide incentives for cities to pay closer attention to water quality issues, (3) the district's sponsorship of a workshop on low-impact development, which drew water and land-use planners from across the metropolitan area, and (4) the assumption of some DNR permitting responsibilities.

The district's activities have been so extensive that the principal complaint lodged against it by a variety of stakeholders is that it is *too* active – that its commitment to water quality and its financial independence have made it heavy-handed and unwilling to listen or compromise. However, many of these critics acknowledge that the organization has improved markedly over the past several years at communicating with its stakeholders and understanding their perspectives. Both the district's executive director and some state agency observers attribute this improvement to changes in the membership and self-defined role of the district's board.

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[3] Eighteen lakes within the watershed (including some of the 11 impaired by excess nutrients) are also on the 2006 impaired waters list due to impairment by mercury, which is caused primarily by air pollution and cannot be easily affected by watershed district activities. PCA is coordinating a statewide study to address the issue of mercury in the state's waters.

[4] Improvements in water quality in the Chain of Lakes have involved cooperative efforts by the Minnehaha Creek Watershed District, the Minneapolis Parks and Recreation Board, the City of Minneapolis, the City of St. Louis Park, and Hennepin County.

Sauk River Watershed District / Stearns SWCD

Appendix A2

The Sauk River Watershed District is a relatively large district located primarily in Stearns County, but it also includes portions of Todd, Douglas, Pope, and Meeker counties. The district covers just over 1,000 square miles of land from which water flows into the Sauk River. The river flows southeast from Lake Osakis in Todd and Douglas counties, through Stearns County, and into the Mississippi River just north of St. Cloud. The district includes all or part of 49 townships and 27 cities, including portions of St. Cloud and other rapidly developing areas around St. Cloud.

The district has a wide range of economic activity. Agriculture has a strong presence, but other types of businesses play an important role in the district. These businesses include granite quarries, food processing, light industry, retail, restaurants, and resorts/tourism. With over 240 lakes and 1,800 miles of streams and rivers, the district provides many opportunities for water-related tourism. The district's major lakes are Osakis, Big Birch, Little Birch, Big Fish, Grand, and the Sauk River Chain of Lakes (also known as the Horseshoe Chain of Lakes). The Sauk River Chain of Lakes is an interconnected system of 14 bay-like lakes through which the Sauk River flows.

The Sauk River and many of the streams and lakes that flow into it are impaired. Of particular concern, the Sauk River Chain of Lakes has had high levels of phosphorus. According to the watershed district's former administrator (who left the district in the summer of 2006), water quality in the chain is particularly important because it is a good indicator of water quality throughout the watershed district. The chain is in the lower portion of the watershed and collects the pollutants that come from upstream and flow into the chain via the Sauk River. The phosphorus in the chain comes from several sources. Agricultural runoff is a concern because large portions of the watershed are farmed with row crops and livestock operations. Septic system problems have increased as small seasonal cabins around lakes have been converted into larger, year-round residences.

The Sauk River Watershed District was established in 1986 primarily to address water quality problems in the Sauk River Chain of Lakes. While the district has identified a wide range of other goals in its management plans over the years, addressing water quality problems in the chain has continued to be a central goal. To implement its current plan, the districted reported spending $1.4 million in 2005. The district devoted over half of these funds to providing incentives to landowners that pursue best management practices on their land.

Because 64 percent of the watershed district falls in Stearns County, the Stearns SWCD plays a critical role in managing this watershed. In fact, the watershed district and SWCD work cooperatively to encourage landowners to pursue best

management practices. The watershed district focuses on monitoring water quality, educating the public, and raising funds for these activities. The SWCD focuses on working with the landowners and providing technical and financial assistance for these best management practices. In 2005, the SWCD reported spending $1.5 million, which was the highest overall level in the state among SWCDs.

Working with the Stearns SWCD, the Sauk River Watershed District spearheaded a partnership that has made strides toward cleaning up the Sauk River Chain of Lakes. Between 1985 and 2003, phosphorus levels in the chain dropped by nearly 50 percent from 300 to 176 parts per billion. While the chain is still impaired, this is a significant reduction. In fact, the U.S. Environmental Protection Agency features this effort on its website as a successful program for reducing nonpoint source pollution.[1]

These results were achieved through various strategies. To address phosphorus coming from agricultural runoff, manure storage facilities were installed or improved, manure management plans were prepared, feedlot filter strips and retention basins were installed, and conservation easements were established. To prevent erosion near bodies of water, vegetative buffer strips were planted and shorelines were restored. To address failing septic systems, the partnership entities educated the public about proper system maintenance and provided loans to upgrade septic systems at lakeshore residences and resorts. In addition, in the early 1990s, a watershed-wide phosphorus discharge limit was implemented for sewage treatment plants.

Besides the Sauk River Chain of Lakes project, the watershed district and SWCD have implemented other projects and programs. For example, in 2005, the watershed district started a diagnostic study for the lower Sauk River (the segment of the river downstream of the chain of lakes). This resource assessment will provide baseline information about water quality in this rapidly developing area near St. Cloud. The SWCD and seven other local units of government are also involved in this project. As another example, the Stearns County SWCD has teamed up with several partners (including Pheasants Forever and the Sauk River Watershed District) to carry out an accelerated buffer project. Under this program, farmers set aside cropped land on the banks of streams, drainage ditches, and wetlands for conservation. Rather than cropping the land, the farmers plant native vegetation to create a buffer strip between the water and the land that continues to be cropped. Under its Conservation Reserve Program (CRP), the federal government pays these farmers for the easements. The program is run and coordinated by a Pheasants Forever staff person who works out of the SWCD office. The staff person travels around Stearns County, meets farmers, and encourages them to participate in the program.

The Sauk River Watershed District has been able to document the success that it and the SWCD have had because of the watershed district's monitoring program. In 2005, the district took samples from 25 stream locations and 12 lake sites. To collect this data, a monitoring team of two people was continuously in the field during the summer, with a second team assisting on occasion.

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[1] U.S. Environmental Protection Agency, "Section 319 Nonpoint Source Success Stories," http://www.epa.gov/owow/nps/Success319/, accessed November 6, 2006.

Bassett Creek Watershed Management Commission

Appendix A3

The Bassett Creek Watershed Management Commission is an urban WMO that manages the water that flows into Bassett Creek. The Creek flows from central Hennepin County into the heart of downtown Minneapolis and has a long history of water management efforts. In the early years of the 20th century, flooding plagued neighborhoods near the stream's outlet at the Mississippi River. In 1923, the City of Minneapolis completed a project to lower the streambed and cover it with concrete, placing the last mile and a half of the creek underground. However, this proved to be only a short-term solution. Flooding problems upstream from the tunnel entrance worsened over time as residential and commercial development gradually covered all of the 40-square-mile watershed and increasing amounts of stormwater were channeled into the creek. The federal government declared Hennepin County a federal flood disaster area in 1978 and again in 1987 in part due to severe flooding in the Bassett Creek watershed.

As early as the mid-1960s, representatives from the nine cities with land area within the watershed met regularly to try to find common solutions to the flooding issues. However, this informal communication was not strong enough to address the problems. Under some pressure from Hennepin County, a formal joint powers agreement to form the commission was signed in 1968 by representatives from Plymouth, Golden Valley, Minneapolis, Medicine Lake, New Hope, Crystal, Robbinsdale, Minnetonka, and St. Louis Park. Each member city had one vote on the board. Contributions from member cities provided the commission's base funding, with each city's payment based upon its net tax capacity and the amount of its land area lying within the watershed. The joint powers agreement explicitly gave the commission the authority to require member cities to carry out watershed management activities approved by the commission, a forceful provision that reflected the urgency of the problems the watershed faced.

The commission focused its efforts primarily on flooding for its first 30 years. Its flood control work culminated in the 1980s and 1990s with a ten-year, $40 million flood control project carried out in collaboration with the Minnesota Department of Transportation, DNR, and the U.S. Army Corps of Engineers. The largest part of the project was the construction of an entirely new tunnel under downtown Minneapolis to replace the original tunnel, which had dangerously deteriorated and could no longer handle the volume of water directed into it.

The commission's work has significantly reduced the potential for serious flood damage within the watershed. In June 2003, a heavy storm that dropped 4.7 inches of rain on the watershed in a 3¼ hour period caused mostly isolated flood damage around small ponds and blocked culverts. Flooding along the main stem

of the creek was limited to a golf course and a road, which was temporarily closed. An analysis performed by the commission found that its flood control structures had prevented as much as $20 million in damages to homes and businesses from this storm alone.

Five lakes within the watershed, as well as Bassett Creek itself, appear on the state's 2006 list of impaired waters. However, data collected by the commission and its partners suggest that water quality at all of the impaired sites has remained roughly constant or improved over the past 20 years despite the extensive development activity that has taken place in the watershed during that time. According to some state agency officials, the commission was somewhat slow to focus its attention on water quality.[1] However, the organization's 2004 management plan shows that the commission has now completely shifted its priorities away from flood control and toward water quality. All but 1 of the 21 capital projects proposed in the plan are related to water quality. To pay for the $3 million cost of these projects, the commission is instituting a levy on watershed residents for the first time in its history.

Like a number of WMOs, the commission does not employ any staff, using outside contractors and consultants to carry out the work of the organization. This approach has been criticized by some stakeholders, who argue that the organization's resistance to adding an administrative layer limits the capacity of the organization and is not cost-effective in the long term. One board member noted that the commission had paid Barr Engineering more than $400,000 over a three-year period to develop the organization's 2004 water management plan, an amount that could have funded salary and benefits for a full-time staff person qualified to create the plan. The commission had total expenditures of approximately $300,000 in 2005.[2]

The commission has successfully carried out an extensive flood control mitigation program despite the weaknesses of the joint powers WMO structure. Our assessment suggests that this success was primarily due to the strong commitment of the member cities to the organization, which remains firm even when members lose out on contentious issues. For example, although the imposition of the levy was opposed by three of the nine member cities, all continue to actively participate. Interestingly, some of our interviewees suggested that this commitment is partly due to fears that a lack of cooperation would cause the commission to be replaced by a watershed district. Since watershed districts are governed by a board appointed by the county and have independent levy authority, some city officials believe a watershed district would be less responsive to their preferences and concerns.

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[1] Some of the commission's flood control structures did have a positive impact on water quality simply by slowing down stormwater flow. Some observers we spoke with attributed the commission's increased focus on water quality to a statutory change in 1999, which barred city staff from serving on the boards of joint powers WMOs (*Minnesota Statutes* 2006, 103B.227, subd. 2). However, others suggested that the commission would have moved in this direction in any case due to increasing pressure to address the requirements of the federal Clean Water Act.

[2] Some of the work planned and approved by the commission is paid for by its member cities, so this figure does not represent the total amount of money spent on commission programs.

South Two River Watershed District

Appendix A4

The South Two River Watershed District is a small district located primarily in Stearns County. The district encompasses roughly 93 square miles of land from which water flows into the South Two River (which eventually flows into the Mississippi River northwest of St. Cloud). Land use within the district is primarily agricultural, but the district includes two cities (Albany and Holdingford) and a portion of a third city (St. Anthony). The district has three primary lakes – Two River, Pelican, and Pine. In 2005, the district spent just over $50,000.

The watershed district was established in 1986 to address several problems, including poor water quality, lake and stream flooding, sediment and erosion problems, poor storm drainage, and septic system flooding. Two areas of the district were of particular concern – the segment of the South Two River that enters the City of Albany and the segment of the river that flows into Two River Lake. Two River Lake is the only body of the water in the district that has been classified as impaired (for high levels of mercury) under the federal Clean Water Act. However, the waters in the district have not been extensively monitored and assessed for impairments. More monitoring may reveal additional impairments.

Overall, the South Two River Watershed District has been ineffective. The district has not actively pursued the goals, objectives, and tasks in its management plans that are needed to address the district's flooding and water quality problems. Since its inception 20 years ago, the district has completed very few (if any) major watershed management projects.

For example, the City of Albany had been experiencing periodic flood problems since at least 1984. In response, the watershed district initiated but did not complete a flood control project. To hold floodwaters outside the city, the district decided in the 1990s to construct a retention pond. However, the district was unable to negotiate a purchase price for the required land. Eventually, the city decided to take the project over to ensure that it was completed. The city negotiated a purchase price with the landowner and built the impoundment. Of the project's final $136,000 cost, the city provided $44,000, DNR provided $56,000, and the district contributed $36,000.

The district's current management plan, which was written in 2002, lists a wide range of goals, objectives, and tasks. Under the plan, the district's primary objectives are to (1) collect data to assess the watershed management needs of the district, (2) identify sub-watersheds where wetland impoundments could be constructed, and (3) construct the impoundments to slow runoff and remove

pollutants.[1] As of 2005, the district had made little progress implementing the plan. The district had collected very little of the data outlined in the plan and had not taken steps to systematically identify areas for wetland impoundments.[2] Of its 2005 expenditures (roughly $50,000), the district reported devoting two-thirds of them to planning and general administration. The district spent a small portion (the remaining third) on projects and programs that directly reduce flood risk and improve water quality. Over the years, the district has spent some funds to issue permits, monitor water quality, and help finance some small conservation projects.

The district's monitoring of water quality has been limited. In June 2006, an engineering firm hired by the district released a report that pulled together all of the available information on the quality of water in Two River, Pelican, and Pine lakes.[3] The data was limited. For example, the report had only four years of phosphorus readings for the surface of Two River Lake – one for 1978, 1979, 1999, and 2000. This is insufficient data to determine if the lake is impaired under the federal Clean Water Act or to track water quality over time. Nevertheless, the data suggest that phosphorus pollution is a concern. The phosphorus level taken in 2000 was well above PCA's standard for impairment. More monitoring is needed to determine if it is actually impaired. If the South Two River Watershed District had wanted to adequately determine the district's water quality problems and evaluate its own performance, it should have conducted more monitoring. Without good monitoring data, local water management entities cannot determine if they are adequately protecting the state's water resources.

In addition, the district did not actively interact and cooperate with its neighboring local water management entities. For example, it did not participate in PCA's Upper Mississippi Basin Plan or Stearns County's water plan advisory committee. For the most part, the other local water management entities in the area participated in these regional efforts. These types of regional activities are important for protecting the state's water resources because water flows from one watershed to the next and from one county to the next. Watershed management in one part of a region affects the quality and quantity of water in other parts.

Some residents raised concerns about the district's lack of activity leading to a large cash balance. At the end of 2005, the district's cash reserve was $158,000. We did not try to determine if this balance was too large for two reasons. First, there is no established standard for an appropriate cash reserve. Depending on the local circumstances and future plans, different cash balances would be appropriate in different circumstances. Second, the district planned to significantly reduce the balance during 2006. Under the district's 2006 budget, it planned to levy only $22,500 but spend over $103,000.

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[1] South Two River Watershed District, untitled document labeled "Draft March 2002," 7. BWSR provided this document to the Office of the Legislative Auditor on July 25, 2006, as the South Two River Watershed District's watershed management plan.

[2] As described below, after August 2005, the district tried to reform itself and implement its management plan. Part of this effort included hiring an engineering firm to identify areas for wetland impoundments.

[3] Bonestroo, Rosene, Anderlik, and Associates, *South Two River Watershed District Lake Water Quality Report* (St. Paul, Project # 909-06-103, June 2006).

It appears that the district was inactive for several reasons. According to BWSR's own assessment, the board of managers was inadequately trained on its powers and duties and had a rapid rate of turnover in recent years. The district also had limited staffing and little or no public outreach. In addition, the district had a small tax base.[4] In 2004, only two other watershed districts in the state (Stockton-Rollingstone and Crooked Creek) had both a lower tax capacity per capita and a lower overall tax capacity.

Starting in August 2005, the district tried to turn itself around. The district contracted with an experienced administrator to run the district, revitalized its advisory committee, compiled water quality data that it had been collecting, developed a water quality monitoring plan for the future, hired an engineering firm to identify areas for wetland impoundments, and published and distributed its first newsletter.

The district's efforts to reform itself probably came too late. The district had already lost public trust. In 2006, a group of citizens, frustrated with the district's lack of activity, petitioned BWSR to terminate the district. Stearns County and the district's two cities also submitted resolutions or letters to BWSR indicating that they did not support the district.[5] Without the support of these key partners, it would be difficult for the district to succeed. In August 2006, BWSR voted to terminate the district.[6]

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[4] BWSR, *South Two River Watershed District Assessment* (February 9, 2006); and memorandum from Jim Haertl, BWSR Water Management Specialist, regarding "South Two River WD Termination Petition" (August 8, 2006).

[5] Stearns County and the City of Holdingford passed resolutions supporting termination. The City of Albany submitted a letter requesting that BWSR remove the city from the boundaries of the watershed district.

[6] As of late 2006, the termination decision was being appealed in the courts.

Upper Rum River WMO

Appendix A5

Encompassing just over 126 square miles, the Upper Rum River WMO manages only part of the Rum River watershed. The nearly 1,600 square mile watershed stretches from Mille Lacs Lake down to the Twin Cities metropolitan area and ultimately drains into the Mississippi River. The Upper Rum River WMO encompasses all or part of five cities and one township in the northwest corner of Anoka County and functions under a joint powers agreement first adopted in 1991 among these municipalities. Land use within the district is diverse with about one-fourth being used for each of the following functions: agricultural, forest, and wetlands. Less than 10 percent of the land is urban. The district has 36 lakes and 4 main rivers/streams. About 40 percent of the WMO's area is drained by ditches constructed nearly 100 years ago.

While the Upper Rum River WMO currently does not have as many pressing watershed management issues as some other areas of the state, officials from the state and Metropolitan Council believe that water quality issues will intensify as this rapidly developing area grows. The area served by the WMO already has at least three impaired waters, including Crooked Brook. More comprehensive monitoring in the area may reveal additional impairments.

The WMO has a relatively simple operation. It has no staff and reported spending $20,000 in 2005 with most of these funds being used to hire a consultant to develop a new management plan. The work of the organization is carried out by its board, which takes a passive approach to managing its portion of the Rum River watershed. Its philosophy is that it prepares a watershed management plan that guides the activities of the municipalities that make up the joint powers organization. While the WMO oversees and coordinates, the municipalities are responsible for actually addressing the watershed management issues. The WMO has contracted with the Anoka Conservation District to provide limited water monitoring, spending less than $2,000 per year between 2001 and 2005.

However, the WMO has struggled to fulfill its mission. Its current plan, which was written in 1997, states that it will "review local water management plans [developed by municipalities] and evaluate their consistency with the [WMO's] watershed [management] plan."[1] In fact, under state statute, WMOs are expected to review and then approve or disprove the water management plans developed by their municipalities.[2] However, our review of the WMO's minutes and other documents from 2003 through 2006 revealed that the WMO has not performed

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[1] Short Elliott Hendrickson Inc., *Upper Rum River Watershed Management Organization, Watershed Management Plan* (May 1997), 62.

[2] *Minnesota Statutes* (2006), 103B.235, subd. 3.

this task. We found only one reference to a review of a municipal water management plan in the minutes. During the May 2, 2006 WMO board meeting, responsibility for reviewing an update to East Bethel's water management plan was assigned to a board member. The board member was supposed to provide comments concerning the plan at the next WMO meeting, with final comments due to the city by June 28, 2006. However, minutes from later meetings revealed no comments or discussion.[3] In addition, East Bethel city staff told us that they never received any comments.[4] Furthermore, the City of Ham Lake revised its water management plan during the 2003 to 2006 period and the WMO minutes do not reveal any discussion or review.

According to its 1997 management plan, the WMO is also supposed to oversee the water-related activities of its communities. To facilitate oversight, the plan states that the WMO will maintain open communication and coordination with all governments active in the watershed.[5] However, there is almost no discussion of city and township issues in the WMO's minutes. In addition, while all of the WMO's board members are elected municipal officials, other city and township representatives almost never attend the WMO meetings.[6] The WMO's minutes indicate that the organization spent most of its time in the last few years working on the new management plan. The WMO appears to have spent little time overseeing and coordinating the activities of the municipalities.

The Upper Rum River WMO seems reluctant to fulfill its oversight and coordinating responsibilities. As of late 2006, the WMO was finalizing its new watershed management plan, and this draft plan had been heavily criticized by several state agencies and Metropolitan Council. Under state statute, BWSR, PCA, DNR, Agriculture, Health, and the Metropolitan Council are required to review each WMO's management plan.[7] In its April 2006 review of the draft plan, the Metropolitan Council stated that if the Upper Rum River WMO wishes to keep regulation at the local level, the WMO needs to work more closely and cooperatively with communities within the watershed to ensure adequate local plans and regulations. Specifically, the Metropolitan Council's review said that the WMO's proposed plan does not provide sufficient guidance for the development of municipal water management plans or consequences if those plans are inadequate or not implemented.[8]

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[3] We reviewed the minutes from June and August. There were no WMO board meetings for July, September, or October.

[4] According to the board chair, the WMO considered the plan review to be a low priority because the WMO was in the process of revising its own plan. State law (*Minnesota Statutes* 2006, 103B.235) requires all member municipalities to revise their plans after a WMO's plan has been approved.

[5] Short Elliott Hendrickson Inc., *Upper Rum River Plan*, 54 and 62.

[6] The board members are elected officials who are appointed by their cities and township to also serve on the WMO board. Under *Minnesota Statutes* 2006, 103B.227, subd. 2, city and township employees are not allowed to serve on the WMO board.

[7] *Minnesota Statutes* 2006, 103B.205, subd. 10a, defines the "state review agencies" that work with the Metropolitan Council and Board of Water and Soil Resources to review the plan as described in *Minnesota Statutes* 2006, 103B.231, subd. 8.

[8] The September 2006 review by the Board of Water and Soil Resources also criticized the plan's failure to identify standards and policies that would guide member communities' plans.

The WMO's proposed plan has also been criticized for proposing a small budget. In its review, the Metropolitan Council stated, "implementation of a proactive watershed management plan can not be achieved with an annual budget of $7,500."[9] Comments from BWSR noted that "the proposed annual budget of $7,500 is less than 10% of the budget of other comparable outer-ring WMOs with recently approved plans."[10] With little money, the WMO has no staff and few, if any, technical resources that would help it review the water management plans and reports from the municipalities. The WMO board has even recognized that finances limit its ability to monitor local activity. The WMO's minutes from its December 7, 2004 meeting state "It would be ideal to implement some type of process to make sure that the [WMO's] Plan is adhered to [by the municipalities]. Unfortunately, there is no money available to implement such a process. The public is relied upon to report any concerns regarding water issues."

[9] William Moore, Metropolitan Council, memorandum to Randy Bettinger, Upper Rum River Water Management Organization Board Chair, regarding "Draft Comprehensive Watershed Management Plan, February 2006, Referral File No. 19709-1," April 20, 2006. Table V-4 of the draft plan includes a yearly budget of $6,500 to $17,000 for each of the next three years. The budget increases substantially in 2010 to reflect a groundwater capacity study and then drops back to $14,000 in 2011 and just over $9,000 for the years 2012 to 2017.

[10] Les Lemm, Board of Water and Soil Resources, memorandum to Todd Hubmer, WSB & Associates, untitled, April 24, 2006.

Comfort Lake – Forest Lake Watershed District

Appendix A6

The Comfort Lake – Forest Lake Watershed District is the only watershed district in the state that encompasses both metropolitan and outstate counties. The City of Forest Lake and the townships of Forest Lake and New Scandia first organized the area as the Forest Lake WMO in 1983. In 1998, citizens concerned about water quality and an abandoned ditch petitioned for a watershed district to replace the WMO and for the service area to be expanded to include the Comfort Lake area of Chisago County. This expansion added Chisago and Wyoming townships and the City of Wyoming. Of the district's 47 square miles, just over 60 percent lie within Washington County. In 2005, the district spent $244,000 on watershed management activities.

Land use in the district is diverse with less than 20 percent of the land classified as urban, just under 30 percent as agricultural, 25 percent as forested, and about 16 percent as wetlands. According to people we interviewed, the area is undergoing rapid urbanization, and these percentages are likely changing. There are numerous lakes in the district as well as many streams that ultimately flow into the St. Croix River, which is designated as a wild and scenic river. According to PCA data, several lakes in the district, including Comfort, Forest, and Bone, are impaired.

The Comfort Lake – Forest Lake Watershed District has been slow to initiate projects (other than studies), regulations, and educational activities. For example, according to the district's 2007 budget, the district will start its first major projects in 2007. Yet, according to the district's 2001 plan, it was supposed to have started water quality projects to clean up Comfort Lake back in 2004. Although we do not have a standard for how quickly a district should move ahead with projects, the district has taken a considerable amount of time. The district was created back in 1999. Furthermore, during our interviews, state and local officials reported that the district has been slow to implement projects compared with similar entities.

The district's 2001 plan also states that the district expected to develop rules and permits in 2002, which it has not done. Comfort Lake – Forest Lake is the only watershed district in the Twin Cities metropolitan area that does not have any rules regulating activities that affect water quality and quantity.[1] In fact, state

[1] All the other districts have formal rules except the Lower Minnesota River Watershed District. However, this district has requirements that are similar to rules. It requires certain activities, such as residential developments that exceed five acres, to go through a comment-and-review process. "Lower Minnesota River Watershed District Project Review Requirements," http://www.watersheddistrict.org/pdf/project%20requirements.pdf, accessed December 3, 2006.

law directs watershed districts to develop rules with only few exceptions.[2] We were given various explanations for the district's lack of rules and permits. The chair of the district's board told us that he questions the wisdom of spending money, possibly $30,000 or more, to develop rules that some say would duplicate PCA rules. Yet, PCA staff told us that they need a proactive local regulator because the state has limited enforcement resources.

According to the district's attorney, a lack of high-quality analyses that assess the conditions of the watershed have prevented the district from moving forward with projects and regulatory activities. The district needs these assessments to identify areas requiring regulatory attention and potential projects. As a result of these assessment needs, the district has focused its efforts on collecting data and preparing studies. The district has contracted for water monitoring each year, worked with the counties to develop topographic data, completed a study on floodplain delineation in 2005, and has recently contracted with a consultant to develop a water quality model for the watershed.

While good assessments are important, the district has taken over seven years to move beyond the assessment phase of its operations. Given the district's demonstrated water problems, such as its impaired waters, this slow progress is a concern that should have been monitored by the state. However, as we discuss in Chapter 3, BWSR has not systematically monitored the activities of watershed districts or established performance standards and expectations for them.

The district has also had a limited education program. For example, according to the district's 2001 management plan, the district will continually provide public education and outreach programs, including newsletters, fact sheets, and flyers. Except for a few presentations to local government, the district has done little to educate the public.[3]

Furthermore, the district has had administrative problems. In 2005, the district applied for and received a $76,570 clean water grant from the EPA but ended up rejecting the grant. The district would have used the funds to determine the sources of the pollution that have resulted in Comfort Lake becoming impaired. This information would have helped identify possible water quality projects. After reviewing district minutes and EPA records and speaking with several observers, we were unable to determine the exact reasons that the district rejected the grant. We were told that the district had concerns about project costs and conditions being attached to the grant. This decision means that, rather than using federal funds, the district must use local levy dollars to carry out its diagnostic work. In addition, funding for another Minnesota study may have been lost. PCA ranked the district's application second among five Minnesota proposals submitted to EPA. According to the grant's RFP (request-for-proposals), EPA gave priority to projects supported by each state's water quality agency, which is the PCA in Minnesota. Since EPA only funded three

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[2] The general requirement is in *Minnesota Statutes* 2006, 103D.341, subd. 1. One exception is in *Minnesota Statutes* 2006, 103D.335, subd 19, which addresses open space, greenbelt, and floodplain regulation.

[3] There have been opportunities to meet this goal. In 2006, Washington County created a water educator position that is jointly funded by watershed districts and a few of the county's other units of local government. The Comfort Lake – Forest Lake Watershed District was the only watershed district without its own educator that declined to participate.

Minnesota projects, it is possible one of the unfunded proposals would have received a grant if PCA had supported another project.

Critics have also raised concerns about the high fees that the district pays for administrative services. Through 2006, the district had no staff and contracted for administrative, legal, and engineering services. The district's attorney provided most of the administrative services, including official records of meetings, communication, annual reports, and budget preparation. In 2005, the district spent nearly $40,000 on official records. The district also spent nearly $8,000 on budget preparation and a 12-page annual report. The fees charged by the attorney and his staff for these administrative services account for some of these large costs. The attorney charged $150 per hour for his time, which included preparing meeting minutes. The attorney's assistant billed $120 per hour for clerical tasks, such as preparing correspondence and filing documents with BWSR. In 2006, the attorney increased his fees for administrative services. The attorney charged the district $225 per hour, and the administrative assistant continued to charge $120 per hour. Hourly rates paid by several nearby local water management entities for administrative tasks, such as compiling minutes and preparing annual reports, ranged from $35 to $60 per hour.

The district is in the process of changing its operations. In 2007, the district will have two new board members (out of five managers on the district board) and plans to establish a local office and hire a full-time administrator by the beginning of the year. While the district will spend more money to employ a full-time administrator than it paid its attorney to carry out administrative tasks on a part-time basis, the administrator will provide more services than the attorney, such as establishing a local office, providing constituent services, applying for grants, administering rules (when developed), and carrying out other district activities.

Hennepin Conservation District

Appendix A7

The Hennepin Conservation District, the SWCD for the state's most populous county, was essentially dismantled in the winter of 2003. Because of internal turmoil, the Hennepin County Board withdrew all of its funding from the district in a vote on February 18, 2003, and voted to assume most of the district's functions in a separate vote later that spring. Though the conservation district still exists, it is in the process of turning over its few remaining functions to the county and the district will eventually pass all the funding it receives from BWSR to the county.[1] The primary reason for the district's continued existence is that under state law, BWSR-distributed cost-share conservation funds must be directed through SWCDs. If the district were to become entirely defunct, Hennepin County landowners would be unable to access this source of funding.

This turn of events represented a departure from the organization's previous successes. In our discussions with state agency officials, they described the district as it once existed as a "flagship" SWCD and "one of the best" in the state. In addition to the standard SWCD role of working with local landowners, district employees provided extensive technical services to cities and WMOs, especially in the less developed western part of the county. The district was also a leader in groundwater modeling work and played an important role in environmental education efforts. One measure of the district's success was the response by other local entities when Hennepin County withdrew its funding—at least fourteen cities and townships, six WMOs, and five federal and state agencies contacted the county to urge it to provide replacement services.

By nearly all accounts, the district's problems came about as the result of infighting on the district's board. In November 2000, county voters elected to the board a former district employee who had been fired and who had subsequently engaged the district in a legal battle over her dismissal. This new board member challenged the legality of some district actions and the honesty of some of its employees. Board meetings became contentious. The other members of the board brought two lawsuits against the dissenting board member in July 2001, charging that she had publicly disparaged the district and inundated district staff with requests for records and files under the Data Practices Act. She countersued.

As the turmoil on the board worsened, there were also concerns that the organization would lose its capabilities through attrition of its experienced staff. According to the district's former manager, he personally initiated conversations

[1] The conservation district's board will still need to approve the distribution of cost-share conservation funding it receives from BWSR because BWSR has determined that responsibility cannot be delegated under *Minnesota Statutes* 2006, 103C.501.

with Hennepin County administrators and commissioners regarding the possibility of the county absorbing the district's functions. Meanwhile, Hennepin County and the district sought special legislation to make Hennepin Conservation District the only SWCD in the state with an appointed board. In another development, a constituent dissatisfied with a district determination regarding wetlands on his property collected enough signatures to force a countywide referendum on the district's dissolution.

The legislation did not pass and the referendum failed in the November 2002 election. However, in that same election, voters replaced two of the existing board members. Another two board members resigned shortly after the election, leaving the dissenting board member as the sole holdover from the previous board. In its first meeting with its new membership, the district's board fired its legal counsel and made the dissenting board member its (1) media and public affairs officer and (2) representative on labor issues. The Hennepin County Board defunded the district shortly after this meeting and began a process of consultation with stakeholders to determine which of the district's functions it should assume. All of the district's previous staff left the district in the wake of the defunding decision; most of them took positions carrying out similar responsibilities with Hennepin County Environmental Services. After the defunding vote, the dissenting board member resigned as well.

The conservation district's board was left with a mission but without a working organization to fulfill it. It was able to draw upon cash reserves and BWSR grant funding to hire a single staff person. However, the district sold or gave away many of its assets and retrenched to a very low level of activity. It distributed some cost-share conservation funds received through BWSR and worked on some wetlands issues. A review of the organization's minutes for 2003 and 2004 suggests that the vast majority of the board's time was devoted to internal administrative matters.

The organization muddled along until attrition and the November 2004 election produced another almost complete turnover of the board membership. The new chair, a leadership trainer who conducts workshops for SWCD board members around the state, led the new board in a series of discussions to examine its options. The board concluded that it could best serve the residents of the county by serving primarily as an advisory and advocacy committee, and it reached an agreement with Hennepin County in November 2006 to have county staff (essentially, the district's pre-2003 personnel, now under county auspices) carry out all of the functions of the district.[2]

The circumstances surrounding the struggles of the Hennepin Conservation District were rather unusual, and considerable caution should be used when attempting to draw lessons from its experience. However, this case study draws attention to the reluctance of BWSR to address failures at the local level. Even after the county had concluded that the district was dysfunctional and withdrew all of its funding, BWSR continued to provide general services grants and cost-share grants to the district. BWSR administrators asserted to us that oversight of local districts is not their role.

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[2] As provided for under *Minnesota Statutes* 2005, 103C.401 subd. 2b.

A further implication that may be drawn from this case study is that elected boards do not necessarily improve accountability. Although some people we have spoken with across the state believe that watershed districts would be more accountable if they were elected, the troubles experienced by the Hennepin Conservation District were caused by its elected board. It seems very unlikely that a similar situation would have occurred with an appointed board. Hennepin County has a careful vetting process for its appointed boards—the board reviews qualifications, interviews candidates, and gives consideration to recommendations from city governments.

Minnesota Board of Water & Soil Resources

January 16, 2007

Mr. James R. Nobles
Office of the Legislative Auditor
Centennial Building Room 140
658 Cedar Street
St. Paul, MN 55155

Subject: Report on Watershed Management – Agency Response

Dear Mr. Nobles:

Thank you for the opportunity to review the Office of the Legislative Auditor's (OLA) report on "watershed management." We acknowledge the effort your staff made to understand the nuances of integrating local governance structures with state and federal goals. As Chair of the Board of Water and Soil Resources, I appreciated your statements recognizing this organization's expertise in this field.

The topics raised in the report mention pros and cons associated with potential changes, but usually refrain from offering insight beyond the observation that many issues involve trade-offs. We highlight this not as a criticism, but as the essence of the debate. We agree there is an interesting policy discussion to hold regarding the balance between local autonomy and state oversight. We believe we have struck an appropriate balance given the resources available. I can assure you that our Board will have this discussion once the remainder of the Board is able to view the report.

OLA Recommendation: "The Legislature should require BWSR to provide greater oversight…"

Response: The intensity of oversight the Board can provide is a function of statutory authority, financial resources, and administrative competence. It is within the power of the Board to address administrative competence. The report suggests several mechanisms for improving oversight that can be incorporated into our operations without significant costs to either local governments or the Board. For example, I anticipate the Board will direct staff to examine expanding our oversight functions to provide centralized linkages to local government websites, tabulations of financial data, and assessing deviations from anticipated task schedules contained in local water plans at a minimum.

OLA Recommendation: "The Legislature should give BWSR a wider range of tools to encourage and compel consistently low-performing local entities to improve their operations and performance."

Response: The Board has used its existing authorities to withhold grants, penalize and reward SWCDs based on cost-share utilization rates, terminate WDs, eliminate nine metropolitan WMOs, perform local government assessments, and institute fines for violations discovered in cost-share audits. However, the degree of oversight directed in current law is largely tied to those entities receiving grant money from the State via contractual agreements. As such, entities such as SWCDs receive more scrutiny than those who are more self-sufficient. We do not dispute that discretionary oversight functions once performed by the Board have been reduced as the result of the demands of the Wetland Conservation Act and recent budgetary reductions. With limited staff hours available, the Board and our executive director have set priorities based on the generally high level of performance we see in our interactions with local government units. You are correct in your observance that financial resources to take on additional statutory duties would likely be necessary.

OLA Recommendation: "…the Legislature should require that (the) executive director be appointed by the Governor and confirmed by the Senate… In addition, the board should become an advisory commission."

Response: Such a radical change should have a compelling body of evidence driving it. We do not see the evidence in the report and—more importantly—we have not seen evidence that the 20-year structure of the board is broken, unresponsive to the Legislature, or unresponsive to the Administration.

In 1987, BWSR was formed by combining *three* separate boards into one as an outgrowth of one of the State's periodic examinations of water governance. The consolidation was intended not only to promote cost-effective operations, but also to establish the one forum where local perspectives were regularly debated, voted on, and integrated with state operations. In an era where federal and state governments have pushed many functions down to local entities, this function is critical. Local governments do not have anything similar at the Pollution Control Agency, the Departments of Natural Resources, Agriculture, or Health, or at the Environmental Quality Board.

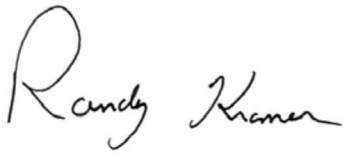
Most of the improvements that will be made on the landscape to address impaired waters will be as a result of actions taken by local governments that have been created at the behest of local taxpayers. Keeping this network of local entities engaged with the State on a partnership basis optimizes the State's ability to meet its clean water goals. The recent process to hire a new executive director reinforced this for me. The candidates were intensely scrutinized by State and local interests represented on our Board and we kept the Administration apprised of our progress. This is not the time to relegate local government opinion to advisory status.

OLA Recommendation: "The Legislature should ensure that BWSR has adequate resources to perform its new oversight responsibilities."

Response: Minnesota developed a flexible system of local water governance because it had to. The irregular distribution of water resources coupled with the non-uniform density of public lands, tax base, and land cover requires that a one-size-fits-all approach be rejected. The oversight BWSR provides starts with ensuring legal minimums are monitored and then quickly branches off into judgments about what is appropriate for a given locality and whether the process followed in reaching local decisions was sound—even if it is not the same decision we ourselves would have made. There *are* additional oversight functions that BWSR could devise in consultation with the Legislature, Executive Branch, and local governments. We hope that process to devise them recognizes this fact and the costs of conducting the oversight to the State and to local entities is considered.

The Board recognizes the importance of the independent review that the OLA provides. While we do not agree with all of the recommendations in the report, we commend the effort and professionalism of your staff. We hope the report prompts a productive dialogue between the Legislative and Executive Branches regarding the optimal systems for accomplishing State goals through the efforts of our local governments.

Sincerely,



Randy Kramer, Chair
Minnesota Board of Water and Soil Resources

Bemidji
701 Minnesota Avenue
Suite 234
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
1601 Minnesota Drive
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
1004 Frontier Trail
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
2300 Silver Creek
Road N.E.
Rochester, MN 55906
phone (507) 281-7797
fax (507) 285-7144

Saint Paul
520 Lafayette Road N.
Saint Paul, MN 55155
phone (651) 296-3767
fax (651) 297-5615

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