PARTNERSHIPS IN WATER MANAGEMENT: MINNESOTA'S CHALLENGE OF THE 1980s

Summary of the "SPECIAL STUDY ON LOCAL WATER MANAGEMENT," a report to the Legislative Commission on Minnesota Resources and Governor Albert H. Quie.

Minnesota Water Planning Board
June 1982

THE LEGISLATIVE DIRECTIVE

Laws 1980, Chapter 548 directed the Water Planning Board ". . . to prepare a report to the Governor . . . and the Legislature from which appropriate legislation may be developed . . . which will define the role of local units of government in the implementation of the framework plan."

A separate section of the Act requires the Board to consider ". . . possible clarifications and improvements in authorities and relationships of local water management agencies."

The Board was directed to complete the report by January 1, 1981. The "Special Study on Local Water Management" fulfilled this charge.

THE WATER PLANNING BOARD

The Water Planning Board is an independent agency in the Executive Branch of Minnesota state government. The Board is composed of the commissioners of the Departments of Agriculture, Health, and Natural Resources; the executive director of the Pollution Control Agency; the chairman of the Soil and Water Conservation Board; three citizen members appointed by the Governor; and the chairman who serves at the discretion of the Governor. Currently, Paul Toren, Don Ogaard, and Al Payne serve as citizen members and Thomas Kalitowski as chairman.

The Board's staff at the time of the study included seven professionals, each of whom contributed to the "Special Study on Local Water Management." John Wells, senior hydrologist, served as project manager for the study.

WATER IS A PROBLEM!

Minnesotans take water for granted. We assume that there is an endless supply of water, that our water is always clean and safe, and that we are adequately protected against the uncertainties of nature. We must understand that:

* Nearly all of the water we get is from precipitation, and it all runs out of the state.
* Our precipitation cannot be considered bountiful when large areas of the state are semiarid and two-thirds of the rivers in western Minnesota have recorded low flows of zero.
* In its 680-mile trip through Minnesota, the Mississippi River is assaulted by millions of tons of eroded soil, tens of millions of pounds of nitrogen and phosphorous, and thousands of tons of heavy metals, chlorides, and chemicals that remove oxygen from the water.
* While municipal drinking water supplies are almost always safe, individual domestic supply systems are not.
* Droughts are not exceptions, but a part of the normal climatic pattern; and floods cause loss of life and $60 million to $70 million in damage in an average year.

Think of Minnesota's water management problems in this way: When Minnesota became a territory, only about 10,000 settlers and about 25,000 Indians occupied the land. Since then, our population has increased 115 times to over four million people. The total amount of water has not changed in all these years, but the uses and abuses of the resource have increased dramatically.

The strain of more people and modern practices have caused water management problems to emerge in every area of the state. The existence of these problems—and our frustrations in dealing with them—is the major reason for studying local water management. In the examples below, three regions are briefly examined to highlight the range of problems confronting Minnesota.

Massive streambank erosion along Battle Creek in St. Paul.

THE METROPOLITAN REGION

Etter Creek Streambank Erosion. "What's left of Etter will be auctioned" was a 1981 headline in the *St. Paul Pioneer Press.* The accompanying article tells the story of a small community in Dakota County which was literally washed away. Seven of the 11 families in Etter had to be relocated. Their homes were either moved, demolished, or donated to a fire department for training. The culprit was a combination of improper management practices and naturally erosive soils which have changed a creek running 10 feet wide into one which now lies in a bed up to 200 feet wide and 100 feet deep.

Battle Creek Flooding and Erosion. A combination of natural forces and inadequate stormwater management has caused extensive flooding and erosion along Battle Creek in Ramsey and Washington Counties. In 1965, flooding took the lives of two young boys and more recently Battle Creek Park, a major recreational facility, has had to be closed. Storm sewer outlets and culverts have been damaged, sanitary sewers crossing the creek have been exposed and broken, interceptor sewers paralleling the creek have been threatened, and public and private property has been damaged.

SOUTHEASTERN MINNESOTA

Regional Ground Water Quality Concerns. A large area in southeastern Minnesota is covered with a near-surface layer of bedrock called Karst. This region has been described as a limestone sponge topped with a very thin layer of soil. Ground water is particularly susceptible to contamination in Karst areas because the topography is characterized by cracks, fissures and sinkholes. The thin soils in these areas are unable to provide adequate barriers between contaminants and the underground water supply. Ground water quality studies conducted by the Department of Health have found widespread contamination of private well water supplies. Contaminated water supplies have been linked to diarrheal illness in young children and to increased calf mortality. The Department of Health warns of the very real threat of epidemic disease in this region.

Rochester Flooding. The Zumbro River, Cascade Creek, Bear Creek, and Silver Creek all converge within the city limits of Rochester. Almost one-third of the city lies within the floodplains of the four streams. Flooding caused by severe thunderstorms during the summer of 1978 resulted in five deaths and over $50 million in damages.

NORTHWESTERN MINNESOTA

Local Surface Water Supply Shortages. In the span of one year (1975-1976), citizens in the upper portion of the Red River Valley experienced a major flood (close to a 50-year frequency), and a drought during which little or no water flowed in the Red River. Moorhead came close to having a water supply emergency. Low flows in the Otter Tail River forced Breckenridge and Fergus Falls to seek alternative sources of water. More recently, Crookston has had to consider alternatives to its surface water sources because of potential quantity and quality problems.

Red River Flooding. In an average year, $16 million in flood damages are estimated to occur in the Red River Valley. Economic losses in the basin were about $44 million in 1979 with over one million acres of land flooded.

The real tragedy of nearly all of these problems is that they could have been avoided or their adverse effects lessened. Adequate flood-proofing of buildings would have reduced flood damages in Rochester. Improved flood warning systems might have saved lives. Attention to sound agricultural practices and land use planning might have saved Etter.

Upstream-downstream conflicts still persist between those concerned with drainage and those interested in protection from floods. In some areas, dams have been built to retard water while drainage to accelerate removal of surface water continues.

Local officials and citizens trying to resolve problems are forced to cast around for solutions because responsibilities are fragmented and coordination is often poor or nonexistent.

Unsuccessful rescue attempts at Rochester during 1978 flooding.

WE NEED TO CHANGE

The existing approach to local water management has sometimes worked well. But the new challenges Minnesota will face to protect, manage and develop its water resources in the wake of tight fiscal constraints indicate a need for change. Based upon the lessons learned from current practices and the views of state and local leaders, the Water Planning Board pinpointed seven reasons for improvement:

* Greater local control and simplification of government are warranted. The Legislature has criticized Minnesota's current approach as being "so large and complicated that few, if any, governmental officials and citizens have a clear understanding of the entire system." Loss of local control may be the major effect of an approach not understandable to the public.

* Better financial and technical capabilities are required at the local level. The Water Planning Board's survey of local officials confirmed this need. With new responsibility at the local level will come increased financial and technical requirements. The state must help meet these needs by working with local governments as a partner in addressing water problems.

* No one group is responsible for water at the local level. Water problems do get addressed, but many times only after they reach crisis proportions. A process should be in place to make sure somebody at the local level is working in cooperation with state agencies to prevent and solve water problems before costly solutions and human grief result.

* A comprehensive approach to solving problems is needed—but is often missing. Problems generally have been tackled one at a time. Many times this has resulted in limited solutions which address only the symptom, not the root cause.

* An approach that attracts strong leaders is critical. Citizens may question whether they should become involved when responsibility is so widely divided that no one body can accomplish its goals effectively.

* Local leaders believe change is necessary.

* To support "no change" really means accepting uncoordinated, incremental revisions to an approach based upon reacting to problems rather than working to prevent them. Further, change is occurring and will continue to occur. While such changes may be worthwhile, they need to be considered in a well defined framework of local relationships and authorities. Otherwise, Minnesotans risk losing a manageable government and stronger local control.

Local leaders discuss wetland management issues.

VIEWS OF LOCAL LEADERS

If effective change is to be achieved, the support and action of local leaders is essential. The Water Planning Board surveyed nearly 500 local leaders to determine what they consider as their proper role in local water and related land resources management. Those questioned included county commissioners, mayors, township officials, watershed district managers, soil and water conservation district supervisors, regional development commission officials, and special interest group leaders. Their responses reveal a vast array of opinions which are crucial in the debate on local management.

* **There are generally positive relations among existing units of government.** At worst, eight of 10 respondents still characterized their relationships with another unit of government (i.e., watershed districts) as "good" or "excellent."

* **Overlapping authorities create problems in water and related land resources management.** At least one of four respondents with an opinion had encountered difficulties as a result of overlapping authorities in each of the 10 subject areas (e.g., drainage, flood control, erosion control) about which they were asked.

* **Change is needed to prevent problems that result from overlapping authorities.** Local leaders generally ranked "formal agreements" or "improved communications" as the best methods of avoiding problems caused by overlapping authorities. The option of "no change" ranked last or next to last among each group questioned.

* **Local officials are not united on who should provide the necessary coordination at the local level in water and related land resources management.** When sample sizes are "weighted" to give approximately equal-sized samples, counties and a "combination" of units generally appear among the top four choices of local leaders to carry out management responsibilities (although in certain cases, soil and water conservation districts or state agencies are preferred).

* **Financial aid and staff assistance are needed to increase local involvement in water planning and management.** The majority of those surveyed ranked financial assistance as their greatest need and general planning and technical assistance as second priorities.

* **Local leaders believe that governing bodies organized consistent with hydrologic boundaries are better able to make water-related decisions than units organized along political lines.** Six out of 10 respondents with an opinion agreed.

* **The need for better communication and coordination still exists.** Only 35 percent of the respondents understand the goals that the state has established for water and related land resources management. Only 19 percent of the cities understand the goals of soil and water conservation districts in water management. Lack of coordination is seen as the greatest barrier to effective management by interest groups and as the second greatest barrier by watershed districts and regional development commissions.

* **Generally, strong support is present for water and related land resources planning at the local level.** Most local officials support development of water and related land resources plans as an element of comprehensive planning. Almost all said they are optimistic that planning improves coordination of local actions, influences state management decisions, increases citizen participation in decision-making, and paves the way for local governments being granted permitting authority.

RECOMMENDED ACTION

Strengthening local control and simplifying government are at the heart of the Water Planning Board's recommendations. The Board holds that changes are needed to increase local capability to meet new challenges in water and related land resources management. With federal budget cuts and "belt tightening" by the state, the demands of managing our water resources will now, more than ever, require local involvement. At the same time, the state of Minnesota must not abandon its responsibilities for stewardship of the state's water and related land resources, and instead must forge a true local-state partnership to meet the challenges of the 1980s.

Nine actions are recommended to help Minnesota meet the challenges of tomorrow and to fashion effective local leadership which is coordinated with state goals in water and related land resources management.

Erosion damage as shown above can be prevented with careful management of soil and water resources.

1. GENERAL PURPOSE GOVERNMENTS, PARTICULARLY COUNTIES, SHOULD BE DESIGNATED AS THE FUNDAMENTAL DECISION MAKERS AT THE LOCAL LEVEL.

Water resource issues cannot be divorced from land management decisions. Since general purpose governments have broad powers in land use management, they should be given similar powers in water management if water and related land use decisions are to be fully integrated.

Counties should have the central responsibility under this approach, with cities remaining independent on problems limited to city boundaries. Township government should be subordinate to county authorities. Formal agreements should be developed between the county and other local governments to spell out how all local units and the county will work together in solving local water problems.

2. COUNTIES SHOULD BE GIVEN THE BASIC RESPONSIBILITIES AND AUTHORITIES FOR DEVELOPING AND IMPLEMENTING WATER PLANS.

County water planning is the key to local control. Ongoing planning is vital to guide management programs and to heighten awareness of resource problems. With a commitment by counties to planning, most water problems can be identified at an early stage when solutions are likely to be simple and inexpensive, and new problems can be avoided or minimized.

To help in plan implementation, the Board recommends that counties be given the powers of watershed districts under Minnesota Statutes, Chapter 112. Counties should also be required to operate under the water management principles which underlie the Watershed Act. That is, they should be required to assess the impacts of all actions on the watershed, or other appropriate hydrologic unit.

3. INCENTIVES FOR PLAN COMPLETION SHOULD BE PROVIDED AND PENALITIES IMPOSED FOR FAILURE TO COMPLETE THIS STEP.

The state should establish a Natural Resources Management Fund to assist counties with their planning duties. The fund should also aid counties in carrying out mandated programs, such as the Wild and Scenic Rivers program, once plans have been approved.

Counties should be eligible to administer appropriate state permit programs provided plans have been approved by the state coordinating body. Counties with approved plans should also become eligible to receive state grants for programs such as flood reduction aids and erosion control cost-sharing.

Counties that fail to meet planning requirements should not be eligible for state grants or for administration of state permit programs. Further, the use of certain project development powers by counties, watershed districts, and soil and water conservation districts should be suspended if deadlines for plan completion are missed. (Exceptions to this penalty should be allowed in limited cases.)

4. COUNTIES SHOULD PROVIDE FINANCIAL SUPPORT FOR WATER AND RELATED LAND RESOURCES MANAGEMENT.

Increased local responsibility will require additional financial and technical support. A dedicated fund for water and related land resources management should be created in each county. The fund would augment the resources of special purpose districts and provide matching dollars for the state Natural Resources Management Fund proposed above.

5. COUNTY WATER PLANNING AND MANAGEMENT SHOULD BE BASED ON HYDROLOGIC UNITS.

The watershed is most directly affected by nearly every land and water use decision. Therefore, a management plan with focus and authorities linked to watershed units is essential. County water planning and management actions should be keyed to hydrologic boundaries consistent with the 1979 "State of Minnesota Watershed Boundaries" map. The 81 major watershed units would frequently provide the best focus, although other sized units might be appropriate in evaluating projects and plans. Where ground water issues are important, counties should evaluate proposals based upon their effects on aquifer systems.

6. SOIL AND WATER CONSERVATION DISTRICTS AND WATERSHED DISTRICTS SHOULD BE MORE DIRECTLY TIED TO COUNTIES.

Each county should be given the authority to approve the plans and programs of the districts based upon their consistency with the county plan. The programs and plans of intercounty watershed districts should be consistent with the plans of each of the counties that they intersect.

While the county would become the focus for local management activities, it must tap all the expertise available in making sure local efforts work toward the same goals. In fact, many counties may choose to meet their responsibilities by working through the soil and water conservation district or watershed district. However, each district will have to demonstrate to affected counties how it can be most useful.

7. WHERE WATER PROBLEMS CROSS COUNTY BOUNDARIES, THE OPTIONS OF FORMING WATERSHED DISTRICTS OR JOINT POWERS AGREEMENTS SHOULD REMAIN OPEN.

Counties should continue to have the authority to petition for the establishment of watershed districts. They should also be given the power to petition for the termination of watershed districts. This power should be subject to unanimous agreement among the counties that they will use county authorities to accomplish the purposes of the Minnesota Watershed Act.

Where resource problems cross city boundaries, joint powers agreements should be used, including the county as a partner. But if solutions cannot be agreed upon under a joint powers arrangement, the county should have the authority to adopt a solution consistent with its approved plan.

8. REGIONAL COMMISSIONS MAY SERVE AS THE PLANNING ADVISOR AND SOURCE OF ASSISTANCE TO COUNTIES IN CARRYING OUT PLANNING DUTIES.

Regional commissions, where they exist, should provide planning assistance to local government in water management. They should continue to work for intergovernmental cooperation. The commissions should review local plans and provide advisory comments to the state coordinating body for its use in approving plans.

Because of the unique problems in the metropolitan area, an approach giving greater emphasis to the duties of watershed districts, cities and urban towns should be pursued. (Note: Major legislation was recently enacted calling for development of watershed-oriented plans and programs in the seven-county metropolitan area. See *Laws 1982,* Chapter 509).

9. A STATE WATER COORDINATING BODY SHOULD SET GUIDELINES, APPROVE COUNTY PLANS, AND RESOLVE CONFLICTS.

A water resources coordinating body should be created to guide a statewide water planning process and to coordinate state and local initiatives. Because of the central role given to counties, they should be members of the coordinating body. This body should develop guidelines for county plans and approve county plans which satisfy the guidelines. It should administer the Natural Resources Management Fund to help counties meet their new duties. It should also provide technical advice and staff aid to counties developing plans. In addition, the coordinating body should coordinate state regulatory policies to maintain consistency among agency programs. The coordinating body is needed to give local governments, particularly counties, a stronger voice in state government and to make the local-state partnership work in water management.

Snake River canoe trail: a resource that deserves protection.

THE DEBATE

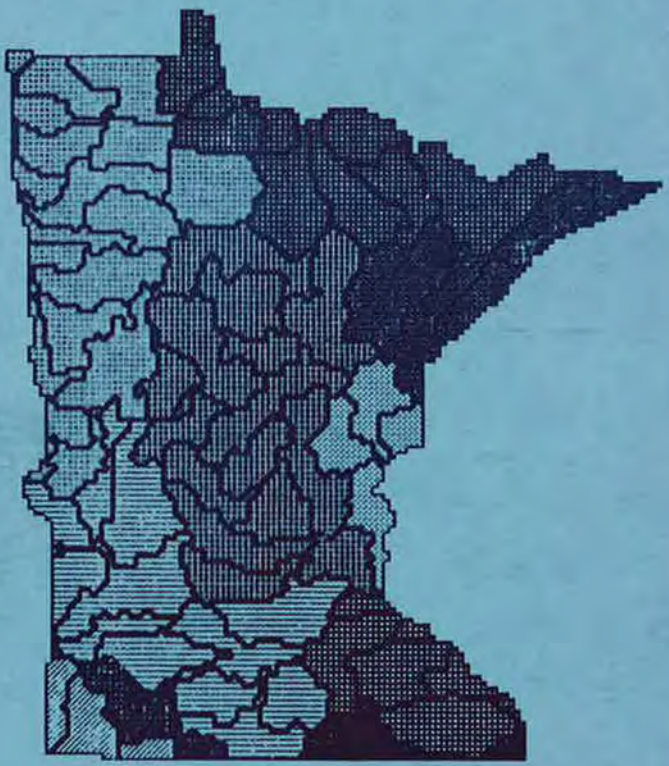
While it is clear that there is no magical combination, no single answer, the Water Planning Board believes its recommendations provide positive, constructive solutions concerning the role of local government in water and related land resources management. A partnership between capable local and state governments would provide the new focus needed to anticipate and solve problems before they get out of hand. The "Special Study on Local Water Management" is intended to capture the attention of Minnesotans and stimulate debate on the complex issues of water and related land resources management.

Much has happened since the completion of the "Special Study." The "Comprehensive Local Water Management Act" (S.F. 1452/H.F. 1540) was introduced late in the 1981 session of the Legislature and debated in 1982. The 1982 Legislature adopted a surface water planning act for the seven-county metropolitan area *(Laws 1982,* Chapter 509). This law is a positive step in local water planning. And it has raised questions which will likely fuel further debate of a statewide approach.

Questions which deserve debate are:

* Can Minnesota afford to delay local comprehensive planning and management outside the metropolitan area any longer?
* Is the county in fact, the best choice to coordinate local water-related plans and programs throughout the state? If not, who is?
* Who should be the coordinating body for review of plans at the state level, and what powers should it have?
* How can planning be financed in light of local need, and state, local and federal budget woes?
* How can the implementation of local plans be assured and how can they be financed?

Active citizen participation is important. Make your views known. Contact the Water Planning Board for additional information.



MINNESOTA WATER PLANNING BOARD
Room 600, American Center Building
150 East Kellogg Boulevard
St. Paul, Minnesota 55101
(612) 296-1424