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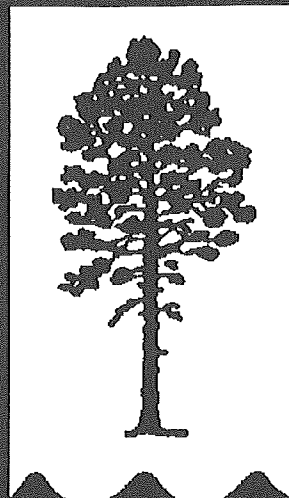
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- Meeting Minnesota's water and waste



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# Meeting Minnesota's Water and Wastewater Needs: Draft Recommendations

Comments Due By June 20, 1996

Minnesota communities are facing extensive and growing water supply and wastewater treatment needs. The costs of improving public facilities between now and the year 2000 could exceed \$1.5 billion; the price for private systems could be even higher. Water and wastewater needs compete with such other high-cost items as education and health care, while federal funds are decreasing and grants are replaced by loan programs.

In anticipation of these needs, the Environmental Quality Board and Minnesota Planning are examining what can be done to prevent and correct water supply and wastewater treatment problems and to prudently fund needs. The draft recommendations in this report are based on information in *Meeting Minnesota's Water and Wastewater Needs: A Working Paper*, discussions with many interests, suggestions from a work group and focus groups, and responses to a questionnaire about water supply and wastewater.

The draft recommendations center on actions to prevent and correct problems. While the need to correct existing problems is significant, preventing problems is equally important, since many costs and environmental problems involving water and wastewater are due to poorly sited residential developments and businesses.

The EQB Water Resources Committee will determine the final recommendations at a meeting July 11, 1996. The recommendations will be a central part of the committee's *1997-99 Water Policy Report* to the Minnesota Legislature, due September 15, 1996.

Readers are encouraged to indicate what recommendations they liked, what they would change and what is missing. Respond to Marilyn Lundberg at the EQB, 658 Cedar St., St. Paul, MN 55155; (612) 296-0676; e-mail, [Marilyn.Lundberg@mnplan.state.mn.us](mailto:Marilyn.Lundberg@mnplan.state.mn.us). The draft recommendations are also available through Minnesota Planning's World Wide Web home page at <http://www.mnplan.state.mn.us>.

## Focus on a Unifying Mission

Individuals, businesses and various levels of government play important roles in water supply and wastewater treatment issues. A common mission would help unify efforts and give participants a way to measure their efforts.

**1 Recommendation:** Use an overall mission to guide water supply and wastewater treatment activities, programs and regulations. The mission would be to:

- Prevent future problems and safeguard water sources through practicing appropriate and effective land management and planning, controlling pollution, adequately maintaining public and private systems and innovatively designing new or expanded systems.
- Reduce water demand and use, wastewater production, use of hazardous substances, toxicity of effluent and needless cost.
- Reclaim water, nutrients and polluting substances from treatment systems.

## Develop Sustainable Guidelines on Water

Legislation passed in Minnesota in 1996 defines sustainable development as development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. The legislation calls for Minnesota Planning to prepare a planning guide and model ordinance for voluntary use by local units of government. This provides a good opportunity to organize and set priorities for water and wastewater needs.

The planning guide should indicate the water and wastewater measures that should be included in local sustainable development plans. To help local government protect water resources, the state should gear its own programs toward aquifers and watersheds. The guidelines should be flexible and dynamic, since water problems may appear suddenly, requiring appropriate actions be taken quickly.

**2 Recommendation:** Guidelines for sustainable development plans should cover water supply and wastewater treatment elements and help strengthen local efforts. The planning guide should:

- Provide guidance on how to coordinate land use changes and economic development within aquifer and watershed protection areas.
- Encourage collaborative arrangements with neighboring jurisdictions and among counties, cities and towns.
- Provide mechanisms to ensure communication occurs between cities and towns within a county and among other neighboring jurisdictions.
- Contain model ordinance components that offer actions to protect water resources such as on-site regulations and conservation measures.

## Include Water in Local Sustainable Development Plans

Local sustainable development plans can be an important vehicle for examining water and wastewater needs as part of a community's overall health. Local government cannot adequately plan for water and wastewater needs without envisioning land use and population changes along with economic, environmental and social conditions and trends.

Currently, planning and coordination requirements differ across Minnesota. Outside the Twin Cities region, local governments are allowed, but not required, to have plans and controls. Only recently in the Twin Cities metropolitan area have comprehensive plans been required to address water supply and other water management issues. Yet planning — as well as coordination, education and research — is instrumental in preventing problems.

**3 Recommendation:** Sustainable development plans should include information about existing and future water and wastewater needs and priorities. Planning by counties, cities and towns should:

- Identify the availability and quality of water as part of a comprehensive assessment of the community's natural resources.
- Report the location, capacity and operating costs of existing water and wastewater facilities and the capital costs of proposed facilities. Where possible, quantify environmental effects.
- Report the number and conditions of private water and wastewater systems to the extent they are understood.
- Include information from local water plans and activities of special purpose units, such as rural water districts, wastewater districts and school districts.
- Develop joint plans with adjoining local units of government in sparsely populated areas to ease the difficulty of water and wastewater planning.
- Delineate growth boundaries with adjoining communities and plan for infrastructure needs.
- Use local authorities, such as feedlot and on-site ordinances, to ensure plans are carried out.

## **Include Water Supply and Wastewater Management in Local Water Plans**

The purpose of local water plans is to identify existing and potential problems and opportunities for the protection, management and development of water and related land resources. Water supply and wastewater management are basic elements that need to be understood to appropriately identify water-related priorities. When a county begins to develop a water plan, local units of government are to report to it existing water and related land resources plans and controls, as well as conflicts that they want examined. The plan is supposed to include information about water and sewer extensions, wastewater discharges and expected changes in public utility services and other areas affecting water resources. However, some cities and special purpose districts choose not to

participate in this process, creating gaps in important water information.

Minnesota Pollution Control Agency has surveyed the wastewater systems for capacity, expansion plans and other needs. A needs survey and assessment of drinking water needs is under way. Water utilities are preparing water supply and contingency plans. The information from these surveys will be available for incorporation in local water plans and sustainable development plans.

**4 Recommendation:** Require water supply and wastewater authorities to provide their plans and strategies for inclusion in local water plans so that local plans cover all aspects of water resource problems and needs.

## **Define Local Communities' Role**

Communities need to explore the best way to provide water and wastewater to their residents. This means examining the options of sharing facilities, using a single water source or treatment plant, having several facilities or dispersing wells throughout the system. Conservation can reduce the need for expanding water and wastewater systems as well as lessen costs for water and wastewater improvements. Protecting water sources reduces the need for water treatment.

**5 Recommendation:** Communities should protect water sources, maintain existing systems and reduce the need for expanding water supply and wastewater treatment systems through collaboration and aggressive conservation efforts, such as installing household water-saving devices, metering water use and correcting infiltration and inflow problems. Local units of government should:

- Enter into collaborative and cooperative arrangements with neighboring jurisdictions to more efficiently solve problems.
- Seek the most cost-effective approaches, including buyouts of nonconforming systems and low-technology solutions such as composting toilets and other innovative alternatives.
- Adopt and enforce local controls, such as feedlot and on-site ordinances, to protect water supplies and ensure the prevention and correction of problems.

## Expand the State's Ability to Correct Problems

The state plays a key role in deciding what corrective actions are necessary and how to carry them out. However, some communities lack the financial resources to correct problems with their wastewater systems. For example, two currently proposed wastewater projects for small communities would cost more than \$20,000 and \$50,000 per household, respectively. High costs delay the correction of pollution problems.

**6 Recommendation:** Hold all communities responsible for complying with laws. The state should:

- Pursue interim solutions for water supply and wastewater treatment problems through compliance agreements.
- Identify and promote lower-cost alternatives for small communities.
- Expand the range of water supply and wastewater funding options for small communities to include such measures as privatization, relocation or installing holding tanks and trucking waste to an existing treatment facility.
- Institute a limited-duration amnesty program under which small communities without adequate wastewater treatment systems can develop interim and long-term solutions.

## Expand Local Communities' Educational Efforts

Education can help build the support needed to safeguard water resources and guarantee wise use of public and private water and wastewater systems. People often do not appropriately value water, since individual water costs generally reflect only treatment and distribution. Water and wastewater costs often are subsidized by other programs. Thus, the connection between use and cost is missing. Due to the good quality of Minnesota's water, many water supply systems do not need to treat the water. Protecting these water sources rather than having to build expensive treatment facilities has significant economic as well

as environmental benefits. This means using public and private systems prudently, a goal that can be furthered through education.

**7 Recommendation:** Local government should advise people about the value of Minnesota's water resources and institute best management practices for the efficient and judicious use of water and wastewater systems. Local governments and service providers should:

- Educate people about the real cost of water and then use water and wastewater rates that reflect costs and are not distorted by general subsidies from other programs.
- Inform citizens about how to maintain private and public water and wastewater systems and why doing so is critical.
- Instruct residents in how to properly use public and private systems, such as in disposing of toxic materials.
- Provide information about the types and purpose of point-of-use water treatment devices.
- Report needs for treatment research to the state.

## Promote State Educational and Research Efforts

The state has a role in providing information about the value of water, its availability and ways to protect it. In many places, water use is increasing while the understanding of aquifer yields and limits is lacking. Research is needed to identify a range of water and wastewater treatment options for some communities. State and local governments need to know if low-cost treatments used elsewhere in the country will work in Minnesota's climate and soil conditions. Information about low-cost or innovative systems that will work needs to be distributed widely.

**8 Recommendation:** The state should develop informational materials about water and wastewater issues and promote research to expand options and improve water management. The state should:

- Identify the extent of aquifers and what rate of use is sustainable.

- Establish water and wastewater demonstrations at state parks and other facilities.
- Provide informational materials about water and wastewater options to elected officials, businesses and others to help decision-making.
- Foster research on the conversion of nonpotable water into a viable source.
- Promote research on the use or disposal of waste from water treatment.
- Encourage research on smaller water treatment systems and wastewater systems for residential, restaurant and commercial/industrial facilities. Pursue technology transfer and ties to research in other states.

## Ensure Cost-Effective Local Choices

Infrastructure financing usually has involved a mix of federal, state, local government and individual resources. Special purpose districts and private service providers also play a role in some cases. Costs for water and wastewater treatment will continue to rise, affecting some users greatly. Individuals and local governments have the prime responsibility for paying for water and wastewater treatment.

**9 Recommendation:** Local governments and other service providers should ensure water and wastewater choices are cost-effective and protect resources by:

- Equalizing differences within communities by providing subsidies directly to low-income households based on their ability to pay.
- Ensuring that costs within communities are allocated based on use.
- Seeking partnerships with private and public sector service providers.
- Assuming responsibility for added costs arising from serving undeveloped areas or from imprudent development choices, such as expanding into places that have water and wastewater service problems.

## Target State Grant and Loan Funding

The state provides some grants and loans for water and wastewater needs through a number of programs. After the sustainable development planning guide is finalized and a process is established for local units of government to develop sustainable development plans, the state should use the funding for water supply and wastewater treatment to support the needs identified in plans. The state also should inform utilities about approaches to instituting rates that will ensure that the costs of treatment, operation and maintenance are covered.

Funding criteria must remain flexible since water emergencies could require financial assistance for quick action. Since coordinating water supply and wastewater treatment systems within a region, aquifer and watershed is critical, cooperation or even consolidation should be considered a criteria for funding projects.

**10 Recommendation:** The state should use state and federal incentives to support the overall mission. The state should:

- Seek ways to cut costs of federal requirements through reduced monitoring, interim solutions and other approaches.
- Tie water and wastewater treatment financial assistance to needs identified and strategies proposed in a sustainable development or local water plan.
- Tie water and wastewater funding to the adoption of appropriate prevention measures, such as subdivision regulations, on-site ordinances and reducing water consumption.
- Tie water and wastewater funding to evidence of coordination and cooperation among local governments, where possible.
- Ensure that aid recipients properly operate and maintain water and wastewater systems and use a rate structure that accurately reflects costs.

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**11 Recommendation:** The state should provide financial assistance to help communities meet existing and future needs in an environmentally and economically sound manner. The state should:

- Minimize differences in user rates among communities by providing financial assistance above the basic level to low-income communities.
- Provide loans for public drinking water supplies and wastewater treatment systems.
- After adequate notice, base assistance on past compliance with regulations and adequate maintenance of existing systems, unless a significant environmental impact cannot be averted without financial aid.
- Use state funding to leverage federal dollars and private funds through the municipal bond market.

This publication is part of a joint EQB Water Resources Committee and Minnesota Planning study. A working paper, published in December 1995 as part of this study, provides information about the state's water supply and wastewater treatment needs and funding and is available upon request.

Readers are encouraged to indicate what recommendations they liked, what they would change and what is missing. Respond to Marilyn Lundberg at the EQB, 658 Cedar St., St. Paul, MN 55155; (612) 296-0676; e-mail, [Marilyn.Lundberg@mnplan.state.mn.us](mailto:Marilyn.Lundberg@mnplan.state.mn.us). The draft recommendations are also available through Minnesota Planning's World Wide Web home page at <http://www.mnplan.state.mn.us>.

For additional copies of *Meeting Minnesota's Water and Wastewater Needs: Draft Recommendations*, contact:



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May 1996

Upon request, *Meeting Minnesota's Water and Wastewater Needs: Draft Recommendations* will be made available in an alternate format, such as Braille, large print or audio tape. For TDD, contact Minnesota Relay Service at (612) 297-5353 or (800) 627-3529 and ask for Minnesota Planning.

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