UPPER MISSISSIPPI RIVER BASIN
WATER PLAN 2000
PUBLIC INPUT REPORT

INTRODUCTION

The Upper Mississippi River Basin – Water Plan 2000 public input process was initiated by the Minnesota Environmental Quality Board Water Resources Committee (EQB-WRC) to provide feedback on the Goals, Objectives, and Indicators developed for the Water Plan 2000 prior to submission to the Minnesota Legislature.

As part of the process, the EQB-WRC, following input from the various state agencies charged with water management responsibilities, decided to follow the hydrologic watershed boundaries for the planning process. By following the Basin boundaries the EQB-WRC would ensure consistency with other state agencies planning processes, including the Minnesota Pollution Control Agency's (MPCA) Basin Planning Process.

BASIN BACKGROUND

The Upper Mississippi River Basin from the Headwaters to the seven county metropolitan area is a large, diverse and complex system (Attachment A for a Map of the Basins), draining portions of three different ecoregions. The Northern Lakes and Forests (NLF) ecoregion comprises the largest portion of the Basin (50 percent). In this ecoregion, the Basin includes all or parts of Becker, Clearwater, Beltrami, Itasca, Cass, Hubbard, Crow Wing and Aitkin Counties. Some of the major watersheds in this portion of the Basin are the Leech Lake River, Pine River, and Crow Wing River. As the Mississippi flows south from Crow Wing County and into Morrison County there is a transition to the North Central Hardwoods Forests (NCHF) ecoregion which comprises about 44 percent of the Basin. In this area the Basin includes all or parts of Douglas, Otter Tail, Todd, Morrison, Mille Lacs, Benton, Stearns, Sherburne, Kanabec, Isanti and Wright Counties. Prominent watersheds within the NCHF portion include the Long Prairie, North Fork of the Crow, Sauk, and Rum Rivers. A very small portion of the Basin includes the Counties of Kandiyohi, Renville, Meeker and McLeod Counties in the Western Corn Belt Plains (WCBP) ecoregion. This area is drained primarily by the South Fork of the Crow River. Differences in land form, soils, land use and glacial geology between these regions contribute to differences in surface and ground water quality and quantity issues of the Basin.

Socio/Demographic Characteristics

The Upper Mississippi River Basin contains all or portions of 30 counties with more than 60 percent of the state's 4.7 million residents. Demographically, the area is representative of population and growth patterns throughout the state, containing metropolitan populations, growing urban/suburban populations, areas of rural growth, and rural areas with declining populations. Growth of the 30-county region over the past 25 years has been slightly higher (28 percent) than the state average (24 percent). This is primarily due to the rapid growth in counties bordering the Twin Cities Metropolitan area.

The Northern segment, including the headwaters counties, contains a significant number of seasonal homes and has seen moderate growth over the past 25 years. Between 1970 and 1980 growth in the area was about 18 percent. Between 1980 and 1990 growth was at a standstill (less than 1 percent) and, since 1990, has again shown steady, moderate growth. The areas of highest growth have been in the lake counties of Hubbard, Crow Wing, Cass, and Beltrami (all over 40 percent growth since 1970). The smallest growth has occurred in western counties of Wadena and Clearwater.

The St. Cloud segment includes six counties influenced by population growth in St. Cloud and in the Twin Cities suburban area of Sherburne County. Growth in Sherburne County has been rapid throughout the past 25 years, increasing 63 percent between 1970 and 1980 and 40 percent and 35 percent respectively for the decades from 1980 to 1990 and 1990 to 1997. This represents a total population increase of more than 200 percent during the 25-year period. Growth in this segment is expected to continue but not as rapidly; an 18 percent increase between 2000 and 2020 is projected. While the City of St. Cloud is located in Stearns County, the majority of the County has remained rural. Benton County's rapid growth (63 percent) reflects the majority of growth in the St. Cloud metropolitan area. However, between 2000 and 2020, Stearns' County population is expected to grow at a faster rate (52 percent) than other counties in this Basin segment.

The Crow River segment of the Basin has seen the greatest percentage growth since 1970 (57 percent) and is expected to continue to have the highest percentage growth within the Basin, although this growth is projected to slow to 22 percent in the first two decades of the millenium. Both Carver and Wright counties, located at the edge of the Twin Cities metropolitan area, have grown the most rapidly with population increases of 116 percent and 112 percent respectively between 1970 and 1997. Renville County, located in the extreme southwest part of the Basin is a rural, agricultural area and its 17 percent population loss is a reflection of the decrease in populations in agricultural areas. Renville County is expected to continue to experience a population loss (11 percent) over the next 20 years. Meeker County, another primarily agricultural area adjacent to Renville County showed an 18 percent population gain between 1970 and 1997, it is projected to have a slight loss (1 percent) in the next 20 years.

The two counties that make up the Mille Lacs/Rum segment of the Basin, Istanti and Mille Lacs, have also shown significant population increase (56 percent) between 1970 and 1997, primarily due to rapid growth of Istanti County. Rapid population increase in Isanti County (79 percent) again reflects the movement of Twin Cities residents to more rural areas that are still within commute distance. In the next 20 years, both Isanti and Mille Lacs counties are expected to have moderate population gains (12 percent each).

The rapid growth in many areas of the Upper Mississippi River Basin has caused a major concern on the impact of growth on the surface and ground water quality and quantity.

Surface Water Resources

The numerous lakes and streams in the Basin are known for their clarity, but are particularly sensitive to impacts related to pollution and use. The management of the nutrients of nitrogen and phosphorus is a primary concern for the lakes, rivers, and streams in the Upper Mississippi Basin. The water quality, quantity, and pollution impacts in the lakes, streams, and the Mississippi River in the Basin gradually increases southward, particularly with inflows from the Crow and Sauk Rivers. These two tributary Basins drain intensely agricultural areas and carry more sediments, nutrients and oxygen-depleting materials than the other rivers in the Basin. Total suspended solids appear to be increasing in the northwest and south-central portions of the Basin due to agriculture and urban development along the rivers. Phosphorus and nitrogen levels are lower than State average throughout the Basin, but increase southwardly in the watersheds from the Mississippi Headwaters to the Seven County Metropolitan area. Fecal coliform levels are higher than average as the Mississippi River passes Camp Ripley and further south.

In terms of trophic status 132 lakes (15 percent) are oligotrophic, 328 (37 percent) are mesotrophic, 303 (34 percent) are eutrophic, and 122 (14 percent) are hypereutrophic based on Carlson's Trophic State Index. A majority of the oligotrophic (92 percent) and mesotrophic (66 percent) lakes are located in the NLF ecoregion. In comparison, a majority of the eutrophic lakes (62 percent) and hypereutrophic lakes (92 percent) are located in the NCHF ecoregion.

The Northern Lakes and Forests portion of the Basin is characterized by predominately forested and wetland land uses. Low phosphorus loading to the lakes combined with the morphometry (moderate size and depth) of the lakes contribute to the generally good water quality in the lakes in this Basin. The NCHF portion of the Basin is characterized by a mosaic of land uses with cultivated and pastured land uses common in the western portion and a predominance of urbanized uses in the eastern or Twin Cities portion of the Basin. These types of land uses export high amounts of nutrients -- urbanized areas as the result of high amounts of impervious areas and the agricultural areas as a result of soil fertility and management practices. The NCHF portion of the Basin had 411 lakes assessed and, of these, less than 50 percent fully supported swimmable uses in the Basin. The WCBP portion of the Basin is highly agricultural and has extremely shallow lakes. Of the nine lakes assessed in this portion of the Basin none support swimmable use.

Ground Water Resources

The ground water of the Basin consists of surficial sand and gravel aquifers and bedrock aquifers. The ground water is the principal source of drinking water for approximately 60 percent of the urban population and about 98 percent of the rural population in the state.

In general, the ground water of the Basin meets drinking water standards, although local degradation has occurred due to a number of contaminants including spills of chemicals, leachate from solid-waste landfills, leaks from underground storage and pipelines, and feedlots and agricultural uses. At this time, regionally or Basin-wide characteristics of the ground water are unavailable.

PUBLIC INPUT PROCESS

Advisory Team

To oversee the public input process the EQB-WRC appointed Basin Teams composed of representatives of the Minnesota Pollution Control Agency (MPCA), the Minnesota Board of Water and Soil Resources (BWSR), the Minnesota Department of Health (DOH), the Minnesota Department of Agriculture (DOA), Minnesota Department of Natural Resources (DNR), and the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). See Attachment C for Team Membership.

The charge for the Advisory Committee was to seek input for the key Goals, Objectives, and Indicators as developed by the EQB-WRC for the Upper Mississippi Basin from the Headwaters to the boundary of the seven county metropolitan area.

Public Input Process

Based on knowledge of the Basin, the committee decided to hold three public information meetings as the primary method of public input. The three meeting locations were chosen to divide the Basin into smaller geographic areas to encourage more local participation and also to reflect the geographic differences in the Basin. The committee started with a January 4, 2000 meeting in Walker to gain perspective on the upper part of the Basin; characterized by lakes and forests. The second meeting was a January 11, 2000 meeting in Onamia to focus on the issues of the Rum River watershed and Lake Mille Lacs. The third and final meeting was held on January 18, 2000 in St. Cloud to focus on the North Fork and South Fork of the Crow watersheds, Sauk River watersheds, and the watershed surrounding St. Cloud, where agricultural land uses are more dominant.

The meetings were put on public noticed in the official newspapers of the Counties in the geographic setting area. In addition, personal letters were sent the to the local water planners, county board chairs, and principal city officials in the three geographic areas explaining the meetings (See Attachment D for copies of the newspaper notices and sample letters). All three meetings were held from 4:00 p.m. to 7:00 p.m. in order to make it most convenient for both water professionals and the general public to attend. Turnout at the meetings was light, ranging from a low of 8 to a high of 25. Attachment E is a roster of meeting attendance.

The WQB-WRC Upper Mississippi Basin Advisory Team members facilitated the meetings. The facilitators followed a modified small group nominal process to seek input from the participants. Participants were allowed to submit verbal comments, written comments or a combination. All comments were recorded on flip charts and are attached by meeting in Attachment F. Written comments received by the project are attached in Attachment G.

The general meeting format was the same for the three meetings. In each case we provided background context on the Minnesota Water Plan, the Upper Mississippi Basin issues and why

their comments were needed. The facilitators then proceeded thorough the sections of the plan's goals, objectives and indicators.

As part of the comment process, the Stearns County Water Planning Task Force requested a separate meeting with the one of the Co-Chairs of the Advisory to forward specific comments concerning the Water 2000 process. These comments are included and identified as a separate comment process in this document.

PUBLIC INPUT SUMMARY

The comments are summarized in three ways: General Water Issues and Program Comments, Specific Comments on the Goals and Objectives; Indicators developed by the EQB-WRC. For this document the comments have been paraphrased, with the intent of not losing the overall tone and content of the comment, and placed into these categories or breakdown corresponding to the original goal, objective or indicator. A complete list of comments as received are included as Attachments F and G.

The reader is reminded that since the Upper Mississippi River Basin is a diverse and complex system as it flows from the Headwaters to the Twin Cities metro area, many of the public comments received reflected the local characteristics at the individual public meetings. For a more geographic breakdown refer to Appendix F and G.

General Comments

During each of the meetings a number of comments were received that were universal to water management. Many of these comments concerned current programmatic or general issues of water management and not a specific goal, objective or indicator.

- The overall goals are not adequate; the goals are too general. That the State needs to plan and develop goals that are specific, achievable, and have a strong local involvement. In addition the State needs Integrated Biological Indicators (IBI) with state and regional goals; and more defined local indicators.
- Need to develop workable mechanisms for the transfer of information back to the local units of government.
- Establish and monitor some "key" undeveloped lakes facing development to look at impacts over time.
- In general, the State of Minnesota needed to monitor withdrawals to prevent the mining of the ground water resources.
- As a general comment, concentrate as many indicators on a particular water resource, i.e. the same lake, aquifer, land or vegetation cover.
- In North Planning Unit (watersheds and area of the Basin North of Morrison County) many of the stream flows are controlled by outside groups. Need to include more local impacts in flow decisions made by these outside groups.
- The State needs to establish optimum flows on rivers for fish habitat; waste assimilation, property values; and local needs and factors.

- An indicator needs to be developed that measures or integrates environment protection and management versus tax return.
- A general observation that Natural Environmental Lakes, particularly lakes with large tracts of undeveloped lands need a stricter use classification and rules.
- A general observation that the funding needs should be tied to reflect natural resource priorities, needs and goals.
- The State of Minnesota should develop and give local units of governments incentives for environmental stewardship.
- A general statement that all governmental units need or should be required to follow its own best management practices.
- A concern expressed about the impact of the Water 2000 Plan on Local Units of Government, particularly on funding issues.
- A general or universal methodology needs to be developed for land use information and support of land use mapping.
- Planning groups need to keep in mind that over 1 million people rely on the Mississippi River for drinking water; need to develop indictors for the Mississippi Basin with this use in mind.
- In general, State Agencies need to do a better job of using data collected.
- In general, the State needs to recognize that it has a lot of amenity areas, under development pressure; that need protecting.
- The state needs to adopt a "risk management" system or approach that stresses focusing on the worst issue first. For example, from the local level - nitrates in ground water and phosphorus in lakes and streams followed by nitrogen and the hypoxia issues from a national level for lake and streams.
- State Agencies need to work on inexpensive models for assessing watershed needs. For example the Secchi Disk for lake water quality.
- In general, lakes are more stable and easier to monitor, so the State should concentrate on lakes as an indicator of water quality.

Specific Goals, Objectives and Indicator Comments

Goal: MINNESOTANS WILL IMPROVE THE QUALITY OF WATER RESOURCES.

The majority of the input at the three meetings concerned the quality of the surface and ground waters. The comments were both specific and general in nature to the three objectives.

<u>General Comments for this Goal</u>

- The State needs to consider adding non-conforming on-site or septic systems as an indicator for both surface and ground water. *If the State set this as an indicator, it would give local units of government more political support to implement the requirements of rules.*
- Climate and weather issues can impact indicators and objectives.
- Encourage and use land management, conservation, or water quality protection strategies in land development plan approvals. Monitor and record the use of these strategies as an indicator.
- For both surface and ground water, all of the identified indicators do not address any long-term needs identification. The indicators should also focus on the long-term culminative

impacts, including the issues of new tax burden versus the tax return of environmental or natural resource impacts.

- For both surface and ground water use indicators that measure or integrate environment protection versus tax return for a property.
- In ground and surface water management, the State should develop an indicator that considers demographics and the growth that is driving the trends and the water indicators are measuring. In many cases, growth and demographics can be measured now, while the impacts from this growth and demographics will not show up in the water data for a period of time, maybe years.
- For both water quality and quantity goals (Goals 1 and 2), the indicators developed are reactive, the State should develop indicators that are more proactive.
- In water quality and quantity goals (Goals 1 and 2), a new tread that the State should consider monitoring as an indicator is land acquisitions/conservancy/trusts that are being formed. The use of non-profits and foundations is a new cultural response to the demographics and changing framework for resource and environmental management.
- In water quality and quantity goals (Goals 1 and 2), increased development is requiring a need to look at issues from a culminative standpoint. One single 160-acre development might not cause measurable environmental impacts, but a number of 160-acre developments in a watershed will have a culminative impact. Track development and potential impacts from a culminative standpoint.
- As part of water quality and quantity management goals, objectives and indicators (Goals 1 and 2), development tracking will also assist in other management goals such as Blandings Turtle protection.
- The water quality and quantity indicators need to measure upland impacts and loss of upland resources, particularly in areas where countywide zoning does not exist.
- In water quality and quantity management if would be helpful if the State measured the supply and demand of land property values and shifts in uses. An example is the large number of 40-acre parcels being purchased for hunting, fishing, and other recreational uses and not for agricultural uses.
- As an indicator, measure the increased use of buffer strips, the increase in acreage under buffering, and the water quality characteristics and improvements from buffering.
- In surface and ground water, use best management practices for siltation and sedimentation reduction as an indicator.

<u>Objective A – Protect and improve water quality in streams.</u>

Specific comments for Objective A and Indicators 1 through 6 from the meetings are discussed below. Many of the indicators could also apply to Objective B – Lake Water Quality:

- Need a good water quality statistical program.
- Indicators need to reflect local water quality characteristics; not just Secchi Transparency and not just total phosphorus.
- Need a good baseline of background water quality. Water quality before impacts, natural versus man-caused impacts.
- Utilize programs such as River Watch to develop local indicator information and then bring this information back to the local units of government.
- Concern about whom is going to collect the information for all the indicators. Concerns about the money to do it.

- As a land use or socio-indicator, monitor the use of covenants in plats and subdivisions. Also encourage the use of convenants.
- Use CRP lands as an indicator for surface water. Measure the land-use changes resulting from lands coming out of CRP and the impacts on water quality.
- Use as an indicator of the socio-economic trends or impacts on water quality and quantity the decline in smaller land holdings in a watershed.
- Use the amount of rented land for large farm irrigation.
- Use pH as an indicator in surface waters.
- Use macroinvertebrates as an indicator of water quality.
- Add phosphorus as an indicator in streams to make streams and lakes more compatible.
- Add pesticides as an indicator for streams and lakes.
- Establish fixed monitoring sites for surface waters and use these sites as indicator sites.
- Measure the changes in land use and vegetation and use as an indicator.
- Use dissolved oxygen as an indicator of water quality in streams and lakes.
- For surface waters, develop an indicator based on swimming suitability and Carlson's Tropic Statue Index.
- Use existing municipal wastewater discharge data as an indicator.
- Use the percent of riparian buffers as an indicator of water quality.

Objective B – Protect and improve lake water quality.

Specific comments for Objective B and Indicators 7 are discussed below. Many of the indicators could also apply to Objective A – Stream Water Quality.

- Indicators need to reflect local water quality characteristics; not just Secchi Transparency and not just total phosphorus.
- Need or consider percent of shoreland alternation as an indicator.
- Establish and monitor some "key" undeveloped lakes facing development to look at impacts over time.
- Develop an indicator for chlorophyll a and Trophic State Indexes (TSI) for lakes.
- Use as an indicator mercury and PCB levels in the lakes and fish consumption advisories.
- Add pesticides as an indicator for lake and stream water quality.
- Establish and use fixed lake monitoring sites to track overall trends.
- For lakes and streams, measure the changes in land use and vegetation and use as an indicator.
- Use dissolved oxygen as an indicator of water quality in streams and lakes.
- Include dissolved oxygen, chlorophyll a, ortho-phosphorus and Carlson's Trophic Status Indicator as lake water quality indicators.
- Measure the change in shoreland impervious areas as an indicator of potential lake water quality.
- Measure the number of upgraded on-site systems as an indicator of potential lake and stream water quality.
- Need to develop an indicator based on swimming suitability and Carlson's Tropic Statue Index.

Objective C – Prevent degradation of ground water quality and reduce concentrations of contaminants.

Specific comments for Objective C and Indicators 8 through 12 are discussed below. Many of the indicators could also apply to Objective D and E – Water Quantity.

- Use as a measurement the number of communities adopting source water protection measures.
- For ground water monitoring, atrazine and volatile organic compounds are good indicators, but are costly. Use total organic carbon as a first step.
- As an indicator measure the amount of irrigated lands over sand plain aquifers.
- Use the amount of rented land for large farm irrigation measurements.
- As a social indicator include wellhead protection zones or plans.
- As a social indicator track the number of Class V injection well and underground injection control wells in the state. This would also include better tracking of on-site septic or wastewater treatment systems.
- Monitor the number of delineations of wellhead protection areas and the associated water monitoring of wellhead areas.
- Use the number of feedlots and the animal units per square mile as an indicator.
- Use the number of abandoned wells as an indicator.

Goal: MINNESOTANS WILL CONSERVE WATER SUPPLIES AND MAINTAIN THE DIVERSE CHARACTERISTICS OF WATER RESOURCES TO GIVE FUTURE GENERATIONS A HEALTHY ENVIRONMENT AND A STRONG ECONOMY.

Specific comments for Objective D, E, and F and Indicators 13 through 15 are discussed below. Many of the indicators could also apply to Objective A, B, and C on water quality.

Objective D – Maintain ground water levels to sustain surface water bodies and provide water supplies for human development.

- The measurement of water levels in wells is appropriate and needed. In addition, the State needs to think about expanding the existing system and put more wells into it.
- As in Objective C, an indicator is needed for the amount of irrigated lands over sand plain aquifers.
- As in Objective C, measure the amount of rented land for large farm irrigation.
- Need to establish a baseline of information on the ground water quality and quantity of the culminative impacts of irrigation, intensive farming, and feedlots.
- The State needs to maintain rather than observe the ground water levels.
- As an indicator, the State Plan should develop a method of determining the economic value of ground water.
- Manage and use, as a measure, the amount impervious surfaces for surface and ground water impacts on quality and quantity/flow levels.
- Monitor and measure the amount of wetland acres as an indicator of water quality/quantity and natural conditions and can be used for Goal 3, Objective G and H.

Objective E – Maintain flow of rivers and streams within historical range of variation.

- In North Planning Unit (watersheds and area of the Basin North of Morrison County) many of the stream flows are controlled by outside groups. Need to include more local impacts in flow decisions.
- How will the "Historical Levels" be defined?
- Manage and measure the impervious surfaces for surface and ground water impacts/flow levels.
- Need to establish, as an indicator, watershed land use changes.

Objective F – Maintain the quality and diversity of Minnesota's lakes and wetlands while acknowledging regional variation.

- Need to use a biologic or similar indicator of wetland diversity (ex. the IBI as a biological indicator) for wetland mitigation measures and not just a number of acres measurement.
- A wetland diversity indicator should also include indicators such as changes in wetland types, changes in wetland functions, and changes in wetland locations.

GOAL: MINNESOTANS WILL RESTORE AND MAINTAIN HEALTHY ECOSYSTEMS THAT SUPPORT DIVERSE PLANTS AND WILDLIFE.

Objective G – Ensure that aquatic environments have conditions suitable for the maintenance of healthy, self-sustaining communities of plants and animals.

- Need to include sensitive or native vegetation populations as an indicator, add allow for indicators to reflect the native regional variations.
- Consider including natural mussel populations as an indicator.
- Need to include in any IBI developed for the Upper Mississippi Basin, naturally occurring invertebrates.
- Develop an indicator to monitor changes in aquatic vegetation.
- Consider using Blandings Turtle populations as an indicator of healthy ecosystems.
- As an indicator, select fish indictors appropriate to the individual lakes (i.e. not every lake is a walleye lake). Look at the species communities.
- The application of Indicator 17 and 22 is very narrow. The State indicators also need to take into consideration the region and individual ecological community characteristics.

Objective H – Limit introduction and spread of exotic species.

- Consider including, as indicators, the number of waterbodies with purple loosestrife and curlyleaf pondweed.
- Add "undesirable" to the exotics definition. Example Purple Loosestrife or Curly Leaf Pondweed.
- Add Purple Loosestrife or reference a standard list of exotics.

GOAL: MINNESOTANS WILL HAVE REASONABLE AND DIVERSE OPPORTUNITIES TO ENJOY THE STATE'S WATER RESOURCES.

The participants addressed primarily the indicators of this section. Over all they offered more indicators for the EQB-WRC to consider for the measurement of the goal and objectives and did not address the Goals or Objectives.

Objective I: Provide appropriate access to water recreation sites.

Specific recommendations for Objective I include:

- The use of various license sales should also be used as an indicator.
- Use public riparian zones or beaches as an indicator.

Objective J: Improve or maintain the quality of water recreation.

Specific recommendations for Objective J include:

- Use passive recreation surveys (non-fishing; non-boating) as an indicator.
- Use land shore owner satisfaction surveys as an indicator.

A number of comments were received that addressed both Objective I and J, or were of a general nature concerning water recreation opportunities. These recommendations include:

- Encourage the establishment of lake quiet zones or similar recreational zones, prohibiting some of the other uses causing noise impacts.
- Measure the use of surface management or zoning of lake surface uses and diversity as an indicator.
- Use of beaches and establishment of swimming beaches as an indicator of water recreation resources. Swimming can also be use as an indicator for water quality.
- Use public riparian zones as an indicator.

Attachment A
References and Citations

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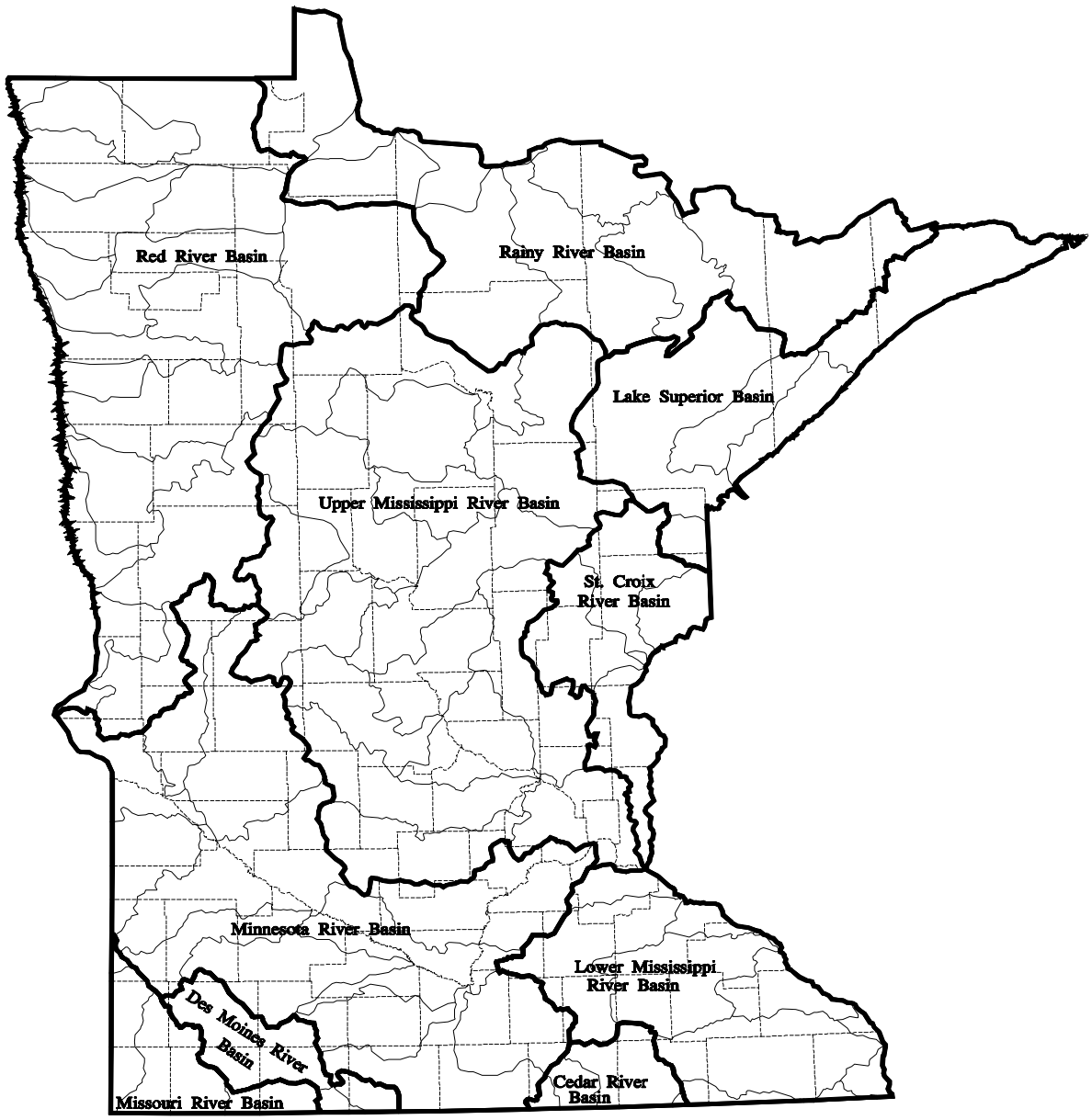
Attachment B
Map
Minnesota's Major River Basins, Including the Upper Mississippi River Basin



Attachment C
Basin Advisory Team

Name	Representing
Jim Hodgson, Co-Chair	Minnesota Pollution Control Agency
Dan Steward, Co-Chair	Minnesota Board of Water and Soil Resources
Judy Sventek	Metropolitan Council Environmental Services
Mark Zabel	Minnesota Department of Agriculture
Beth Kluthe	Minnesota Department of Health
Mike Howe	Minnesota Department of Health
Jim Ayres	U.S. Department of Agriculture Natural Resources Conservation Service
Harvey Sundmacker	U.S. Department of Agriculture Natural Resources Conservation Service
C.B. Bylander	Minnesota Department of Natural Resources
Ed McNally	U.S. Army Corps of Engineers

Attachment D
Water Plan 2000 Meeting Notifications

December ___ 1999

Dear _____:

I would like to invite you to a meeting to discuss establishment of a various planning committees for the watersheds in the Upper Mississippi River Basin as part of the development of the Minnesota Pollution Control Agency's (MPCA) Upper Mississippi River Basin Plan. In addition this group will assist in the development of the Minnesota Environmental Quality Board's (EQB) Minnesota Water Plan 2000. I have attached a list of the local meetings and the priority watershed for those local meetings.

The meetings are intended to start the process of development of the goals, objectives and indicators for water quality goals, objectives and indicators through the MPCA's Basin Planning Process. In addition, the Minnesota Legislature has instructed the EQB to develop a State Water Plan every ten years. This plan's purpose, due in 2000, is to make water management more understandable and unify state efforts within major river Basins.

Major components of each plan is development of goals, objectives and indicators appropriate to each major river Basin. For the EQB component we need to complete our work by February 25, to allow the EQB time to compile the information from all ten Basins into a plan for submission to the Legislature. The MPCA process will compile the water quality information for the Basin to be included in the MPCA's Basin Plan, which will be more specific, then the EQB Plan.

This invitation and information packet is being distributed to local policy makers and resource managers in the Basin, but the meeting is open to other interested individuals. I am enclosing some documents and information concerning the meetings and the various plans that we are completing. Please keep in mind that these documents were developed only as starting points for discussions about the planning processes. We can modify the goals, objectives and indicators to better reflect the Upper Mississippi River Basin. The important thing is that we develop the needs and issues for the Basin and keep the door open for state resource allocation and funding appropriate to the Upper Mississippi River Basin.

We've got a lot of work to do and not much time to do it. I hope that you, or a representative of your organization, will be able to attend one of the meetings. If you have any questions about the MPCA's Upper Mississippi Basin Planning process, the EQB's Water Plan 2000, or the meetings please give me a call at 218-828-6065.

Sincerely,

Jim Hodgson
Upper Mississippi Basin Planning Coordinator
North District – Brainerd Office
Minnesota Pollution Control Agency
EQB Upper Mississippi River Basin Advisory Team Co-Chair

Enclosures

Attachment D (Continued)
Water Plan 2000 Meeting Notifications

Minnesota Pollution Control Agency
Upper Mississippi River Basin Planning

Informational Meetings

Informational meetings for the Minnesota Pollution Control Agency and the Environmental Quality Board Water Plan 2000 will be held in the following localities. The location of these meetings was chosen to help provide local watershed and area perspectives to the process. In the Upper Mississippi River Basin the following meetings will target the watersheds and water resources of the area.

For the part of the Counties of Cass, Crow Wing, Hubbard, Beltrami, Clearwater, Itasca, Aitkin, Crow Wing, Douglas, Todd, Morrison, Becker, and Otter Tail in the Upper Mississippi River Basin.

January 11, 2000
Walker American Legion
407 Front Street
Walker, Minnesota
4:00 – 7:00 p.m.

For the Counties of Aitkin, Mille Lacs, Isanti, Sherburne, and Anoka in the Rum River Watershed of the Upper Mississippi Basin.

January 18, 2000
Onamia Fire Hall
621 West Main Street
Onamia, Minnesota
4:00 – 7:00 p.m.

For the Counties of Benton, Stearns, and Sherburne in the watersheds of Sauk and Mississippi River, and the Clearwater River and the Counties of Wright, Meeker, Kandiyohi, Renville, McLeod and Carver in the North and South Fork of the Crow River Watersheds.

January 25, 2000
St. Cloud City Hall
400 2nd Street South
St. Cloud, Minnesota
4:00-7:00 p.m.

For further information contact:

Jim Hodgson
Upper Mississippi River Basin Planning Coordinator
Minnesota Pollution Control Agency
1800 College Road
Baxter, Minnesota 56425
218-828-6065

Attachment E
Water Plan 2000 Meeting Attendance

Minnesota Water Plan 2000

Meeting Attendance
Walker Meeting
January 11, 2000

Name	Address	Representing
Jeremy Maul	Wadena County SWCD 4 Alfred St. NE Wadena, Minnesota	Wadena County SWCD
Kitty Tepley	Todd County SWCD 720 Commerce Road Long Prairie, Minnesota	Todd County SWCD
Glen Hodgson	420 Pokgama Avenue North Grand Rapids, Minnesota	City of Grand Rapids
Dale Lockwood	Minn. Dept. of Natural Resources 1601 Minnesota Drive Brainerd, Minnesota	MDNR-Fish
Harlan Fierstine	Minn. Dept of Natural Resources 07316 State 371 NW Walker, Minnesota	MDNR-Fish
Doug Kingsley	Minn. Dept of Natural Resources 301 South Avenue Park Rapids, Minnesota	MDNR-Fish
Molly MacGregor	Minnesota Rivers Council PO Box 1107 Walker, Minnesota	Rivers Council
Anthony McKeown	RR 2 Box 387B Nevis, Minnesota	Headwaters Canoe Club
Roland Kronberg	Douglas County Land Dept. 305 8th Ave. West Alexandria, Minnesota	Douglas County
Garry Johanson	Hubbard Environmental Services Hubbard County Courthouse 301 Court Street Park Rapids, Minnesota	Hubbard County

Attachment E
Water Plan 2000 Meeting Attendance
Walker Meeting Attendance (Continued)

Paul Fairbanks	Cass Cty Environmental Services Cass County Courthouse Walker, Minnesota	Cass County
John Alden	5168 Park Point Hackensack, Minnesota	Ten Mile Lake
Art Norton	Itasca County SWCD 1889 East Highway 2 Grand Rapids, Minnesota	Itasca Cty SWCD
Jane Van Hunnik	Mississippi Headwaters Board PO Box 3000 Walker, Minnesota	MHB
Mark Wettlaufer	Morrison County Water Plan 213 S.E. 1st Avenue Little Falls, Minnesota	Morrison County
Rodger Hemphill	Hubbard Cty. SWCD 212 2nd Street West Park Rapids, Minnesota	Hubbard Cty. SWCD
John Steward	Tri-County Leech Lake Wshd 07316 State 371 NW Walker, Minnesota	TCCLWP
Julie Kingsley	Rt 2 Box 147 Menahga, Minnesota	Rivers Council
Jim Hodgson	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Ken LeVoir	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Jeff Hrubes	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Dan Steward	217 South 7 Street Brainerd, Minnesota	Minn. BWSR
Ed McNally	U.S. Army COE St. Paul District 190 5th Street East	U.S. Army COE

St. Paul, Minnesota

Attachment E (Continued)
Water Plan 2000 Meeting Attendance

Minnesota Water Plan 2000

Meeting Attendance
Onamia Meeting
January 18, 2000

Name	Address	Representing
Greg Brown	Northern Environmental 372 West County Road D New Brighton, Minnesota	Northern Environmental
John Overland	Northern Environmental 1731 Graydon Avenue Brainerd, Minnesota	Northern Environmental
Scott Dois	MLLWMG 900 5th Street SW Onamia, Minnesota	Mille Lacs Watershed
Paul Andrews	8906 Eyota Way Onamia, Minnesota	Mille Lacs Watershed
Tom Sandberg	RR 8 Box 665 Aitkin, Minnesota	Aitkin Cty. Planning
Dan Steward	217 South 7 Street Brainerd, Minnesota	Minn. BWSR
Mark Zabel	Dept. of Agriculture 90 West Plato Blvd. St. Paul, Minnesota	Minn. DOA
Ed McNally	U.S. Army COE St. Paul District 190 5th Street East St. Paul, Minnesota	U.S. Army COE
Jim Hodgson	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Laurel Mezner	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA

Attachment E
Water Plan 2000 Meeting Attendance
Onamia Meeting Attendance (Continued)

Pat Shelito	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Kelli Huxford	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Dave Hills	Minnesota Dept. of Natural Resources 1601 Minnesota Drive Brainerd, Minnesota	MDNR

Attachment E
Water Plan 2000 Meeting Attendance

Minnesota Water Plan 2000

Meeting Attendance
St. Cloud Meeting
St. Cloud City Hall
January 25, 2000

Name	Address	Representing
John Wilkinson	Sartell. Minnesota	
Bob Nelson	PO Box 174 Long Prairie, Minnesota	
Dorothy Nelson	PO Box 174 Long Prairie, Minnesota	
Dan Otte	39298 Co. Rd. 185 Sauk Centre, Minnesota	Stearns County
Rob Spitzley	Box 1462, St. John's University Collegeville, Minnesota	
Mark Basiletti	Sherburne SWCD 14855 Highway 10 Elk River, Minnesota	Sherburne SWCD
Dan Steward	217 South 7 Street Brainerd, Minnesota	Minn. BWSR
Joe Peters	27205 Hidden Cove Road Cold Spring, Minnesota	
Dee Peters	27205 Hidden Cove Road Cold Spring, Minnesota	
Gerald Mahon	1347 9th Avenue North St. Cloud, Minnesota	
Mike Howe	Minnesota Dept. of Health St. Cloud Office District Office	MDH
Ron Peterson	Benton County Development Office 531 Dewey Street Foley, Minnesota	Benton County

Attachment E
Water Plan 2000 Meeting Attendance
St. Cloud Meeting Attendance (Continued)

Jack Olson	Minnesota Dept. of Natural Resources 1601 Minnesota Drive Brainerd, Minnesota	MDNR
Jenny Lee	Crow River Joint Powers Board 619 East St. Paul Rd Litchfield, Minnesota	Crow River JPB
Ken Robinson	City of St. Cloud Public Utilities 400 2nd Street South St. Cloud, Minnesota	City of St. Cloud
Ed McNally	U.S. Army COE St. Paul District 190 5th Street East St. Paul, Minnesota	U.S. Army COE
Jim Hodgson	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA
Laurel Mezner	MPCA 1800 College Drive South Brainerd, Minnesota	MPCA

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts

Minnesota Water Plan 2000
Meeting Issues
Walker Meeting
January 11, 2000

- General Comment on the Minnesota State Water Plan Process – the overall goals are not adequate, the goals do not say much, need to plan and develop goals that we can achieve; need strong local involvement; need Integrated Biological Indicators (IBI) for the state and regional goals, and more defined local indicators.

- Goal 1 Water Quality, Objective A – Need a good Baseline of background water quality. Water quality before impacts, natural versus man-caused.

- Goal 1 Water Quality, Objective A – Need a good water quality statistical program.

- Indicators need to reflect local water quality characteristics; not just Secchi Transparency and not just total phosphorus.

- Climate and weather issues can impact indicators and objectives.

- To make it measurable; to determine goals and achievements – need to get good reliable background data.

- Need or consider percent of shoreland alternation as an indicator.

- Use as a measurement the number of communities adopting source water protection measures.

- Need to develop workable mechanisms for the transfer of information back to the local units of government.

- Utilize programs such as River Watch to develop local indicator information and then bring this information back to the local units of government.

- Establish and monitor some “key” undeveloped lakes facing development (Hubbard County Beauty and LeSalle Lakes) to look and impacts over time.

- Concern about who is going to collect the information for all the indicators, concerns about the money to do it.

- As a land use or socio-indicator monitor the use of covenants in plats and subdivisions. Also encourage the use of convenants.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts
Walker Meeting (Continued)

- Encourage and use land management, conservation, or water quality protection strategies in land development plan approvals. Monitor and record the use of these strategies as an indicator.

- Goal One; Objective C - For ground water monitoring atrazine and volatile organic compounds are good indicators, but are costly. Use total organic carbon and tox as first steps.

- Use CRP lands as an indicator. Measure the land use changes resulting from lands coming out of CRP and the impacts on water quality.

- Goa1 1 and Goal 2 – Surface and Ground Water Quality and Quantity - need an indicator for irrigated lands over sand plain aquifers.

- Use as an indicator of the socio-economic trends or impacts on water quality and quantity the decline in smaller land holdings.

- Use the amount of rented land for large farm irrigation.

- Need to establish a baseline of information on the surface water quality and quantity of the culminative impacts of irrigation, intensive farming, and feedlots.

- Goal 3 Healthy Ecosystems. Need to develop an indicator to monitor changes in aquatic vegetation.

- Goal 1 Water Quality and Goal 3 Healthy Ecosystems. Need to develop and use temperature and pH as an indicator of "quality" for trout streams.

- Goal 1 Objective B – Need an indicator for chlorophyll a and Trophic State Indexes (TSI) for lakes.

- Goal 2, Objective D, Indicator 13 Water Level in wells is appropriate and needed. Need to think about expanding the existing system and put more wells into it.

- In general the State of Minnesota needed to monitor withdrawals to prevent the mining of the ground water resources.

- Goal 1, Objective C, as a social indicator include wellhead protection zones or plans as an indicator.

- Goal 1, Objective B, includes an indicator the use of mercury and PCB levels in the lakes and fish consumption advisories.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts
Walker Meeting (Continued)

- Goal 1, Objective A, B, C as a social indicator track the number of Class V injection well and underground injection control wells in the state. This would also include better tracking of on-site septic or wastewater treatment systems.

- As a general comment, concentrate as many indicators on a particular water resource, i.e. the same lake, aquifer, land or vegetation cover.

- Goal 2, Objective E – In North Planning Unit (watersheds and area of the Basin North of Morrison County) many of the stream flows are controlled by outside groups. Need to include more local impacts in flow decisions.

- Goal 2, Objective E – Establish optimum flows on rivers for fish habitat; waste assimilation, property values; and local needs and factors.

- Goals 1 and 2, Objective A, B, C, D, E, and F – All of the identified indicators do not address any long term needs identification. The indicators should also focus on the long term culminative impacts, including the issues of new tax burden versus the tax return of environmental or natural resource impacts.

- Goals 1 and 2, Objective A, B, C, D, E, and F – Use of indicator that measures or integrates environment versus tax return.

- Goals 1 and 2, Objective A, B, C, D, E, and F – the State should develop an indicator that considers demographics and the growth that is driving the trends occurring which the water indicators are measuring. In many cases, grow and demographics can be measured now, while the impacts from this growth and demographics will not show up in the water data for period of time, maybe years.

- Goals 1 and 2, Objective A, B, C, D, E, and F – the indicators are reactive, the State should develop indicators that are more proactive.

- Goals 1 and 2, Objective A, B, C, D, E, and F – a new tread that the State should consider monitoring as an indicator is land acquisitions/conservancy/trusts that are being formed. The use of non-profits and foundations is a new cultural response to the demographics and changing frameworks for resource and environmental management.

- Goals 1 and 2, Objective A, B, C, D, E, and F – Increase development is requiring a need to look at issues from a culminative standpoint. One single 160 acre development might not cause measurable environmental impacts, but a number of 160-acre developments in a watershed will have a culminative impact. Track development and potential from a culminative standpoint.

- Goals 1 and 2, Objective A, B, C, D, E, and F – Development tracking will also assist in other management goals such as Blandings Turtle protection.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts
Walker Meeting (Continued)

- Goal 3, Objective G. Consider using Blandings Turtle populations as an indicator of healthy ecosystems.

- Goals 1 and 2, Objective A, B, C, D, E, and F – indicators need to measure upland impacts and loss of upland resources, particularly in areas where county-wide zoning is non-existent.

- Goals 1 and 2, Objective A, B, C, D, E, and F – Measure the supply and demand of land property values and shifts in uses, an example is the large number of 40 acre parcels being purchased for hunting, fishing, and other recreational uses.

- Goals 1 and 2, Objective A, B, C, D, E, and F – A general observation that Natural Environmental Lakes, particularly lakes with large tracts of undeveloped lands need a stricter use classification and rules.

- Goals 1 and 2, Objective A, B, C, D, E, and F – A general observation the funding needs should be tied to reflect natural resource priorities, needs and goals.

- Goals 1 and 2, Objective A,B, C, D, E, and F – A general statement that the State of Minnesota should develop and give local units of governments incentives for environmental stewardship.

- Goals 1, 2, 3, and 4, Objective A, B, C, D, E, F, G, H, I and J – A general statement that all governmental units need or should be required to follow its own best management practices.

- Goals 1 and 2, Objective A, B, C, D, E, and F – Increase and use as an indicator water quality buffer zones. Measure the increased use of buffer strips, the increase in acreage under buffering, and the water quality characteristics and improvements from buffering.

- Goal 4; Objective I and J. Establish the use of the number of sites for river recreation.

- Goal 4; Objective I and J. Encourage the establishment of lake quiet zones or similar recreational zones, prohibiting some of the other uses causing noise impacts.

- Goal 4; Objective J. Use surveys to also measure passive, non-fishing or boating activities on the States water resources.

- Goal 4; Objective J. Use of swimming and establishment of swimming beaches as an indicator of water recreation resources. Swimming can also be use as an indicator for water quality.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts
Walker Meeting (Continued)

- Goal 4; Objective I and J. Measure the use of surface management or zoning of lake surface uses and diversity as an indicator.

- Goal 4; Objective I and J. Use public riparian zones or beaches as an indicator.

- Goal 4; Objective I and J. Use land shore owner satisfaction surveys as an indicator.

- Goal 3; Objective G. Select fish indictors appropriate to the individual lakes i.e. not every lake is a walleye lake. Look at the species communities.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts

Minnesota Water Plan 2000
Meeting Issues
Onamia Meeting
January 18, 2000

- Concern expressed about the impact of the Water 2000 Plan on Local Units of Government, particularly on funding issues.
- Use pH as an indicator in surface waters.
- Goal 1b1 Use Macroinvertebrates as an indicator of water quality.
- Goal 1b Add phosphorus as an indicator in streams to make streams and lakes more compatible.
- Goal 1 C use as an indicator the number of delineations of wellhead and then the associated monitoring of wellhead areas.
- Goal 1C Use the number of feedlots and the animal units per square mile as an indicator.
- Goal 1c Use the number of abandoned wells as an indicator.
- Goal 2d The State needs to observe rather than maintain the ground water levels.
- Goal 2d Establish a method of determining the economic value of water.
- Goal 2e How will the "Historical Levels" be defined.
- Goal 2f Use the IBI as a biological indicator for streams.
- Goal 3h Add "undesirable" to the exotics definition. Example Purple Loosestrife.
- Goal 3h Add Purple Loosestrife or reference a standard list of exotics.
- Goal 3h Add eradication of Eurasian Milfoil as an option.
- Goal 3g Narrow application of 17 and 22.
- Goal 2 d and e Manage and measure the impervious surfaces for surface and ground water impacts/flow levels.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts

Minnesota Water Plan 2000
Meeting Issues St. Cloud Meeting
St. Cloud City Hall
January 25, 2000

- Goal 1 Water Quality, Objective A – Add pesticides as an indicator.
- Goal 1 Water Quality, Objective A – Establish fixed monitoring sites for surface waters.
- Goal 1 Water Quality, Objective A – Measure the changes in land use and vegetation and use as an indicator.
- Goal 1 Water Quality, Objective A – Use dissolved oxygen as an indicator of water quality in streams and lakes.
- Goal 1, 2 Water Quality and Quantity, Objective A, B, C, D, E, and F General issue - Need to consolidate and standardize local land use information.
- Goal 1, 2 Water Quality and Quantity, Objective A, B, C, D, E, and F General issue - Need to support better local land use mapping.
- Goal 1, 2 Water Quality and Quantity, Objective A, B, C, D, E, and F General issue – Use best management practices for siltation and sedimentation reduction as an indicator.
- Goal 1, Objective B – Include dissolved oxygen, chlorophyll a, ortho-phosphorus and Carlson's Trophic Status Indicator as lake water quality indicators.
- Goal 1, Objective B General issue – Measure the change in shoreland impervious areas as an indicator.
- Goal 1, Objective A, and B – Measure the number of upgraded on-site systems as an indicator.
- Goal 2, Objective D – Monitor and measure the amount of wetland acres as an indicator of water quality/natural conditions and can be used for Goal 3, Objective G and H.
- Goal 2, Objective E General issue – Need to establish more gaging sites to monitor trends in stream flow.
- Goal 2, Objective E General issue – Need to establish as an indicator watershed land use changes.

Attachment F
Water Plan 2000 Meeting Issues Placed on the Flip Charts
St. Cloud Meeting (Continued)

- Goal 1, 2 Water Quality and Quantity, Objective A, B, C, D, E, and F General issue – Need to keep in mind that over 1 million people rely on the Mississippi River for drinking water; need to develop indictors for the Mississippi Basin with this use in mind.

- Goal 2, Objective F- Should also include as indicators changes in wetland types, changes in wetland functions, and changes in wetland locations as indicators.

- Goal 2, Objective G – Need to include Blandings Turtles as an indicator.

- Goal 2, Objective G – Need to include sensitive or native vegetation populations as an indicator.

- Goal 2, Objective G – Need to include natural mussel populations as an indicator.

- Goal 2, Objective G – Need to include in any IBI developed for the Upper Mississippi Basin naturally occuring invertebrates.

- Goal 2, Objective H – Need to include as indicators the number of waterbodies with purple loosestrife and curlyleaf pondweed.

- Goal 1, Objective A and B. Need to include the MDH Fish Consumption Advisory as an indicator of water quality.

- Goal 4, Objective I – Use the number of license sales as an indicator.

- Goal 4 Objective I – Use passive recreation surveys as an indicator – not just angler and boater surveys.

- Goal 1 and 4, Objective A, B, I, and J. Need to develop an indicator based on swimming suitability and Carlson's Tropic Statue Index.

Attachment F
Water Plan 2000 Meeting Issues

Stearns County Water Planning Task Force Meeting
Meeting Notes
February 10, 2000

As part of the process, the Stearns County Water Planning Task held a regular meeting specifically to provide input to the Water 2000 process. The comments received were from the Stearns County Water Plan Task Force. Comments are addressed below:

- Goal 1, Objective A, B, and C – Need add non-conforming on-site or septic systems as an indicator. **If the State set this as an indicator, it would give local units of government more political support to implement the requirements of rules.**

- Goal 1, Objective A and B – In general, lakes are more stable and easier to monitor, so the State should concentrate on lakes as an indicator of water quality.

- Goal 1, Objective A and B – Use existing municipal waste water discharge data as an indicator.

- Goal 1 and 2, Objective A, B, C, D, E, and F. In general, State Agencies need to do a better job of using data collected.

- Goal 1 , Objective A and B – Use the percent if riparian buffers as an indicator of water quality.

- Goal 1, 2, 3, and 4; All objectives – In general, the State needs to recognize that it has a lot of amenity areas, under development pressure; these areas need protecting.

- Goal 1, Objectives A, B, and C – The State needs to adopt a "risk management" system or approach that stresses focussing on the worst issue first. For example, from the local level - nitrates in ground water and phosphorus in lakes and streams followed by nitrogen and the hypoxia issues from a national level for lake and streams.

- Goal 1, Objective A, B, and C – State Agencies need to work on inexpensive models for assessing watershed needs. For example the Secchi Disk for lake water quality.

Attachment G
Water Plan 2000
Written Comments Received