

Citizen Stakeholder Advisory Committee Report on Activities

Minnesota Water Sustainability Framework January 2011

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Table of Contents

A. Introduction	2
B. Key Findings and Recommendations	2
C. Background and Methods.....	3
D. Results, Conclusions, Recommendations.....	6
E. Stakeholder Perspectives	12
Stakeholder Recommendations: Minnesota Agri-Growth Council	13
Stakeholder Recommendations: Angling/Recreation Stakeholders	14
Stakeholder Recommendations: Minnesota Chamber of Commerce	15
Stakeholder Recommendations: Forestry Industry.....	16
Stakeholder Recommendations: The Freshwater Society.....	18
Stakeholder Recommendations: Minnesota Lake Associations	19
Stakeholder Recommendations: Leech Lake Band of Ojibwe	21
Stakeholder Recommendations: Resort Owners.....	23
Stakeholder Recommendations: Water Quality Advocates	24

Figures and Tables

Table 1. Minnesota water use poll	6
Table 2. Minnesota water problems poll.....	7
Table 3. Most effective tools to protect and improve water resources	10

A. Introduction

“Because water policy involves values as well as science, the Water Resources Center is engaging all Minnesotans through surveys, workshops, and onsite events to find out how Minnesotans want to use their water and how they feel about a range of water-related issues — from fishing and boating to agricultural practices. A citizen and stakeholder advisory committee is guiding this process.” Dr. Deborah Swackhamer, Project Leader

The Minnesota Water Sustainability Framework’s 17-member citizen and stakeholder advisory committee (CSAC), formed in November 2009, included a broad base of perspectives and expertise. The committee’s role was to provide citizens the opportunity to have input and ensure that the framework incorporates the voices of Minnesotans and stakeholder groups that know, love, and use our lakes and rivers. To achieve that goal, we invited Minnesotans to complete a survey, participate in listening sessions around the state, and share their perspectives through their stakeholder representatives on the CSAC.

The CSAC included representatives from environmental groups, recreational interests, agriculture, local units of government, business, and the tourism industry, as well as shoreland owners and tribal partners. Members spoke to their stakeholders at meetings and events, provided updates on the framework, and promoted the survey through newsletters and websites.

A 10-question survey, “Minnesotans and Their Water,” was available from October 2009 through August 2010, following beta testing at the 2009 Minnesota State Fair. It was offered online and in written form for those who couldn’t access it online, and was distributed at many meetings and events during the year. A total of 4,743 completed surveys were received.

More than 400 people attended nine listening sessions held across Minnesota in January and February 2010 to share their perspectives on how priorities should be established and funds invested. We heard about what was important to people at the local level and how they feel about statewide programs and current policies. All those comments were compiled by topic.

B. Key Findings and Recommendations

Minnesotans understand and support that healthy water needs to be available for the ecological services it provides for all living organisms, not only for the recreational and commercial benefits it provides to humans. This is supported in the survey questions related to most important uses, by survey respondents’ support of the stated definition of “sustainability,” and by the fact that Minnesotans voted for a sales tax increase to protect and improve the state’s natural resources.

Minnesotans understand we need to change our behavior in order to reverse the trend toward decreased water quality. They realize most citizens need to learn more about how their behavior affects water quality; more about the basics of the water cycle, lakes, and rivers; and more about current water resource management efforts and how they can help. They also feel effectiveness of education will increase if it is coupled with incentives and strong, enforced regulations.

Citizens want the dollars raised from the sales tax to be spent differently than those raised from other initiatives, like the lottery. They want the appropriation process to be less political, with some funding allocated at a regional level, rather than all at the state level. They also want funding to be made available to nonprofit and citizen volunteer organizations and tribal partners working toward clean water, not only to state agencies and local government. Citizens want measurable outcomes, accountability, and clear assessments of whether waters are improving.

The issue of aquatic invasive species was of high importance to the citizens responding to the survey and participating in listening sessions. Many felt that the Legislature and agencies based in St. Paul didn't realize how critical an issue this is to Minnesotans.

C. Background and Methods

1. Citizen and Stakeholder Advisory Committee

The 16-member citizen and stakeholder committee (CSAC) included a broad base of perspectives and expertise. It met seven times between November 2009 and December 2010 to plan and implement citizen and stakeholder involvement in the Minnesota Water Sustainability Framework development process. The committee's role was to ensure that the framework incorporated the voices of Minnesotans and stakeholder groups that know, love, and use our lakes and rivers. All Minnesotans were encouraged to complete a survey, participate in listening sessions around the state, and share their perspectives through their stakeholder representatives on the CSAC.

The CSAC includes representatives from environmental groups (Minnesota Waters, Freshwater Society, Clean Water Action), recreational interests (Anglers for Habitat, Trout Unlimited), agriculture (Agri-Growth Council, small farmer), local units of government (Association of Minnesota Counties, League of Cities, soil and water conservation districts, watershed districts, and townships), business (Minnesota Chamber of Commerce), and tourism (resort owner), as well as shoreland owners and tribal partners. The CSAC was co-chaired by Barb Liukkonen of the University of Minnesota and Marian Bender, executive director of Minnesota Waters.

Marian Bender, executive director, Minnesota Waters
Jeff Broberg, president, Minnesota Trout Association
Mark Doneux, administrator, Capital Region Watershed District
Perry Forster, chairman, Riley Purgatory Bluff Creek Watershed
Annalee Garletz, Association of Minnesota Counties
Darrell Gerber, program coordinator, Clean Water Action
Tony Kwilas, director of environmental policy, Minnesota Chamber of Commerce
Dave Legvold, farmer and retired teacher
Barb Liukkonen, University of Minnesota Water Resources Center
Daryn McBeth, president, Minnesota Agri-Growth Council
Joan Nephew, executive director, Freshwater Society
Shirley Nordrum, Leech Land Band of Ojibwe
Mary Richards, Maplelag Resort and Forest Resources Council

Charlotte Quiggle, shoreland owner and township planning commission
Brian Strub, League of Minnesota Cities
Vern Wagner, Anglers for Habitat

Primary roles of CSAC members included representing a variety of perspectives and viewpoints; helping identify priorities for the framework; engaging the groups they represent for initial input and insights; and advancing citizen/stakeholder perspectives to MWSF technical work teams so they are synthesized into the framework. CSAC members also served as liaisons with the framework synthesis team and Headwaters Council to ensure citizen and stakeholder viewpoints are integrated into the framework; helped solicit citizen and stakeholder review of draft version(s) of the framework; and will help disseminate the final framework.

The CSAC met seven times in late 2009 and 2010. At the CSAC meetings, members discussed the survey findings to date, planned initiatives to reach out to various stakeholder groups and other key audiences around the state, and worked together to compile and report the citizen input gathered by the committee and by other framework participants.

2. Communications Efforts

CSAC members introduced the framework project and invited people to take the survey at over 50 events and through a dozen newsletter/newspaper articles, hundreds of email messages and online blogs, and links on organizational websites. These contacts informed and engaged tens of thousands of Minnesotans in development of the framework.

Monthly updates were sent through the Water Resources Center. Members of the Headwaters Council and other technical teams also made presentations about the framework process and invited people to participate in the survey.

Our commitment to outreach in the Framework project is exemplified by efforts to inform the public of the project and its progress. Since August 2009 project staff and volunteer Citizen Stakeholder Advisory Committee members engaged in weekly outreach efforts. Outreach took a variety of forms, including presentations, listening sessions, surveys, organizational newsletters, newspaper articles, and e-mail announcements. Over 76,000 Minnesotans have been reached everywhere from Thief River Falls to Grand Portage to the Twin Cities to Rochester. Many Minnesotans are anticipating the release of the final Framework to look for their voices and issues.

3. Listening Sessions

Listening sessions were cosponsored with the Minnesota Board of Water and Soil Resources (BWSR) in nine Minnesota communities in January and February 2010: Brainerd, Chaska, Crookston, Duluth, Marshall, Rochester, St. Cloud, St. Paul, and West St. Paul. Some 400 representatives of local governments, natural resources professionals, and interested citizens attended. A BWSR staff presented introductory remarks. Jean Coleman or Barb Liukkonen described the framework; there was an interactive (anonymous) survey using Turning Point

technology, and then participants broke into small groups or shared their perspectives in the large group. People could sign up to receive a monthly update and/or contribute written comments at the meeting or by sending them in afterwards. Note takers captured comments and discussion.

4. “Minnesotans and Their Water” Survey

A survey, “Minnesotans and Their Water,” was created to give citizens and water resource professionals across the state an opportunity to provide input to the framework process. While a short survey like this may overly simplify some of the complex issues surrounding water, it gave us an opportunity to hear what is important to Minnesotans. Open-ended questions allowed respondents to add comments if the multiple-choice options didn’t fit their opinions or values.

The survey was disseminated in hard copy at conferences and meetings, and to people who couldn’t access it online. The survey was available online from November 2009 through August 2010. A total of 4,743 surveys were received either in hard copy or online.

Not all respondents answered all questions and some misinterpreted directions, so there aren’t 4,743 usable responses for every question. In addition, the original online version using WUFOO software allowed people to select more than one first choice for ranking questions. Data from those questions were not included in the survey totals, although data from other questions on those same surveys were deemed usable to gather as many data points as possible.

A summary of survey results is appended and responses to individual questions are synthesized below. Demographically, survey results seem to be fairly representative of Minnesota. About 40% of respondents were from the Twin Cities metropolitan region, 27% were from central Minnesota, and approximately 10% were from each of the four corners of the state. Only 9% of respondents were less than 25 years old; 19% were older than 65. The majority of respondents were in the middle range, with 22% between 26 and 45 years old and 51% between 45 and 65. About 40% responded that have a private water supply and 60% said they use water from a municipal system. That proportion does not reflect the true ratio of private well owners in Minnesota (25% private well ó 75% public supply). Apparently some people had difficulty with the wording of the question and others indicated they had both water supplies ó public at their primary residence and a well at their secondary residences (e.g., cabin). Several comments noted they were more concerned about the well so they checked that box.

Survey respondents were also asked to identify their recreational use of Minnesota’s lakes and streams, and were allowed to choose as many as they wanted and add others in an open-ended option. The most common response was “observing the natural world,” followed by boating, swimming, fishing, and owning shoreland property. A significant number identified hunting as a favorite pastime; ricing, winter sports, and spiritual recharge were also frequently listed.

D. Results, Conclusions, Recommendations

The following comments are synthesized from the survey results and supported by comments made at listening sessions and perspectives heard by CSAC members from their stakeholders.

1. Use of Water in Minnesota

When asked, "In your opinion, what are the three most important uses of water in Minnesota?" survey respondents indicated they felt drinking water was the most important use, with ecological uses for wildlife and plants as the second most important use. Agriculture and recreational uses were ranked third and fourth in importance, followed by power generation, wastewater disposal, and transportation.

Table 1. Minnesota water use poll

Use	Average Rating*	Rank
Drinking water	2.66	1
Ecological Uses (for wildlife and plants)	1.17	2
Agriculture	0.91	3
Recreation	0.81	4
Wastewater Disposal	0.21	5
Power Generation	0.13	6
Transportation	0.06	7
* on a scale of 1-3, with 3 being the highest and 1 the lowest		

Drinking water is ranked the most important use of water, followed by ecological services, recreation, and agricultural uses. Power generation, wastewater disposal, and transportation were ranked significantly lower. It is interesting to note that, as evidenced by survey responses (Q1 and Q7) and listening session comments, people believe that the ecological services (uses of water by/for plants and animals) are more important than human uses such as agriculture or recreation. This idea is supported by the fact that Minnesotans voted for a sales tax increase to support the environment and conservation of natural resources. *Minnesotans believe that investments should address ecological functions as a priority.*

2. Most Serious Problems

When asked to identify the most serious problems facing Minnesota's waters, in their opinion, respondents indicated they believe that chemical pollution; nutrients; and nonnative plants, animals, and diseases are the three most serious problems. People rated their top three.

Table 2. Minnesota water problems poll

Most Serious Problems	Average Rating*	Rank
Chemical pollution (salt, petroleum, pesticides)	1.42	1
Nutrients	1.06	2
Non-native plants, animals, diseases	0.77	3
Loss of wetlands	0.74	4
Overuse, multiple demands	0.56	5
Unsafe drinking water	0.53	6
Stormwater runoff	0.51	7
Climate change	0.23	8
* on a scale of 1-63, with 3 being the highest and 1 the lowest		

Survey respondents indicated they felt chemical pollution and nutrients were the most serious problems facing Minnesota waters; this shows an understanding that it is pollutants that run off the land that most endanger our waters. It is interesting to note that while drinking water was ranked as the most important use, unsafe drinking water was not seen as a major challenge. This could indicate that most Minnesotans are confident that their drinking water is safe. It is also important to note that to the general public, invasive species are seen as one of the top three most serious threats to the health of our state's water. While current state and local water quality programs have long been focused on reducing and managing pollutants, little attention has been given to addressing the threat of invasive species. *To address this level of citizen concern, state and local resource management programs should include efforts to prevent the spread of these species and to manage their impacts.*

In addition to the multiple-choice options, people could identify other issues as a priority. Of the 220 comments describing opinions about the most serious problems facing Minnesota's waters, 39 (18%) indicated agricultural production and runoff is serious. An additional 25 (11%) indicated human wastewater, septic systems, or municipal wastewater treatment is serious. Almost 10% indicated land use and overdevelopment. Six percent said inadequately enforced or excessive regulations were a major problem, and another 7% indicated inefficient or inconsistent government was a problem.

3. Balancing Investments and Priorities

Four questions on the survey asked respondents to characterize the balance they thought should be struck between two ends of a spectrum.

Question 3 asked people to identify the balance they believe should be established between improving polluted (impaired) lakes and rivers and protecting waters that are still healthy. There were some regional differences in response to this question. Respondents and participants at listening sessions in northern Minnesota weighed protecting still healthy waters more highly, while those from southern Minnesota opined that more resources should be invested in improving polluted waters. These regional differences are largely related to the quality of waters in those regions of the state.

Overall, the average of all responses came out almost exactly at 50%. This indicates that people believe protecting healthy waters is as important as improving those that have become polluted. Minnesota's current policies and most funding structures favor work that addresses impaired or degraded waters. In contrast to those current practices, *Minnesotans want to see a shift to supporting equal efforts to protect waters of the state that are still healthy.*

“Water use is sustainable when current use does not cause harm to ecosystems, degrade water quality, or compromise the ability of future generations to meet their own needs.”

LAWS of MINNESOTA 2009,
Chapter 172, Article 3, Sec. 30(a)

Question 4 questioned the balance between investing in (protecting or improving) groundwater or investing in surface waters. Again, the balance was nearly at 50/50 (48.8% groundwater to 51.2% surface water), indicating that respondents value groundwater equally with the more visible surface waters they use for recreation. Currently investments in groundwater are less than those made in improving impaired surface waters. *Minnesotans want to see a shift to policies and funding strategies to understand, value, and protect ground water resources.*

For question 5, people were asked to indicate their preference regarding how investments are allocated to address the most serious problems first, no matter where they are located in the state, versus ensuring resources are distributed equitably across the state. Again there were some regional differences, with responses from greater Minnesota supporting an equitable geographic distribution, and response from the Twin Cities metro and central regions indicated they wanted to address the most serious problems first.

Overall there was a preference for addressing the most serious problems first, regardless of where they are in the state (63.3%). At listening sessions, a common request was to include a regional pool of funds that could be invested in local/regional priorities. There is a general perception in greater Minnesota that a disproportionate amount of resources are invested in the Twin Cities metro area. Arguably the largest percent of the state's population resides there, but many recreate in greater Minnesota. *Minnesotans would like to see a portion of the resources/funding allocated to and prioritized by regional entities/partnerships (with appropriate oversight), rather than all by competitive funding through statewide pools.*

Minnesotans also want to see a long-term focus on investments and programs, with sufficient time for realistic evaluation and assessments of improvement. They want flexibility in funding options, with opportunities to address emerging issues or crises, and local prioritization and control of some resources. Minnesotans support funding and investments through organizations, institutions, citizen groups, and tribal partners, not only through state or local agencies.

In question 6, respondents indicated the balance they felt should be established between “having complete scientific research before making decisions” and “making decisions as soon as possible based on the best available science to prevent further degradation of water resources.” The balance was weighed slightly in favor of making decisions as soon as possible (55.2%). *This indicates that Minnesotans believe it is important to have good science and research-based information, but it’s equally important to move forward and begin to make change, rather than waiting for all possible studies to be completed.* This opinion was emphasized at listening sessions and in comments heard by CSAC members.

4. Definition of Water Sustainability

Survey respondents were asked to indicate how well the framework’s definition of sustainability matched their own definition.

Just over 85% of respondents said the definition either “matched their own definition almost exactly” (32%) or it matched “pretty well” (53%). Less than 2% said the framework definition does not match their personal definition. This indicates that Minnesotans support both ecological services and ensuring water for future generations. *A sustainable system should be established with a balance among economic, environmental, and sociopolitical factors to attain the water quality goals identified by Minnesota citizens. Increased education and media efforts should get people talking about sustainability so it becomes an accepted concept and people embrace it.*

5. How to Evaluate Water Improvement

Question 8 was open-ended and asked how respondents would measure whether Minnesota’s waters are getting better. There were nearly 2,800 comments in response to this question with a broad range of suggestions. About 50% suggested testing or monitoring, although people weren’t explicit about what measures or standard would be appropriate. Of those who suggested monitoring, 15% indicated water clarity or transparency should be the appropriate measure. Another 22% indicated that it should be long-term, comparative monitoring to identify trends. About 10% recognized the value of biological integrity, biodiversity, and ecological measures as important indicators of healthy waters; 7% said waters should meet their designated uses (fishable, swimmable, drinkable).

People want quantifiable measures and they want the data, results, and trends of water monitoring to be communicated and accessible. People could understand and would embrace a simple rating system for waters (e.g., A, B, C, D) so they could make their own

decisions about what is fishable or swimmable. People think water should meet standards, although they don't always understand what the standards are or how they get established.

Comparative assessments with before-and-after measurements are an effective way for citizens, professionals, and legislators to track improvements. Criteria for distributing resources should include a requirement for evaluating change. Educational campaigns and programming will help people understand standards, monitoring methods, and interpretation of results so they can be better informed and engaged in decision making at the individual and community level to protect and improve water resources.

Monitoring protocols, results, and trends should be made accessible in easily understood formats for citizens, local resource professionals, and local decision makers. Minnesotans want to see progress and change. They want to make sure investments are sound and will result in identifiable improvement. They also want intuitive and practical systems of assessing water resources so they can understand and be involved in decision making to protect those resources.

6. *Effective Tools for Changing Behavior*

Question 9 asked which tools are the most effective in protecting or improving water resources. Incentives (e.g., cost sharing, tax breaks, or payments for conservation) came out as the top-ranked tool, followed by statewide educational programs, state regulations and enforcement, and state regulations with local enforcement. People were asked to rate their top three choices.

Table 3. Most effective tools to protect and improve water resources

Most effective tools in protecting or improving water resources	Average Rating*	Rank
Incentives (such as cost sharing, tax breaks, or payments for conservation)	1.26	1
State regulations and enforcement	0.86	2
Statewide educational programs	0.82	3
State regulations and local enforcement	0.81	4
Locally based education	0.77	5
Disincentives (such as penalties, increased rates for excessive water use)	0.66	6
Local ordinances and local enforcement	0.55	7
Other	0.11	8
* on a scale of 1-3, with 3 being the highest and 1 the lowest		

The response regarding incentives that encourage best management practices was chosen most often by respondents. Statewide regulations and enforcement and statewide educational programs were chosen more often than locally based efforts. After that responses were relatively evenly distributed among the rest of the possibilities, indicating no clear preferences. *People support the use of incentive programs and educational programs to protect and improve the water. Disincentives are seen as less effective in changing behavior to protect and improve water.*

7. *Further Comments and Suggestions*

Question 10 was also open ended, asking if there was anything else that the respondent wanted to share as we develop a framework for sustainable water resource management in Minnesota. More than 1,480 respondents took the time to enter a response to the question. Responses were grouped and counted according to general subject matter.

- a. **Regulation, enforcement, policy.** The majority of the responses addressed regulations and enforcement. Of all responses, 21% pertained to public policy relating to water management in Minnesota. Most of those related to *the need for stronger enforcement of current regulations* pertaining to water. Many respondents gave examples of local and state authorities overriding or ignoring laws, rules, and ordinances already in place.

Responses also focused on *the need for more coordination of water-related efforts among the state agencies and the need to streamline agency efforts* to make them more efficient.

Comments also reflected the *ongoing tension between state and local efforts* related to water. Respondents felt that there needed to be better local buy-in and enforcement of regulations and increased local control of water-related decisions; however, there is a need for statewide efforts to provide consistency and maintain a larger statewide vision. There seemed to be equal desire for local control and statewide consistency and enforcement. Many mentioned the challenge of having local government enforcing tough laws because it's politically challenging.

- b. **Education.** The second most-mentioned topic in question 10 was *education (19%)*. *The citizens of Minnesota know their water is important, and they know the quality of their water is threatened. They are willing to help protect and improve water quality, but don't know how, why, or exactly what to do about it. The problem seems too big and too complex for individual citizens to grasp. Key recommendations from the survey responses and from the listening sessions include:*

- It's important to *educate children* on their role in protecting and improving water quality. Children will pass on what they learn to their parents, and educated children will grow up to be adults who make good decisions about water use.

- *Citizens want to learn specific actions* they can take to protect and improve water.
- Education about best management practices is *more effective when coupled with incentives* for positive actions as well as enforcement of regulations (punishment for undesired actions).
- *Education is needed to drive the cultural shift* that will be required to change behaviors that affect water.

Other notable responses to question 10 that appeared multiple times, included:

- No water exports from Minnesota
- More attention must be focused on aquatic invasive species
- Get the politics out of funding decisions
- Less study, more action

E. Stakeholder Perspectives

Stakeholder representatives on the CSAC were invited to submit their perspectives and recommendations for consideration by the Synthesis Team. The following pages contain perspectives from 10 of the stakeholder members.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Minnesota Agri-Growth Council

Submitted by: Daryn McBeth, President

- The Minnesota Water Sustainability Framework process ó to develop a comprehensive statewide approach to protect, conserve, and enhance the quantity and quality of Minnesota's groundwater and surface water ó is an important goal for the Minnesota Agri-Growth Council, both in terms of clean water and in terms of process. Procedurally, development of a comprehensive framework is important to allow for input and advice from stakeholders and also to establish a plan or vision that utilizes Legacy Amendment funding wisely. The protection and restoration of Minnesota's waters is vitally important to the state's food and agriculture industry from a civic responsibility interest and also from an economic persuasion.
- From the Minnesota Agri-Growth Council's perspective, in representing over 200 members including agribusinesses, food processors, commodity groups, academic institutions, and other food chain partners, designing a water sustainability framework that accurately and fairly portrays the food and agriculture industry is critically important. Agriculture is the second largest industry in the state, next to manufacturing. And since the food and agriculture industry is dependent on, a user of, and a contributor to water quality and quantity in the state, the role of the agriculture industry in determining the future direction and financial support of clean water policies is also very important.
- As to the utilization of funds from the Constitutionally mandated three-eighths of 1 percent (0.375) sales tax rate designated to habitat, clean water and cultural heritage, the Agri-Growth Council is mindful of the 33 percent portion of these funds that will be deposited in the Clean Water Fund for related clean water initiatives and efforts. These efforts should be allocated for the purposes designated in the amendment, and carried out in a manner that achieves meaningful and verifiable results toward water quality and quantity improvement in Minnesota. These efforts should also be implemented in a way that minimizes bureaucracy and additional unnecessary mandates or requirements on food and agriculture industry water users, especially in the face of opportunities to encourage voluntary practices.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Angling/Recreation Stakeholders

Submitted by: Vern Wagner, Anglers for Habitat

- Fishing is much more than just a getaway for millions of Minnesotans. Fishing also helps to provide a living for countless people from all walks of life and in all corners of the state. In Minnesota we have over 1.2 million anglers. It is imperative that we restore the aquatic habitat to its natural historic state and reverse the negative effects of shoreline development and/or agricultural use.
- As anglers our interest is in healthy and robust aquatic ecosystems that support habitat, stable fish populations and provide clear, clean places for boating, recreation, and outdoor activities. Our watersheds support a myriad of fish and game. Whether it is a trout stream flowing through a forest or the open expanses of our Great Lakes, our survival depends on protecting, restoring, and preserving this water that gives meaning to us as Minnesotans.
- **Definitions of impaired or polluted waters need to consider the spread of Aquatic Invasive Species (AIS).** The threat from AIS to the fish population, natural habitat, and water quality is spreading seemingly unchecked through Minnesota's 10,000 lakes. The potential for degraded water quality from AIS is escalating. Whether it is zebra mussels or Asian carp, an ecological disaster is pending. **It is imperative to use Clean Water funding to slow, prevent, and find solutions to AIS.**
- Aquatic Management Areas (AMA) are critical in protecting clean water not just by providing critical lake and shoreland habitat protection, but also in terms of public benefits in the form of access, recreation, and scenic amenities. They protect aquatic vegetation (macrophytes) in the near-shore area that serves to filter and uptake nutrients that would otherwise be available for algal production. They also protect against shoreland erosion from waves. For example, in addition to providing spawning and nursery habitat for game fish, plants like bulrush serve as natural water quality filters. An AMA protects the entire upland parcel and the shoreland, which prevents that parcel from being a contributing source of nonpoint pollutants and runoff. They filter and buffer runoff from any parcels upstream of the AMA that would drain through the AMA before reaching the lake.
- If there are existing or developing water quality problems on the lake, an AMA can provide habitat that will buffer ecological changes in the lake. This provides more time to address the problem. If an AMA is created by restoring property that had been a significant loading source, the benefits could be even more significant. (This comment has been taken from testimony on the benefits of including funding for AMAs in the context of clean water protection. Kristen Blann, Ph.D.)

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Minnesota Chamber of Commerce

Submitted by: Tony Kwilas, Director, Environmental Policy, Minnesota Chamber of Commerce

- The protection and restoration of Minnesota's lakes and streams is not only an important civic responsibility of stewardship of our natural resources, it is essential to Minnesota's economy. The tourism/recreation industries, manufacturing, and agriculture rely on our water resources. Under the federal Clean Water Act, failing to meet water quality standards could prevent business expansion and development.
- The Minnesota Pollution Control Agency and other state agencies and local units of government must implement section 303(d) of the federal Clean Water Act (impaired waters/Total Maximum Daily Load) in a timely manner through a process that is based on sound science and that provides for open participation and input by all stakeholders.
- In 2006, the Minnesota Chamber supported passage of the Clean Water Legacy Act, which creates a policy framework for implementation of the federally mandated impaired waters program. The law requires coordination and cooperation among state agencies and local units of government; sets goals and priorities for assessing, evaluating, and restoring impaired waters; and establishes a mechanism for ongoing oversight of program implementation.
- The Chamber recognizes that the identification, evaluation, and restoration of lakes and streams that do not meet water quality standards will require significant financial resources. In the 2008 election, voters passed an amendment to the state constitution that increases the sales tax rate by three-eighths of 1 percent (0.375 percent) to be dedicated to habitat, clean water, and cultural heritage. Thirty-three percent of the annual receipts will be deposited in the Clean Water Fund. The chamber will work to ensure that the funds are allocated for the purposes designated in the amendment and are spent in a manner that minimizes bureaucracy and administrative cost and that achieves verifiable water quality improvements.
- The Legislature, governor, and Clean Water Council established in the act must ensure that the agencies and departments responsible for implementing the Clean Water Legacy Act fulfill the goal of achieving and maintaining water quality standards. All programs must include outcome-based performance measures that will quantify the impact of expenditures on a project and watershed level.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Forestry Industry

Submitted by: Dave Zumeta, Executive Director, Minnesota Forest Resources Council

The following statements are derived from a 2010 publication by the Minnesota Department of Natural Resources Division of Forestry entitled **Minnesota Forest Resource Strategies**:

Positioning the State of Minnesota for Forest Resources Sustainability 2010–2015.

Several of the issues and related strategies listed in Chapter 4 of this publication, State Issues and Strategies, are directly relevant to the state water resources framework that is being developed. All of the following statements are generally consistent with the priorities of the Minnesota Forest Resources Council, which was one of many forestry and related entities that helped the Division of Forestry develop the document in which these statements appear.

Maintenance and protection of water quality and quantity

Minnesota has abundant water supplies in both surface and underground systems. However, demand for water is increasing faster than population growth, which presents challenges to balancing water quality and consumptive needs. Coupled with climate change threats of increased storm severity, runoff, flood damages, and drought, the protection and sustainable management of the state's public and private forest lands are a critical component in ensuring that clean water supplies will continue to be available in the future.

Maintenance of high quality aquatic habitats

Changing land use and population growth also threaten aquatic habitats in the state. Protecting and maintaining high quality aquatic habitats and healthy water ecosystems are essential for sustaining not only human water needs and quality of life, but also the multi-million dollar hunting and fishing industries that are large economic drivers for which the state is well known.

Maintenance of Minnesota's Forest Land Base: Increasing Threats of Forest Fragmentation and Parcelization

Historically Minnesota has enjoyed a large forest land base. However, recent multiple pressures including fragmentation, changes in land ownership patterns, increasing invasive pest pressures (forest health), economic changes in the timber industry, and climate changes are demanding restructuring of forest management practices for present and future multiple needs. Collaboration with like-minded partners in tackling these many-faceted issues will be key to sustaining a healthy forest land base in the state.¹

¹ In presettlement times, Minnesota had about 32 million acres of forest, about 15 million acres of which were subsequently cleared for agriculture or for residential or commercial development. Most of Minnesota's water quality problems occur in these latter areas, and water quality is generally much higher in areas with extensive forests than in agricultural or developed areas. Minnesota's current 16.7 million acre forest land base includes over 5 million acres of riparian forests, of which several million acres are forested wetlands, and is intermingled with many millions of additional acres of lakes, rivers, streams, and non-forested wetlands. Maintaining this forest land base often involves maintaining large acreages of these aquatic habitats. For example, the recent 187,800-acre perpetual forest conservation easement agreement signed by the DNR and Blandin Paper Company includes over 60,000 acres of wetlands and 280 miles of lake, stream, and river frontage.

Mitigation and Adaptation to Climate Change

Climate change is a global phenomenon that has the potential to significantly affect Minnesota forest resources. Climate change will cause the greatest change in forests that are stressed with disease, pests, ground compaction, or altered hydrology, and could result in reduced quality of wood, water, and wildlife habitat. The state is committed to a collaborative approach of working with partners to mitigate and adapt to climate change.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: The Freshwater Society

Submitted by: Joan Nephew, Executive Director

- Minnesota needs a scientifically rigorous study of groundwater that will tell us if we are drawing down precious groundwater resources. If we are to be responsible stewards, we need to know if we are pumping and using groundwater at a rate greater than it is being replenished. As a state, we need to do a better job of weighing long-term, cumulative aquifer-wide concerns when permitting individual wells.
- Nitrates and other chemical compounds are contaminating groundwater. Minnesota needs more and better monitoring of groundwater, and we need to protect groundwater from contamination.
- Minnesota still has fully tested only about 20 percent of our lakes and rivers, and 40 percent of those waters are polluted. We need a hard look at whether the cumbersome and costly Total Maximum Daily Load process is the best way to protect and clean up surface waters.
- Agricultural runoff is the major source of nonpoint pollution. Urban and suburban development also contributes sediment and contaminants to surface waters. We need regulations to substantially reduce nonpoint pollution.
- Endocrine-disrupting compounds widely found in our surface waters are a threat to fish and other aquatic organisms and potentially to humans. We need continued research on the compounds, and we need stronger efforts to keep them out of lakes and rivers.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Minnesota Lake Associations

Submitted by: Marian Bender, Executive Director, Minnesota Waters; and
Charlotte Quiggle, Citizen Leader, Sugar Lake Association

- Create a grant program that would provide amendment dollars to fund specific citizen-led projects with clear surface water quality benefits. Program could be run by Minnesota Waters, which already administers a small, privately funded grant program for this purpose.
- Increase support from the Minnesota Pollution Control Agency for citizen volunteer water quality monitoring. While this program initially engaged hundreds of citizen volunteers who helped expand the state's database of water quality information, financial and political support for the program has dwindled in the past year.
- Push forward the approval and implementation of DNR's revised shoreland rules, which are stalled on the governor's desk. These more protective rules will provide a framework for better land use in the areas adjacent to surface waters and create a stronger backbone for protecting and improving the state's waters.
- Provide funding for counties to offset the costs of updating shoreland ordinances following adoption of the DNR's revised shoreland rules.
- Increase enforcement of current buffer laws on agricultural land. These buffers along streams, lakes, and ditches, if implemented as the current laws require, would lead to a huge reduction in nutrient loading into lakes and streams.
- Align state and local agricultural incentive programs with water quality improvement goals; make sure tax laws reward conservation activities.
- Require that each resource management agency review its current work plans to identify programs that could be increased or improved with citizen engagement, and require that they come up with a plan to do so.
- Expand funding to citizen's groups for preventing the spread of Aquatic Invasive Species (AIS).
- Expand funding for the existing DNR pilot program for whole-lake/whole-bay AIS treatment, which is a cost-sharing program for ecological management of AIS.
- Increase enforcement of septic system management standards (SSTS Rules.) This should entail funding local government units to develop a complete inventory of existing septic systems and then use the resulting database to require recertification of compliance every five years.

- Provide more funding for citizen education for best management practices (BMPs) for shoreland management, to reduce erosion and stormwater runoff into surface waters.
- Offer courses regarding current and newly developed BMPs to contractors who work in the shoreland; require that any contractor who works in the shoreland be certified every three years by attending such a course.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Leech Lake Band of Ojibwe

Submitted by: Shirley Nordrum and Levi Brown, Leech Lake Environmental Director

*"Water is alive, water has feelings, water can hear..."
-Grandmother Josephine Mandamin*

Anishinaabe are connected to all that is around us. Life is a web and everything is connected, but like the spider's web, when strands become weak or broken the strength of the web is lost. We began to lose our connections. Traditional ecological knowledge has long recognized that quality water is a critical and integral to maintaining our traditional way of life. This philosophy is in keeping with 85% of Minnesotans' approval of the definition of water sustainability being when current use does not cause harm to ecosystems, degrade water quality, or compromise the ability of future generations to meet their own needs.

Background

There are 11 federally recognized Indian Tribal Nations whose reservations are located in Minnesota and who may retain treaty guaranteed rights to hunt, fish, and gather within Minnesota in areas ceded to the United States in various treaties.

Although unique and distinct in their own right, Minnesota Tribes share much in terms of their interdependence with, and reliance upon, natural resources to meet subsistence, economic, cultural, traditional, spiritual, and medicinal needs.

Tribal populations tend to face increased risk of public health threats from environmental contamination and to be subject to impacts from environmental degradation to a greater extent than other population segments. Tribal communities tend to consume larger quantities of fish, game, and other natural foods than other communities, and thus face higher health risks posed by bioaccumulative toxics.

A 1999 Indian Health Service report reported that tribal communities face significant disparities regarding disease and mortality rates. Tribal communities have higher incidences than other communities of certain diseases, such as diabetes, cardiovascular diseases, hypertension, and obesity.

There is a clear relationship between the use of traditional foods and the health and well-being of tribal members, including: improvement of diet and nutrient intake, prevention of chronic diseases, and increased opportunities for physical fitness and outdoor activities associated with harvesting traditional foods.

All of Minnesota's Tribes have environmental management programs relating to water quality monitoring and regulation, air quality monitoring and regulations, solid waste disposal, underground storage tanks, and habitat restoration.

Recommendations

- There are significant overall public benefits to ensuring Minnesota tribes have equal access to Minnesota Clean Water Funds. Concerns regarding Minnesota's waters are the same side of the fence issues for tribal, federal, state, and local governments, as well as for nongovernmental organizations. This can be accomplished by creating a grant program to provide amendment dollars to fund specific Tribal projects with clear surface water/ground water quality benefits.
- Require that each resource management agency review their current work plans to identify programs that could be increased or improved through coordination with Tribal programs and require that they come up with a plan to do so.
- Increase enforcement of septic system management standards (SSTS rules). This should entail funding local government units and Tribes to develop a complete inventory of existing septic systems. The resulting data should be used to develop programs for the recertification of compliance.
- All programs receiving funding from Minnesota Clean Water Funds must include outcome-based performance measures that will quantify the impact of expenditures on a project and watershed level.
- Aquatic Invasive Species (AIS) particularly threaten tribal life ways because of significant adverse impacts on tribal fisheries, harvesting of aquatic foods and medicines such as wild rice and, in the case of the faucet snail, a huge impact on duck harvesting. The potential for degraded water quality from AIS is escalating. Whether it is zebra mussels or Asian carp, an ecological disaster is pending. It is imperative to use clean water funding to slow, prevent, and find solutions to AIS.
- Minnesota's future relies on a well-educated public to be wise stewards of the environment. Environmental education can best help Minnesotans make complex, conceptual connections between economic prosperity, benefits to society, environmental health, and our own well-being. The collective wisdom of our citizens, gained through education, will be the most compelling and most successful strategy for protecting Minnesota's water resources. Fund environmental education and outreach efforts to support this initiative.
- Adopt a science-based ecosystems approach, building upon the linkages among media, stressors, and habitats. Ensure that peer-reviewed science is used to guide management decisions. Do not manage resources based on the needs of any one specific species, but rather, based on the needs of maintaining an ecologically sound ecosystem.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Resort Owners

Submitted by: Mary Richards, Owner, Maplelag Resort, Callaway, Minnesota

Minnesota resort owners now face a variety of issues, which makes survival (especially of the smaller resorts) increasingly difficult. Property taxes, zoning, and the economy are issues over which they have little control.

Consequently, maintaining a healthy quality of water becomes increasingly crucial to the survival of Minnesota resorts. Some of the concerns expressed by resorters are:

- **Invasive species.** The increasing prevalence of invasive species will have a direct impact on fishing, boating, swimming and water sports. Zebra mussels and Asian carp are affecting waters now, but as the water quality of lakes declines they will become susceptible to new species.
- There is concern over the lack of regular inspection of septic systems in many counties.
- **Runoff from agricultural land.** Nutrients from fertilizers contribute to the growth of algae in the water. And there is the danger of other contaminants entering the waterways as well.
- **Drinking water.** The quality of drinking water is affected by the water table as well as land usage and the increased population.
- Counties repeatedly give shoreline variances to private landowners, in direct contradiction to DNR shoreline setback standards. Private landowners often remove buffer zones along the shoreline, destroying aquatic habitat and removing the natural runoff filtering system. This effect is often compounded by the landowner using fertilizers in order to create a beautiful lawn and gardens.
- There is concern over the lack of regular inspection of septic systems in many counties.

As it becomes increasingly difficult for resorts to remain viable, we will see properties being divided into lots and being sold to individual private landowners, compounding many of the negative impacts of increased population and poor management.

Resort vacations are a longstanding tradition in Minnesota and tourism is a vital part of the Minnesota economy. Travel/tourism in Minnesota generated \$11.2 billion in leisure and hospitality gross sales and \$695 million in sales tax in 2008 (Explore Minnesota Tourism; MN Dept. of Revenue).

These issues pertaining to water quality are of concern not only to the resort owners but to the economy and the citizens of the state of Minnesota as well.

Minnesota Water Sustainability Framework Citizen Stakeholder Advisory Committee

Stakeholder Recommendations: Water Quality Advocates

Submitted by: Darrell Gerber, Program Coordinator, Clean Water Action for Clean Water Action ó Minnesota, Minnesota Center for Environmental Advocacy, Friends of the Mississippi River, and Land Stewardship Project

- The Clean Water, Land and Legacy Act (CWLLA) was supported overwhelmingly by Minnesota voters in the 2008 election. The funds raised and deposited in the Clean Water Fund must be used only for the purposes enumerated in the act. The Clean Water Fund must also be used to supplement, not supplant, resources to protect and restore Minnesota waters.
- Funding must be appropriated to meet the CWLLA and Clean Water Legacy Act goals in the most effective and efficient manner. Programs should undergo periodic independent evaluation of their effectiveness at meeting the stated program goals with reports to the Legislature.
- Periodic testing and monitoring is necessary in order to determine and ensure continued improvement in water quality in Minnesota's waters. Funding must be provided for water quality assessment sufficient to identify impaired and high-quality waters on a scientifically valid timeline of at least once every 10 years.
- Sufficient funding must be provided to prepare and submit Total Maximum Daily Loads (TMDLs) for all impaired waters in a timely manner in accordance with federal requirements. Within one year of U.S. Environmental Protection Agency (EPA) approval of each TMDL, a detailed implementation plan should be prepared. Sufficient funding should be provided to undertake those activities identified in the implementation plan, prioritizing those with maximum water quality benefit. Implementation plans must contain specific restoration actions, targeted by practice, location and responsible party; short-term (1- to 2-year), mid-term and long-term benchmarks; and an effectiveness-monitoring plan for practice adoption (as appropriate) and water quality improvement.
- Provide funds to begin restoration of waters listed as impaired but which have not yet had an approved TMDL addressing the impairment only for targeted and prioritized assistance and incentives.
- Funds should be provided for targeted, prioritized assistance and incentives as needed to prevent degradation of "high quality" waters in conformance with the anti-degradation provisions of the federal Clean Water Act.
- Drinking water and ground water protection funds should be used to protect drinking water sources, develop strategies to ensure adequate safe drinking water for Minnesotans, and identify and address impacts from endocrine disruptors and other emerging or unaddressed contaminants in surface and ground water.

Minnesota Water Sustainability Framework
Citizen Stakeholder Advisory Committee Report
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