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Changes since 1/6 version are highlighted or struck

I. FINDINGS:

A. Nonpoint Source Pollution

1. Minnesota's lakes, rivers and streams are polluted. The state has limited data on water quality and the extent and effects of nonpoint source pollution. About 18% of our lakes and 14% of rivers have been evaluated for contamination as required by the federal Clean Water Act.¹ This can make it difficult to tell when practices and policies are working.

Of the water bodies that have been evaluated, about 40% fail to meet water quality standards and have been labeled "impaired."²

2. **Of the water bodies that are found to be impaired, the large majority are primarily due to nonpoint sources.** A report by the MN Pollution Control Agency in 2000 found that 86% of impairments are primarily due to nonpoint source pollution; 14% are primarily due to point sources.³ ~~Nonpoint sources are estimated to contribute 86% of water pollution in Minnesota.~~ This is a major change from 30 years ago. Since the passage of the Clean Water Act in 1972, Minnesota and the nation have made great progress in reducing pollution from point sources – such as wastewater treatment plants and factories – has been greatly reduced. However, we have not made much progress on combating nonpoint source pollution; some sources indicate nonpoint source pollution is getting worse.⁴
3. Sources: **By far the largest contributor of nonpoint source pollution statewide is runoff from agricultural practices.** **Agricultural runoff** contributes an estimated 70-80% of all nonpoint source pollution in the state.⁵

Other large sources are **[add scale/percentages where possible; discuss how they are not discrete categories]:**

- o Urbanization (the conversion of rural to urban lands) and urban runoff
- o Shoreland development
- o Wetland loss
- o Septic systems
- o Forestry

For comparison, here's how Minnesota's land is covered (excluding Lake Superior):⁶

- o Agriculture: 44%
- o Forest: 32%
- o Grass/Shrub/Wetland: 13%
- o Urban Development: 6% (Impervious Surfaces: 2%)
- o Water: 5%

B. Governance/Management

1. Very simply, the current roles of various levels of government:
 - **Federal – depending on the program, ranges from no involvement to very specific regulations.**

¹ Freshwater Society. *Water is Life: Protecting a Critical Resource for Future Generations*. 2008. 30.

² Freshwater Society. *Water is Life: Protecting a Critical Resource for Future Generations*. 2008. 30. Water quality standards are developed by the state, as required by the federal Clean Water Act.

³ Gaylen Reetz, MN Pollution Control Agency. Email, January 21, 2009; PCA's 2000 503(b) report.

⁴ Freshwater Society. *Water is Life: Protecting a Critical Resource for Future Generations*. 2008. 30.

⁵ Nowak, Pete. University of Wisconsin. Phone call, December 22, 2008.

⁶ Freshwater Society. *Water is Life: Protecting a Critical Resource for Future Generations*. 2008. 33.

- Some work on the ground (e.g. Army Corps of Engineers)
- Another example: National Pollutant Discharge Elimination System (NPDES) requires permits for discharge of point source pollution and urban runoff into surface water
- Tribes – [fill in]
- State – guide at times, prescriptive regulator at times
 - Big picture planning
 - Set minimum standards – clearer standards in some areas (e.g. septic systems)
 - Grants and loans
 - Regulation
 - Technical assistance
 - Collect, assess, and share data with local units
 - Enforcement, mostly enforced through local governments (authority delegated according to statute)
 - State sometimes takes action against local governments to enforce standards
- Local government units – where the work gets done
 - More specific, local planning
 - Additional monitoring
 - Project implementation
 - Infrastructure maintenance
 - Primarily responsible for oversight

Larger units of government (federal, state) are not necessarily responsive to local needs but have greater technical resources and have broader scales of responsibility. Local government units may be more responsive to local needs but do not always have the necessary technical resources to solve water problems, and often do not prioritize water management compared to other policy needs.

2. At the state level, government related to nonpoint source pollution is comprised of multiple and, at times, competing executive agencies. The various agencies are often seen as advocates for their jurisdiction (agriculture, natural resources, pollution, etc.), and they provide checks and balances to each other. Requiring cooperation between these agencies can help to insure that all interests are represented at the state level.
3. At the local level, Minnesota's water management is done by a mixture of local government units based on hydrologic and political boundaries:

Governance and resources are not consistent across the state. Both the type of government charged with monitoring and controlling nonpoint source pollution and the resources available to that government unit vary greatly. Large-scale projects necessary to reduce nonpoint source pollution are ~~not possible~~ often expensive and can be cost-prohibitive in many areas.

46 Watershed Districts exist over approximately 30% of the state. Watershed Districts are special units of government that are established along the boundaries of a watershed (and across portions of various counties and municipalities), and which have the authority to levy taxes and to address various water-related problems, from flooding to pollution.

In a majority of the areas/many areas [which is more accurate?] without Watershed Districts, various types of joint powers organizations have been established along watershed boundaries by counties, municipalities and other government organizations.

- In the seven-county metropolitan area, state law mandates that all areas be covered by either a Watershed District or a joint powers organization called a Watershed Management Organization. 22 WMOs exist.
- Other joint powers organizations have been organized voluntarily by governments, without any law compelling their formation. They form because governments want to attract a grant, to address a problem, or to try to figure out how to address a water-related problem. Around two dozen of these organizations exist across the state.

- Other groups work with memoranda of understanding or other agreements that fall short of formal joint powers agreements. Approximately two dozen of these exist.
- There are also alliances (and probably joint powers organizations) that cooperate to provide drinking water and sanitary sewer services.

Water management duties are also taken on by towns, cities, counties, and Soil and Water Conservation Districts (which are established everywhere in the state primarily⁷ along county boundaries, and do not have as much authority as Watershed Districts, including the power to tax).

Overall, none of these forms of local government seems to clearly function better than the others. Some Watershed Districts have the resources and the motivation to have analyzed water flow and contamination in every corner of their district, and are able to do sophisticated projects to cut down on nonpoint source pollution. For others, water quality is not a priority. Likewise, some cities have very successfully implemented projects to improve water quality, while others have not.

Ongoing maintenance costs are an issue everywhere. Even the most basic water quality measures (e.g. stormwater ponds) require maintenance with significant costs. Very few entities have instituted long-term funding mechanisms for these expenses, and the state provides little guidance, incentives or regulatory pressure.

Government structure is one factor that contributes to different levels of effectiveness in managing nonpoint source pollution (more below). Other factors include:

- There is little regulation of nonpoint source pollution. Agricultural practices are for the most part unregulated
- Conflicting incentives – e.g. federal Farm Bill
- Combination of
 - Ignorance – people don't make connection between activities on the land and effect on water
 - Tradition (“this is the way we've always done it”)
 - Difficulty in seeing self as contributing to the problem
 - Conservationists, too, sometimes do things that contribute to nonpoint source pollution
 - Sensitivity to being labeled as “the problem”
 - Poor communication from environmentalists, government **[do we want to say this? Can we cite examples?]**
- Devotion and effectiveness of the people involved, the lead staff person in particular.

4. Government units coordinate, mainly on a case by case basis. Because water flows across local boundaries and its effects fall under the jurisdictions of multiple state agencies, projects often require immense collaboration. Across the state, there have been many successful examples of intergovernmental collaboration to improve water quality. **[Chain of Lakes example – look at what are the elements of success, what helps overcome obstacles]**
5. While there are many examples of how particular locations have successfully improved water quality, management of nonpoint source pollution on the whole is not coordinated. Governance is generally program-oriented; most funding goes toward specific programs, and most intergovernmental coordination is done on a program basis.
6. No single entity is responsible for water quality improvement in Minnesota. Individual agencies carry clear responsibility only **over** limited programs. Consequently, it is unclear who should be held accountable for **the final** results.
7. With so many programs and no single entity with authority, work is done at multiple locations without overall coordination or exchange of information and knowledge. No single organization tracks all research in nonpoint source pollution (let alone in water management in general); no single organization

⁷ A few Soil and Water Conservation Districts cover more than one county; a few counties contain more than one SWCD.

coordinates funding. This can result in confusion, duplication, repetition and inefficient use of money and effort. **[be more specific]**

8. **[Show how statutes drive the system – state system evolved significantly in response to federal requirements; local systems in response to state requirements. We can only keep up with doing what is statutorily required (if that)]**

9. **While the fragmented nature of the governance system leads to some overlap, the more important problem is “underlap” – some problems fall through the cracks.**

Ex: Crop nutrients applied as manure or on the same land where manure is applied fall under the feedlot rules and are regulated by the PCA. Crop nutrients applied only as fertilizer, where manure is not applied, are basically unregulated. Consequently, nutrients in surface and groundwater caused by fertilizer alone are not addressed except marginally in designated wellhead protection areas.

Ex: The PCA manages the TMDL programs and has regulatory authority over point sources of pollution. Agricultural non-point sources are not regulated except under the feedlot rules mentioned above. Additionally, if the impairment is sediment from stream bank erosion caused by changes in flows, the PCA cannot directly address the causes of those changes in flows, like drainage systems, unless they are in urban stormwater areas. Rural drainage systems are left to county ditch authorities, whose primary responsibility is efficient agricultural drainage, not downstream effects.

Ex: No state-level organization is responsible for preventing nonpoint source pollution from entering water bodies.

Some contributors to nonpoint source pollution, such as runoff from development and impervious surfaces like parking lots, are regulated through permitting in certain areas. The extent of regulation varies greatly depending on local governments. **[be more specific about what regulations exist – talk about how federal NPDES standards figure in (a change over recent years)]**

Ex: The Pollution Control Agency is responsible for cleaning up nonpoint source pollution in Minnesota water bodies. **[talk about how requirements flow down from federal Clean Water Act].** But plans for pollution reduction are not always translated into results. **[talk about TMDLs (A testing and planning process; it remains to be seen how well it will actually improve water quality. Are there any examples that have been implemented successfully? Are there any that have been implemented period?) To what extent can we identify reasons?]**

10. Confusion in our government system generates scorn and disrespect for programs. The best example of this may be when a regulated party receives conflicting and confusing messages from different program staff. For example, regarding a wetland on their property, a property owner can get completely different instructions and regulatory guidance from the Army Corps of Engineers, the MN Pollution Control Agency, **the MN Department of Natural Resources,** a Watershed District, and a city. When that happens, their rational conclusion is that the regulatory framework is nonsensical, wasteful, and not worth of their respect or compliance.

11. The public does not understand much of the way that water is managed in Minnesota. In general, the public does not understand the roles of state agencies or various local agencies – Watershed District personnel say that citizens often do not even know when a Watershed District exists in their area. The fragmentation of our government system contributes to the public’s confusion.

Causes:

- Fragmentation
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12. Many, many reports have been published over the past 3 decades on how to improve our water governance system, but little has been changed.

- Recommendations range from small tweaks to drastic overhaul (e.g. merging executive agencies)

- **Say more about what other reports have said, why little change**

13. More attention and resources are focused on cleaning up nonpoint source pollution where it exists than on preventing pollution in the first place. However, not only is it better for the environment to maintain water quality rather than to restore a water body that has been polluted, it is much less costly. **[can we get \$\$ figures of money spent and efficiency of prevention vs. cleanup?]**

C. What is good about our opportunity in Minnesota

1. Public commitment to water resources, as demonstrated by recent constitutional amendment
2. Minnesota is relatively advanced in water management. Ex: legislation empowers local government units to act; some local governments have great data regarding the water flow and water quality in their area.
3. A lot of committed organizations and individuals doing a lot of good things across the state **[call out examples from various areas]**
4. The amendment means there's money devoted to water

D. What leads to improvement/spurs change

1. Regulation
2. Threat of regulation
3. Public pressure – from citizens, people within public agencies, etc.
4. Economic pressure
5. Peer pressure and social expectations
6. Education, technical assistance
7. Financial incentives

II. Evaluative principles:

Our current system of water management should be evaluated against the following principles:

- **Transparency:** The management framework should be understandable to both governors and the public. Regulatory overlap and duplication should be minimized. It should be clear what is being done by whom and why the responsibility lies with that party – as well as what is not being done.

Questions implied include:

- What are the roles of the various organizations involved in reducing nonpoint source pollution?
- Are nonpoint source pollution reduction goals covered by these organizations? How difficult is it to tell?
- Are nonpoint source pollution management programs understandable and communicated to governing bodies, the public, and parties who are regulated?
- Do governing bodies and the public understand how their programs fit into larger goals to improve water quality?
- Do governing bodies and the public understand what is being done and by whom and why? Do they understand what may not be being done?

- **Efficiency [formerly called “outcomes-based”]:** Protection and prevention should be stressed before costly and environmentally harmful problems arise. Rules and regulations should be meaningful, resulting in positive environmental outcomes. We should minimize situations where money is spent on useless management practices simply to meet regulatory requirements. Instead, actions should be effective in terms of outcomes and cost. To accomplish this, policies should be based upon up-to-date science, and should be able to adapt as new science emerges.

Questions implied include:

- How are prevention and protection encouraged? Is attention given to maintaining water quality/supply even before problems arise?
- Are goals for reduction of nonpoint source pollution clearly defined? Are they measurable?
- Who decides what the goals are? How are the people who contribute to and are affected by the problem (citizens, businesses, etc.) involved in defining goals?
- Which practices and policies are effective at reducing nonpoint source pollution? Do we know?
- To what extent do regulations, incentives, etc. result in positive environmental outcomes (not just positive plans)?
- To what extent do regulations, incentives, etc. encourage practices and policies that have not been demonstrated to reduce nonpoint source pollution? Are there good reasons for these regulations/etc. anyway?
- Are management strategies based on up-to-date data? Are strategies adapted as new data is available?

- **Equity:** All individuals, entities, and sectors should carry their appropriate share of the responsibility to achieve water management improvements, and we should not place unreasonable burdens, financial or otherwise, on the regulated parties. All individuals, entities, and sectors should share in equitable access to safe water to meet their basic needs.

Questions implied include:

- Where does nonpoint source pollution come from? Which parties are affected by regulations, incentives, etc., and how? Does this align with the sources of pollution?
- Are businesses, local governments, etc. able to meet the requirements of regulations and statutes? If no, why not?

- **Accountability:** All water users should be held accountable for the impact of their water use, land use, and other actions that impact the quality and quantity of our water resources. With respect to public entities, it should be clear who is responsible for outcomes on priority areas. Those responsible for policy goals should be held accountable to measurable goals, and funding, staff, and other resources should match responsibility.

Questions implied include:

- Are the sources of impacts on water quality/quantity clear? Are these parties held accountable for their effects on water resources? If so, how? If not, why not?
 - Is it clear which public entity is responsible for each goal for nonpoint source pollution reduction?
 - What checks ensure that those responsible are meeting the established goals?
 - Do responsible organizations have the funding, staff, and other resources to meet these responsibilities?
 - Where overlap exists between the roles of various organizations, does it make it more difficult to ensure someone is accountable for outcomes?
- **Coordination of responsibility and power:** An individual or organization should have the authority necessary to carry out the responsibilities given to it.
 - **Scale [formerly “watershed-based”]:** Laws must be flexible enough to recognize that one size will not fit all at the local level, yet flexibility must be balanced with the need for clarity in regulations, and local control must be balanced with the need to ensure that certain standards are upheld statewide. Policy should be based on the direction that water flows, though political boundaries do not usually align with watershed boundaries.

Questions implied include:

- How is water policy directed? Along political lines, or along the flow of water?
- Do policies from the national and state levels allow for local flexibility?
- Are certain priorities being met in all localities regardless of the form local governance takes?
- Is the local government unit (or joint powers group) responsible for managing nonpoint source pollution the right size to meaningfully engage residents?
- How difficult is it for the various units of government that cover a watershed to collaborate? Why?
- Does the management system consider the way that the variety of water uses and users interact and the effects of each on the others? Are particular water uses considered as individual actions or as part of an integrated whole?

III. CONCLUSIONS:

1. To be successful, water management ~~must~~ **should** be done on a hydrologic basis – **[but what does that mean? Doesn't mean WDs are necessary. Talk about PCA's thing; advantages, disadvantages of hydrologic governance]**

Reducing nonpoint source pollution and its effects **[to what extent? What is the goal?]** will likely require an “all of the above” approach; a combination of regulation, voluntary practices by business and industry, and behavior change by the public.

- Regulation has been effective in improving water quality to some extent. Over the past 3 decades, pollution from point sources has been greatly reduced, largely due to regulatory pressures **[can we back this up?]**
 - Local governments, businesses, and industry respond to regulatory pressure, and we need to do a better job of making our regulations more effective today. **[How can regulations better address nonpoint source pollution? Can we do pilot/demonstration projects to experiment?]**
 - By doing more on a voluntary basis, we may be able to be more efficient, more effective, and make all parties happier.
 - With the great majority of today's water pollution coming from nonpoint sources, reducing pollution will also depend on the actions of thousands. We need public education and behavior change
 - No one approach will be able to “fix” nonpoint source pollution in Minnesota.
2. It is important for citizens to understand the way that water is managed and water-related decisions are made. Ordinary citizens do not need to understand all of the science related to nonpoint source pollution, but they should be able to understand the effects of nonpoint source pollution, the way that water management decisions are made, and their roles in the decision-making process, as well as the roles of government, businesses, and other parties. Parallel example from medicine: while a patient does not need to understand exactly why a certain medication will have a particular effect on their body, but they should be able to understand its effect as well as the reason their doctor decided to prescribe that medication – patients who are more informed about their health care have better outcomes. **[we can back that up, right?]**