

**Clean Water Council Meeting Agenda**  
**Monday, November 21, 2011**  
**9:00 a.m. – 2:30 p.m.**  
**Freeman Building, Room B145**  
**625 Robert Street North, St. Paul**

<b>9:00-9:15</b>	<b>Convene Full Council</b> <ul style="list-style-type: none"><li>• Comments/additions to the agenda</li><li>• Approve 10/17/11 meeting minutes</li><li>• Council introductions and updates</li></ul>	
<b>9:15-9:30</b>	<b>Steering Committee Report</b>	<b>Information item</b>
<b>9:30-10:00</b>	<b>Water governance study</b> John Linc Stine, MPCA	<b>Information item</b>
<b>10:00-10:30</b>	<b>Review of nonpoint acceleration ideas</b>	<b>Information item</b>
<b>10:30-10:45</b>	<b>Break</b>	
<b>10:45-11:45</b>	<b>Council discussion: concluding accountability and outcomes</b> Council recommendations, directions to BOC	<b>Information item</b>
<b>11:45-12:15</b>	<b>Lunch</b>	
<b>12:15-1:45</b>	<b>Introduction to Groundwater/Drinking water work plan topic</b> Interagency Team members: Jason Moeckel, DNR Glenn Skuta, MPCA, Dan Stoddard, MDA <ul style="list-style-type: none"><li>• Check in on work plan</li></ul>	<b>Information item</b>
<b>1:45-2:00</b>	<b>December meeting agenda / adjournment</b>	

*2:00~2:30 Council Steering Team*

*2:00~4:00 SSTS ad hoc committee meeting*

***Next Meeting: December 12, 2011***  
***Location: MPCA Board Room***

**Clean Water Council Meeting Minutes**  
**Monday, November 21, 2011**  
**9:00 a.m. – 2:30 p.m.**  
**Freeman Building, Room B145**  
**625 Robert Street North, St. Paul**

**Council members present:** Dave Bennett, Marilyn Bernhardson, Pam Blixt, Linda Bruemmer, Warren Formo, John Harren, Scott Hoese, Frank Jewell, Bradley Kalk, Mark Knoff, Dave Leuthe, Mike McKay, Gene Merriam, Gary Pedersen, Steve Pedersen, John Pederson, Gaylen Reetz, Victoria Reinhardt, Todd Renville, Sandy Rummel, Louis Smith, Deb Swackhamer, Paul Torkelson, Matthew Wohlman, Steve Woods.

**Absent:** Kent Eken, Keith Hanson, Dan Sparks.

**1. Convene Full Council**

- Comments/additions to the agenda
  - Approve 10/17/11 meeting minutes
  - Council introductions and updates
- Council convenes. Chair Hanson was absent so Vice Chair Hoese opened the meeting and asked for comments on the agenda. There were none. Motion to accept the November agenda and the October 17th meeting minutes passed.
- Newly appointed Council member representing rural communities, Frank Jewell was introduced. Council members introduced themselves. Frank Jewell is a St. Louis County Commissioner and he is chair of the Environment Committee.
- Gary Pedersen was at the state conference in Alexandria this past weekend. Resolution passed on surface sewage treatment systems supports continued delay and implementation of Chapter 7080 to support (look into) different soils throughout the state.
- Dave Bennett – Poplar River water withdrawal in northern Minnesota. Poplar River flows into Lake Superior through Lutsen. There is a brook trout population in the lower reaches. History of water withdrawal by the Lutsen Management Corporation (LMC). Instead of installing pipeline to Lake Superior, the LMC chose to expand their facility.
- LMC has a permit from DNR to withdraw water from the Poplar River down to 15 cfs. This year the permit is to 5 cfs. This has been a very dry year in northern Minnesota. Special authorization to appropriate water at 5 cfs. DNR issued separate temporary permit for one season – it can be reviewed. DNR acknowledged the presence of brook trout in the Poplar River. The Council should think about this.
- Question: what do you suggest the Council do? Dave B. – the Council should express its viewpoint to the Legislature. Are you asking for a resolution from the Council? Dave – yes.
- Steve P. – the Council doesn't have any authority to comment on permits, so it needs to be a broader issue of special waters; that the Council supports the statute....
- Dave Leuthe – it's an unfortunate situation looking for a long term sustainable solution, where LMC is taking water from Lake Superior. The drought helps LMC see that taking water from the Poplar River is not sustainable.

- What does long term mean? It's already been long term for some. Dave L. – 3 years for the permit. The Legislature gave them 5 years.
- Sen. Peterson – Senator Bakk sponsored the legislation. The goal is to retain jobs for business (LMC). The golf course is already using water from Lake Superior, but getting water up the ski hill is more difficult. LMC competes with Giants Ridge which is nonprofit, state-supported.
- Dave B. – they've already had 10 years.
- Suggestion was made that the Council write a resolution to support DNR - not sure if it's appropriate to do that.
- Louis Smith - impaired waters; the relationship between water quality and quantity may provide a link to this. Also, the Council's charge over groundwater may also provide a reason for our input.
- Scott - about a mile of pipeline would need to be built to get to Lake Superior. Concern that other groups might come to the Council asking for a resolution. Mike – some concerns, but it's worth consideration as Louis suggested.
- Dave B. – the underlying issue is people want permits to be enforced. This situation has dragged on too long and support for a private industry has gone on too long. Did LMC even support Poplar River impairment work?
- Frank Jewell – as someone who lives there and represents the area, there is concern about jobs, concern about costs for a pipeline. Residents in the area also have concerns about how long this has gone on, not enforcing the permit, possible draining the river dry, etc.
- Jen provided some history of Council resolutions - the Council has passed 4 resolutions; two were funding based and two were policy.
- Steve Pedersen presented a motion; CWC supports a position that Legislative stream standards be maintained without deviation except for human health impacts. Louis offered a friendly amendment to the motion to study and develop the issue further.
- Question about the Poplar River impairment. Gaylen – there is a [Poplar River TMDL for turbidity](#) project currently underway. The Clean Water Act (CWA) protects beneficial uses and the TSS standard is set for protection of fishable uses (probably the concern is for the high turbidity in the spring). Minimum flows in winter would create an oxygen impairment.
- Some members expressed concerns about whether the Council should be getting involved with permits and if the Council has any jurisdiction over permits.
- Steve P. - this motion is just to affirm that the Council supports minimum standards except when it affects human health issues. We already have standards we should support them. There shouldn't be deviations for economic reasons.
- Motion carries. FYI – Legislators and agency representatives are non-voting members of the Council.
- Council committee was formed to study this issue with these members; Sandy Rummel, Louis Smith, Dave Leuthe.
- Audience introductions.

## 2. Steering Committee Report, Jen Maleitzke

- FY13-14 report timeline. OLA audit – meeting date November 30<sup>th</sup> at 1:30 p.m. The [Clean Water Fund audit report](#) will be available on the OLA website that day. Keith Hanson reviewed the draft report and provided comments.
  - Council quorum: 19 voting members + 5 agency representatives + 4 legislators = 28 Council members. 10 members need to be present for a quorum.
- 3. Water governance study, John Linc Stine, MPCA**
- John Linc Stine, MPCA Assistance Commissioner introduced himself and went over his background in state government working for DNR, MDH and MPCA in water programs.
  - Water Governance Evaluation: Streamline, strengthen and improve sustainable water management.
  - 2011 Legislature, HF 196 ----did not pass. 2011 Special Session, Sec. 33 Evaluation required. Requires, by January 15, 2013, the PCA in conjunction with other water agencies and the University of Minnesota to evaluate water-related statutes, rules, and governing structures to streamline, strengthen, and improve sustainable water management.
  - [Chapter 103a](#) – water law policy – conserve water.
  - There's not a good unifying set of laws for water. Various laws enacted in response to events to address specific problems. Agencies – staff are very motivated to make water laws work for the state. But there are gaps and some inconsistencies. Nothing there to support how rules can work as a system.
  - Sustainable water management – submit study results to the Legislature by January 15, 2013. \$75,000 in funding for staff, etc. Water Governance Project timeline. We won't be doing extensive public involvement process, but we will be checking back. There may be areas where there are opportunities for streamlining programs, delegating to others, local government.
  - Will there be a formal role for the interagency task force? John S. – they will be a team. We will report back to them.
  - Senator Pederson - one of the reasons for legislation is to reduce number of inspections. Sometimes there are 6-8 inspections for some road projects just for water. John Stine – the challenge is for inspections to uphold mandates of programs. There may be too many programs, but that would have to be changed by legislation. The burden has already been reduced on compliance and enforcement. Some progress has already been made. Things are better than they have been in the past.
  - Linda –when you are looking at the governing structure, will you look at the Council? John S. – yes, we will look at the Council as part of that. Looking for opportunities for streamlining.
  - Rep. Torkelson – look at water planning and at watershed management. John S. – Chapter 103b (water planning) will be in the assessment but we may not drill down into detail. We will look at watershed, basin management – (make sure it is) watershed based.
  - Rep. Torkelson – will you coordinate with EQB who the Governor has asked to look at permitting and planning? John S. - the permitting side is below the level of governance structures. Yes, we will coordinate with EQB.

- Which agencies have compliance requirements? John – many state and local agencies have compliance requirements. Have you developed criteria for this? John S. – we will develop a matrix that will do an evaluation. How much has been pushed to local government?
- Rep. Torkelson – will you look at a rule-making moratorium? John – probably not. A moratorium can cut both ways. Prefer to have conversation about the outcomes of the rules; if they are ineffective, overlap, etc. More comprehensive conversation around outcomes.
- Victoria – shifting responsibilities to local government, pushing responsibilities to local governments is often done without funding, etc.
- Scott – state agencies examining state agencies; would like to see more public input. John S. – challenge for us is to identify areas for improvements. Are the Commissioners involved in this? John - yes, they are involved in the task force groups; have had conversations with Commissioners. John will come back to the Council probably in March 2012.

## Break

### 4. Review of nonpoint acceleration ideas, Jen Maleitzke

- Nonpoint acceleration ideas handout – members took a few minutes to review the handout.
- Jen – the targeted implementation work plan category has 3 strategies. Last meeting, two groups discussed the list of ideas. Combined the top 5 ideas from each group into mutual ideas for the BOC. Are these the right ideas to have the BOC further investigate?
- Victoria - good job combining the ideas. Suggestion for #3 is to take out the word sector.
- Louis – policy group just did something similar and came up with a similar list. Also add;
  - Targeting areas of the landscape, using LiDAR etc.
  - Help landowners market incentives
  - Under combined ideas #3 add integrating drainage system
- Scott – idea #10, agricultural sustainable water certification program - there are already some programs out there for this. Maybe take a look at those (River Friendly Farmer, farmer certification). Warren – Don Baloun at NRCS is taking a look at that.
- Pam - #1 in combined list is vague. Jen – that's something the BOC needs to look at further.
- Steve W. – part of research is to find where this is working, what are the ingredients.
- Linda – discussion on period of time to work on these ideas? All the ideas need to be framed more. Steve P. – we have a report to the Legislature in 2014, effectiveness report. Which programs allows us to continue.....#7 mandatory vs. voluntary – pick a time. Maybe by 2014. Look at programs that point towards decision.
- Sandy - #2 in combined list – what's to keep the erosion from occurring? Mark - the issue is you can't implement the solution because you can't always get on the farms to do the work, so you need the treatment process not just the prevention process. Sandy – we are responsible for how the funds are used. Dave L. – we need a systems solution to the problem. The challenge is you fix one area and the problem moves to another area in system. Pam – need to enforce laws and rules. Jen – that leads into the Accountability and Outcomes part of the work plan.

- Sandy – Duluth field trip presentation; repairs on one river were over one million. If that's the strategy we don't have enough funds. Dave L. – I assume #2 is not the only strategy. Matt – does #2 include BMPs? Steve W. – nearly all projects have multiple benefits. We had a separate proposal for projects relating to water retention. Marilyn – usually projects working on a ravine or bluff also have 80% of the work done on upland treatment. I think that is common. Frank – are the repairs you're talking about that were discussed at the Duluth field trip for Amity Creek in Duluth? Dave L. – they were for the Knife River.
- Scott – we will send the ideas on to the BOC. Steve P. – the BOC will meet sometime before December 12<sup>th</sup> somewhere west of the Twin cities. Pam is interested in participating in the BOC meeting. Jen will send out a notice of the BOC meeting to all Council members.

#### 5. Minnesota's Council discussion: concluding Information item accountability and outcomes

- Council recommendations, directions to BOC
- Jen reviewed the accountability and outcomes work plan topic and went over the presentations and discussions the Council has had on this topic for the past 2 months.
- Members reviewed the summary.
- Jen – the steering team is looking for input from the Council on where to go next. Thoughts about summary, also ideas for where you want BOC to go next.
- Marilyn – we need to put part of this information in our report to the Legislature. We're trying to figure out what are the topic areas to address in our report.
- Mike – the second bullet under overall would be my priority; ["Clean Water Fund programs need to be prioritized and the investment needs to match those priorities."](#) Trying to figure out what are the priorities and develop a tool to address that. Gene agrees strongly with what Mike said.
- Deb – the first two bullets are guiding principles. Is this supposed to track with the work plan, i.e., page 2 of the work plan?
- Warren – first bullet under Nonpoint Source – the CWA requires that. Are we just acknowledging that?
- Mike – develop a tool for bullet under nonpoint. Some of these are givens; we want to be efficient and cost effective. Determine our priorities; develop a tool.
- Steve W. – 1. Are we getting meaningful measures in place for accountability and outcomes; 2. Macro approach. The Council needs to develop some bullets to speak to micro approach. Blend of where things are going.
- Scott – what about Outcomes on the Summary page?
- Mike – agree with the sequence here about determining priorities before determining budget recommendations.
- Warren – outcomes bullet #3; we need more research to determine which BMPs work best.
- Deb – looking at work plan;
  - #2 TMDL provision for enforcement
  - Our outcomes are observations.
  - Work plan never said set priorities which it should.
- Louis – too complicated. TMDLs for state – how do we deal with impairments. Which are the most important? Where are we spending our money? Are we spending 80% on 20% of

the problem? We don't know. Gaylen said Lake Pepin is the best surrogate we have for TMDLs. Go back and look at that.

- Dave B. – for decades we've been spending on Lake Pepin; not a lot of progress on Minnesota River. Maybe money is better spent somewhere where we can get 50% improvement.
- Mike – some programs, i.e. SSTs, we can spend money to improve Lake Pepin. If you get that right, you can apply the lessons learned to the rest of the state.
- Victoria – agree with that. Setting priorities; give the best information to the Legislature. Lake Pepin – lessons learned, get best information to apply to the rest of the state.
- Dave L. – we will not see outcomes of the Lake Pepin scale until over the long term. We will see some changes sooner if we look at a smaller scale. We are still doing things that are keeping the system out of balance.
- Frank – it's hard to follow this summary. Louis gave me something I could follow.
- Scott – where does the watershed approach fit into this?
- Dave L. – if you want to see actual results, you need to go to a smaller scale. Different approaches in different areas of state. Intensive effort in smaller areas to see results.
- Rep. Torkelson – the Lake Pepin TMDL is a colossal failure because the scale is too big. \$2 million was spent on Lake Pepin TMDL, (but it) didn't do much. We need targeting to see results.
- Mike – Dave and Paul's comments not mutually exclusive. Lake Pepin is essentially a state TMDL. Debate will be the priorities. I'm pushing for some direction so first few priorities get funds.
- Mark – are we mixing priorities with outcomes? Priorities are important, but the topic is accountability and outcomes.
- Jen – the Steering Committee will have further discussion and come back to the Council. Tie this more to the work plan. Steve W. – there are various levels of accountability.
- Gaylen – this is a good discussion. Identify other things that need to be captured before we put it together for the report.
- Gene – more discussion about complicated but simple things Louis points out. How to appropriate funding for the next decade? How to use scarce resources for optimum results?
- Gaylen – should we be moving on to the next work plan topic before we finish this one?
- Dave L. – as part of the interagency teams we are always reminded that CWF is just a piece of the funding and effort being done. The work John Stine presented will help show that.

## **Lunch**

### **6. Introduction to Groundwater/Drinking water work plan topic**

- Interagency Team members: Jason Moeckel, DNR, Glenn Skuta, MPCA, Dan Stoddard, MDA
- Check in on work plan
- Jen introduced the next work plan topic, Groundwater and Drinking Water.
- Jason Moeckel, DNR – this is a collaborative effort among agencies. The purpose of the presentation is to address issues on the Council's work plan.

- Overview of Groundwater in Minnesota.
- Why Protect Groundwater? 75% of the drinking water in Minnesota comes from groundwater. We don't have reporting requirements for private wells so we don't know how much water they are pumping.
- Groundwater use in state – 200 billion gallons, which is equivalent to taking 5 feet of water off Lake Mille Lacs. This doesn't include what we don't know about private wells.
- Increasing demand – these are drought times, but also because of increasing population.
- Scott – why the fall off in groundwater use from 2007 to 2010? Jason – don't know for sure. Maybe it was a wetter year in 2010 or there was less construction. Dave L. – also less dewatering.
- Mark – where do you put groundwater under the influence of surface water (groundwater/surface water interface)? Jason – it would be considered groundwater if you're pulling it from the ground.
- Southwest Metro – 66 years of record (Mt. Simon-Hinckley aquifer). We might deplete the best source of groundwater in 140 years.
- Rep. Torkelson – how old is that groundwater? Jason – some areas it's 10,000 years, some 30,000 years. Dave L. – it's not just how old it is. It's how long the water has been down there.
- Jason – rare resources and groundwater. Fens, trout streams. Importance of groundwater to sustain these rare resources.
- Hydrogeology in Minnesota. Hydrologic cycle.
- Groundwater supply is different in different areas of the state. Impermeable layers, areas vulnerable to contamination (central Minnesota has sand aquifers). Areas of the state with limited groundwater availability. Karst areas – we can't rely on surface water geology to determine where the groundwater will go.
- Question on the slide on groundwater use in the state. Jason – we are well over 200 billion gallons per year for public water supply. Define public water supply. Does that include industrial? Jason - public water supply is not a private individual. Dave L. - it's what they actually use, what they file in their annual report. Don't always separate municipal and industrial. What is in other? Everything not in the other categories but not in private supply.
- Glenn Skuta – Groundwater concerns:
- Sources of groundwater contamination - there are many sources of groundwater contamination. What happens above the surface affects what happens below the surface. Concerns about infiltration through various sources.
- We have detected chlorine, arsenic, and nitrates in the groundwater. Most frequently detected VOC compound is chloroform, a by-product of water disinfection. Arsenic also detected in areas of the state – not always human induced – some is naturally occurring.
- Nitrate problems – agencies/locals looking at dealing with identified nitrate problems. Good example of targeting areas to get the most beneficial impact. PFCs detected in the east metro area.
- [Little Rock Creek](#) – increase in groundwater pumping, decrease in groundwater level, decrease in stream flow. ([Little Rock Creek Stressor ID Report](#)). Addressing what's being done in groundwater to address what's happening in the stream.



- Todd – are all of the municipal areas under wellhead protection? Randy Ellingboe, MDH – all municipal water supplies are required to have wellhead protection areas by 2019. One third have them to date.
- Dan Stoddard – Groundwater Protection Strategy
- The Clean Water Council endorsed the strategy and recommendations (included in members' meeting packet). There are 8 high level recommendations, intended to guide policy.
- Prevention is really important for groundwater because of the longtime it takes to develop groundwater. This is also the reason for the long term focus.
- Clean Water Fund activities for groundwater – handout in packet.

#### Questions:

- Dave Leuthe – how old is groundwater? Some is very old because it's down deep and hasn't been used. As we use it, it will be replaced by water higher up that is younger. What we're putting in the water now will be in that younger water. Prevention is so important. It is costly to treat groundwater later on if contaminated.
- Gene – question for Jason; how do you reconcile some of the slides? The well in Savage (SW Metro; 66 years of record) with a significant increase in depth leads him to conclude that the recharge rate is not keeping up with the withdrawal. The multicolored slide showed problems. How to reconcile that with areas of abundant groundwater/surface water? Dave L. – relative to other areas of the state. There's also the issue of the quality of the water. Jason – the Mt. Simon aquifer doesn't run very far west.
- Gene – why use groundwater? Groundwater is abundant relatively as long as we are not stressing the system. We don't want to stress the surface water systems. Also, there are more people. What is best strategy? Protect the supply so we can use it in the future.
- Jason – do we know enough to say we're using it sustainably? As a society, we want to drive as fast as we can to the edge of a cliff and stop just in time. As an agency, we are constantly challenged as to why we can't do something.
- Randy E. – evaluations about where to get water from; also determining what it will cost to supply that water. The cost of using surface water supply is higher because of treatment.
- Gene – groundwater is a scarce resource and it's free.
- Dave L. – SW metro slide – when the level goes down you're pulling water from different recharge areas.
- Steve W. – is there any rule about priority use? Dave L. – yes, domestic use is the first priority. We don't like to make these decisions. We have to change the way we manage the system.
- Victoria – this slide vs. slide that says abundant supply in metro area. So what if we have abundant supply if we're depleting it.
- Gaylen – water is almost free. The problem is not enough supply; it's how we use it. We have a problem with how we use water – watering lawns, waste management systems that use water, garbage disposals, the amount that we use for consumptive purposes is really small. We need to do something about management of use, along with protecting it.

- Glenn – there's a political and economic reason. St. Paul water utility has a surplus of water that they're trying to get communities to purchase, but they would rather drill their own wells. They can't sell it. Multifaceted problem.
- Mark – there's nothing in the report about water reuse. Dan Stoddard – that did get into the state conservation plan.
- Mark – what is the projected impact of permits on water usage? Dave L. – chasing of the cheap. They will drill their own well rather than having a permit requirement. People are still in denial about conservation. When there is a problem and supply is limited, then people respond. Mark – the systems approach, look beyond just water to air systems.
- Louis – balance of state expertise and local governance. With groundwater, the local entity is in the municipal supply business and the state has the concerns.
- Dave L. – the faster you get groundwater out of the system, the faster it goes down to the Gulf of Mexico. It doesn't go back into the system.
- Scott – go back to the work plan to see if we should change things or add things.
- Jen – are there other topics to add to the work plan? Mark – water re-use.
- Rep. Torkelson – Deb's report to the Legislature identified energy use as a major water user.
- Jen – the interagency team suggested great water systems, groundwater management areas, information on groundwater/surface water interaction.
- Rep. Torkelson – an article in the St. Paul Pioneer Press by Dennis Lien incorrectly stated that there is no entity in government that directly oversees Clean Water Funding. The Council should send a letter correcting that.

#### **7. December meeting agenda / adjournment**

- Adjourned at 2 pm.

*2:00~2:30 Council Steering Team*

*2:00~4:00 SSTs ad hoc committee meeting*

*Next Meeting: December 12, 2011*

*Location: MPCA Board Room*

# Water Governance Evaluation

Streamline, strengthen and improve sustainable  
water management

**John Linc Stine**  
Deputy Commissioner  
MPCA

November 21, 2011



# 2011 Legislature – HF196

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- Moratorium on rule making pertaining to water quality and resource protection from July 1, 2011 until June 30, 2013
- Pollution Control Agency, Department of Natural Resources, Board of Water and Soil Resources, Environmental Quality Board, Departments of Agriculture, Health and Administration.
- Agencies to examine existing rules pertaining to surface and groundwater quality and resource protection to ensure they are valid, fair, or can be eliminated.
- Required agencies to develop recommendations for organizing programs/ activities among the state agencies and report by January 2015



# 2011 Special Session

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## 91.10 Sec. 33. EVALUATION REQUIRED.

- (a) The Pollution Control Agency, in conjunction with other water agencies and the University of Minnesota, shall evaluate water-related statutes, rules, and governing structures to streamline, strengthen, and improve sustainable water management.
- (b) The Pollution Control Agency must submit the study results and make recommendations to agencies listed under paragraph (a) and to the chairs and ranking minority party members of the senate and house of representatives committees having primary jurisdiction over environment and natural resources policy and finance no later than January 15, 2013.



# 2011 Special Session

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# Water –related Statutory Purposes

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- Drainage
- Public Waters Regulation
- Water use and Appropriation
- Flooding
- Pollution Prevention and Control
- Water Quality
- Shoreland Management
- Groundwater Protection
- Wetland Conservation
- Drinking Water
- Public Health Risk Assessment
- Water Well Construction



# Water Governance Project

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Project Managers – John Linc Stine and Rebecca Flood, MPCA

Project Staff – undecided

Project Timeline:

August – December 2011	Organize and Plan
January – September 2012	Interagency Work and Evaluation
October – December 2012	Report Drafting
January 2013	Final Report





**Clean Water Council Discussion**  
**Ideas to accelerate nonpoint source implementation**  
**Monday, October 17, 2011**

For Council discussion:

**How can the adoption of practices identified as necessary to improve water quality from nonpoint sources of pollution be accelerated?** Prioritize the top five ideas to better accelerate nonpoint source implementation from below or other new ideas can be generated by members.

Ideas for discussion

1. Evaluate effectiveness of WMOs/WDs in metro area.
2. Measure current BMP adoption as a necessary first step for any decision making.
3. Seek better enforcement of existing regulations.
4. Provide funding for staff to work with landowners (either private, public or nonprofit).
5. Extend grant periods to better retain staff, support ongoing relationship with landowner.
6. Keep the adoption of practices as voluntary – but make disclosure of practices mandatory.
7. Pick a date to begin dialogue related to mandatory approaches if voluntary programs don't produce results.
8. Require water retention within watersheds: reestablish wetlands and create water retention in riparian corridors to reduce downstream flows.
9. Create Agricultural Management Areas (AMAs) to meet the agricultural sector pollutant load reduction allocated by the watersheds TMDL.
10. Establish an agricultural sustainable water certification program.
11. Shift focus of Clean Water Implementation Funds from cost share for private lands to “public problems” -- bluff and bank erosion.
12. Make property taxes reflect land use choices—higher taxes for contributing pollution and lower taxes for having BMPs in place.
13. Producers agree to develop and execute a conservation plan that addresses water quality issues on the operation, which includes a BMP implementation schedule that meets the objectives of state water quality programs (including TMDLs or other watershed implementation plans).
14. Establish special purpose districts with taxing authority.
15. Promote and fund widespread on-farm demonstrations of BMPs.
16. Provide financial support to counties to develop agricultural advisory committees of local farmers and farm groups to provide input on non-point water plans.
17. Work with existing ag technical resources (Certified Crop Advisors (CCAs) and Technical Service Providers (TSPs)) to enhance their environmental skills and to develop a water quality/environmental component that could be incorporated into consultations.
18. Create an economically viable market for environmentally friendly cropping systems in targeted high risk areas on the land.

**Marilyn's group:** Categorized list of ideas into top five concepts (numbers in parenthesis are from the overall list of ideas above)

1. Help landowner (3, 4, 5, 15, 17 18)
2. Promote voluntary approach with BMPs (2, 6, 10, 12, 15, 18 19)
3. Develop mechanism for location sector implementation – Agricultural Management Areas (AMAs) (8, 9, 13, 14, 16)
4. Develop regulatory approach (7)
5. Use CWF for cumulative (transferred) issues, ex. Ravines (11)

**Scott's group:**

1. Combine #3 and 4: Provide funding for staff to work with landowners for enforcement of existing regulation, education and implementation (either private, public or nonprofit).
2. Incentivize/require temporary water retention within watersheds to reduce rate of downstream flows.
3. Establish an agricultural sustainable water certification program.
4. Shift focus of Clean Water Implementation funds from cost share for private lands to "public problems" – bluff and bank erosion.
5. Making our water planning process valuable. (Paul T). Add Gary's idea for conservation farm planning at the subwatershed level.

### **Mutual ideas for BOC to further research**

1. Help the landowner through several avenues:
  - a. Providing adequate funding for local staff to help the landowner understand and comply with existing regulations,
  - b. Providing education and promotion of widespread on-farm demonstrations of BMPS, and
  - c. Establish a sustainable water certification program.
2. Consider using Clean Water Funds to address cumulative or transferred issues – ravines, bluff and bank erosion.
3. Make local water planning process valuable for local sector implementation – examples:
  - a. Conservation farm planning at sub watershed level
  - b. Development of agricultural management areas
  - c. Incentivize water retention within watersheds

# Accountability and Outcomes

September-October 2011

## Summary:

At the September and October 2011 meetings, the Council heard and engaged in presentations and discussions around the topics of accountability and outcomes. The pages that follow are a summary of the notes and discussion items from each meeting, along with contact information for all of the presenters. To find the presentations, visit the Council web page, [2011 meeting packets](#). To help guide the Council's discussion at the 11/21/2011 meeting, the Steering Team put together a shorter summary for your review:

## Accountability

### Overall

- The administration of Clean Water Fund programs needs to be efficient and cost effective.
- Clean Water Fund programs need to be prioritized and the investment need to match those priorities.

### Point source

- Existing regulations need to be enforced: (e.g., shoreland rules, public ditch buffers, etc.)
- Because TMDL affect point source permits, the requirements need to be specific (ex: stormwater).

### Nonpoint source

- There is a discrepancy between regulation for nonpoint and point source pollution. Cities have wastewater and stormwater responsibilities, which is the regulated segment. If progress isn't shown on the nonpoint side, there is concern about further requirements on point sources and the tremendous costs associated. What's the balance in the capacity to move forward?
  - Example of a stormwater permit where the regulated community's contribution is less than 5% and non-regulated is 95%. Huge cost to address 5% of problems (\$843 million). It's not economically smart to focus that much money on 5% of the problem.
- A total suspended solids (TSS) report that will be published soon says the major source is from rural contributions; 60% from ravines, erosion. For phosphorus, agriculture is a large contributor. The point sources have reduced already. Nitrates and bacteria – more equal contributions.

## Outcomes

### Overall

- There is a tension between spending funds on collecting more data and work on the ground.
- There needs to be targeting – finding spots on the landscape where BMPs will work and are reasonable.
- There is a need for specifics about which BMP works best in each part of the state.

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### Local programs

- Unfunded mandates at the local level are a real issue, particularly because there is not enough capacity to address mandates and to administer ongoing programs.
- Programs that are administrated locally need flexibility and cannot be subjected complicated reporting requirements as there is not staff to dedicate.
- If LGUs “opt in” to a program (ex: building code enforcement), it comes with a set of rules and regulations and some funding. Funding is the priority issue
- LGUs are the only ones who can deliver on those priorities. It’s hard to measure results, it takes time, and we need water quality data to show that it’s working.

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Meeting Date	Presentations/Discussion	Contact
Sept. 19, 2011	<p><b>Presentation/Notes:</b>  <b>Accountability and outcomes: regulatory tools</b></p> <ul style="list-style-type: none"> <li>○ Agency representatives</li> </ul> <p><b>MPCA, Rebecca Flood</b>  Clean Water Act (CWA)-----pollution sources; waterbody health-----TMDL</p> <p><b>Regulatory Tools</b> - handout  The Clean Water Act lays out tools to address most point sources of pollution through regulatory mechanisms, as outlined below. Though many nonpoint sources are not regulated and instead rely on voluntary adoption of BMPs, there are some regulatory tools that can be used to address nonpoint sources, also outlined on page 2.</p> <p><b>Point source:</b>  <b>Clean Water Act / state authorities; MPCA</b></p> <ul style="list-style-type: none"> <li>• <b>Wastewater:</b> National Pollutant Discharge Elimination System (NPDES) and State Disposal System (SDS) program controls direct discharges into navigable waters. NPDES and SDS permits, issued by either EPA or an authorized state/tribe contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge.</li> <li>• <b>Stormwater:</b> The Stormwater Program includes three general stormwater permits: the Municipal Separate Storm Sewer Permit, the Construction Stormwater Permit and the Industrial Stormwater Permit.</li> <li>• <b>CAFOs:</b> All concentrated animal feeding operations (CAFOs) that discharge or propose to discharge must obtain an NPDES/SDS permit. County may accept delegation to be regulated authority (in 55 counties, the feedlot program is conducted through a cooperative arrangement between the MPCA and county government).</li> </ul> <p><b>SSTS – MN Statute 115.5-56; Chapter 7080-7083; Local ordinances; Counties/MPCA</b></p> <ul style="list-style-type: none"> <li>• MPCA lays out design and compliance criteria for systems, establishes requirements for local programs, certifies individuals and licenses businesses to do SSTS work. Counties adopt SSTS ordinances that comply with state rule and cover all of county not covered by city or town ordinance by reviewing plans and approving permits for new/replacement systems; ensure</li> </ul>	<p><a href="#">Rebecca Flood</a>, MPCA, 651-757-2022</p>

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	<p>compliance of systems when notice of noncompliance is issued.</p> <p><b>Non point source:</b>  <b>Shoreland Program; Counties and cities</b></p> <ul style="list-style-type: none"> <li>DNR developed statewide minimum standards in 1989 which all counties and cities are supposed to comply with by including them in local zoning ordinances. Local ordinances are to contain requirements that limit vegetative and topographic alteration in the shore impact zone which is ½ the structure setback for the water body. In addition, such ordinances are supposed to contain standards which require agricultural uses to keep a 50' buffer along all public waters in natural vegetation.</li> </ul> <p><b>Public Water Permits; DNR</b></p> <ul style="list-style-type: none"> <li>Any alteration of the cross-section of a public water requires a permit from the DNR. BMPs are often required as conditions under those permits. State Rules require that DNR permits contain a condition requiring that a one rod strip of land be planted in permanent grasses on either side of altered natural watercourses.</li> </ul> <p><b>Public Ditch buffers; Public Ditch Authorities</b></p> <ul style="list-style-type: none"> <li>MS 103E.021 requires that a one rod (16.5') strip along all public ditches be planted in permanent grasses. This provision is required for new ditches or when legal repairs are done on existing ditches.</li> </ul> <p><b>Groundwater Protection Act for Nitrates; MDA</b></p> <ul style="list-style-type: none"> <li>MDA is the lead agency for the regulation of inorganic fertilizer and has authority under the state Groundwater Protection Act to regulate the use of fertilizer to protect groundwater.</li> </ul> <p><b>Pesticide Control Law; MDA</b></p> <ul style="list-style-type: none"> <li>MDA is the state and EPA delegated lead agency for pesticide regulation in Minnesota and has broad regulatory authority to take actions to restrict the use of pesticides as necessary to prevent unreasonable adverse effects on the environment.</li> </ul> <p><b>Wetland Conservation Act; BWSR</b></p> <ul style="list-style-type: none"> <li>Protection of wetland areas via local issued permits.</li> </ul> <p><b>County Planning Act (Minn. Stat. 394); Counties</b></p> <ul style="list-style-type: none"> <li>County authority to plan for and manage land use. Land use regulation is often referred to as planning and zoning. The scope of county land use activities includes a range of programs that address environmental concerns, including specific land uses or landscape features: shoreland</li> </ul>	

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	<p>areas, floodplains, wild and scenic rivers, wetlands, wells, feedlots, septic systems and soil erosion. Some program areas are mandated by the state and others are optional for county adoption.</p> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• How many point sources are there on the Minnesota River upstream of Shakopee? Follow-up: According to the Minnesota River Dissolved Oxygen TMDL, there are approximately 280 municipal and industrial point source dischargers in the Minnesota River Basin.</li> <li>• How well has trading worked in this example? Rebecca – phosphorus credits traded between municipalities based on overall load allowed. It has worked well looking at phosphorus reductions. Has this process been challenged? I can't recall if a contested case hearing was requested. I don't think so.</li> <li>• All municipal permits? Yes, with a few industrial permits. Facility has to meet its permit limits and go beyond that in order to use that in trade. This is point to point trading, not nonpoint to point.</li> <li>• Does the facility they are trading with have to be upstream? How much phosphorus is traded, whether 1 to 1 or 1 to 15, etc., depends on the location of the facility.</li> <li>• Point to nonpoint trading is a very time consuming process.</li> <li>• How do you develop the load allocations? Load allocations are not for individual landowners but are aggregated. Whose responsibility is it to see that load allocations are being achieved? Some may be BWSR's, some federal responsibility for programs they fund.</li> </ul> <p><b>DNR – Dale Homuth, Rob Collett, Julie Westerlund</b></p> <ul style="list-style-type: none"> <li>• Dale – Shoreland rules are required to be adopted by every county except Hennepin and Ramsey. Dale gave an overview of the shoreland rules (handout in packet). Public water permits/public ditch buffers.</li> </ul> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• How is the public water course defined? Dale gave the definition. Public waters are mapped on the <a href="#">Public Waters Inventory maps</a>.</li> <li>• Why are Hennepin and Ramsey Counties not included? In Hennepin and Ramsey the counties don't do zoning, the cities do.</li> <li>• Six SE Minnesota counties are in compliance and are enforcing the shoreland rules. Moving up</li> </ul>	<p><a href="#">Dale Homuth</a>, DNR, 651-259-5133  <a href="#">Rob Collett</a>, DNR, 507-359-6051  <a href="#">Julie Westerlund</a>, DNR, 651-259-5147</p>

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	<p>the Minnesota River. Rob Collette; hydrologist in New Ulm – we’re seeing more counties enforcing rules, some lawsuits. Renville Co. SWCD is working to help bring the county into compliance.</p> <ul style="list-style-type: none"> <li>• County ditches are not included in the shoreland rules; other areas where there may be a gap. There are local communities where they are more restrictive.</li> <li>• Agreement with agencies that buffers are great, but there is still an issue with hydrology. Volumes of water that blow out areas.</li> <li>• Because authority is given to cities in Ramsey County, the county is not allowed to regulate that. Ramsey County has to go to the municipality to get a permit.</li> <li>• Withdrawal permits should be added to the list.</li> <li>• 50 ft. buffer – model ordinance (for zoning?), but not a statewide regulation. Grandfathered nonconforming uses. Dale – wording was changed to be more vague. Some ordinances are written to say you can’t plow the buffer. Rob – if we find them in violation, they may be unable to get BWSR funds. We don’t want to mandate that it goes into the program or do any takings. We just want them to not mow it.</li> <li>• Does DNR regulate this? Rob – administered locally through zoning ordinances.</li> <li>• What is the compliance rate? Rob – it depends on where you are in the state. It’s different throughout the state. Renville County has very high compliance. Marilyn – Redwood County is not pushing it. They see it as an unfunded mandate.</li> <li>• Olmstead County, Planning Department walked the land and found most in compliance. They sent letters and got all but 3-4 to come into compliance. But what about cities not in compliance?</li> <li>• Unfunded mandates are real issues. One size fits all – hard to get some deviation from that. Maybe look at other options to achieve the goal. Build in some flexibility.</li> <li>• Rob – option to include soil management plan, but SWCDs said they don’t have the capacity to do that.</li> <li>• Question on where rip rap falls in the shoreland rules, public water permit.</li> <li>• Status of shoreland rules? Dale – shoreland rules are now dead. They need to be re-authorized by the Legislature.</li> </ul> <p><b>Dan Stoddard, MDA – Pesticides – handout</b></p> <ul style="list-style-type: none"> <li>• Stakeholder Advisory Groups</li> </ul>	<p><a href="#">Dan Stoddard</a>, MDA, 651-201-6291</p>



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	<ul style="list-style-type: none"> <li>• Helpful to have interaction with other agencies.</li> <li>• Education is huge part of implementation/prevention.</li> <li>• Common detection is first step toward regulation under Groundwater Protection Act.</li> <li>• 2 impairments in Minnesota for registered pesticides – both are for acetochlor in south central Minnesota. Pre-TMDL response plans allowed because impairments were old.</li> <li>• Agronomists, retailers are important. Amount of pesticide in the water dependent on rainfall amounts after application.</li> <li>• Metalochlor increased the year after everyone was told acetochlor was high. Maybe because everyone switched from acetochlor to metalochlor.</li> <li>• Fertilizer</li> <li>• Lessons from SWPA Nitrate Reduction</li> <li>• Beyond BMPs</li> </ul> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• MDA registers each pesticide.....p. 1 third slide, explain that. Dan – product of concern – we may focus on that product if there's a reason for concern, i.e. may need more trainings and certification for the product. Very resource intensive.</li> <li>• You can't regulate fertilizer in surface water. Is there a need for us to regulate for surface water? Dan – that's a big policy question. We can regulate where surface water and groundwater interact.</li> <li>• What about farmers who can buy pesticides without a license? Dan – you only need a license for restricted use pesticides or if you will be applying the pesticides for others.</li> <li>• Steve W. – Wetland Conservation Act (WCA) is meant to fit alongside other programs. Local governments issue permits, do inspections, do enforcement with DNR enforcement, partially funded mandate. BWSR Board is appellate; can file appeals with the BWSR Board.</li> <li>• How are the grants handled? Steve W. – NRBG; block grants for various grant programs. They have to report into the computer reporting system called eLINK. We check a subset of that to see if the match is met. Field staff oversee how the program is working; subset is looked at more closely. Recently started to look more at problem areas.</li> <li>• Mitigation. Steve W. – WCA doesn't prohibit impacting a wetland. No Net Loss - avoid wetland impact, minimize, mitigate. Mitigation provided, follow up monitoring, or purchase mitigations</li> </ul>	

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	<p>from wetland bank.</p> <ul style="list-style-type: none"> <li>• Question; de minimis doesn't apply just once, so eventually could the wetland get totally filled in? Steve W. – applies to small impacts; de minimis (definition: so small or minimal in difference that it does not matter or the law does not take it into consideration.) Dave Weirens – 20 sq. ft. to 10,000 sq. ft. depending on where you are in the state. De minimis can be used only for a certain percent of the wetland. First come first served issues.</li> <li>• Ability to oversee WCA. Steve W. – BWSR has the ability to pull back authority. Pine SWCD wants to suspend WCA over winter. BWSR notified Pine County to take over. Could have a wetland moratorium – can suspend all work impacting wetlands.</li> <li>• What about MNDOT? MNDOT is the LGU for WCA.</li> <li>• Is there follow-up by BWSR on grants? Steve W. – they must have a work plan with deliverables, review expenditures for eligibility, meet time frames, provide deliverables. All are reviewed actively throughout the life of the grant.</li> <li>• What about QA/QC for grants? Marilyn – work plan is put into eLINK; expenditures and final report are all in eLINK. Is there a cross check on the quality of the work produced? Steve W. – there is a technical design manual signed off by professional engineers. Financial and administrative checks. Marilyn – report goes into eLINK on estimated outcomes. Spot checks by local government; they do an as built and spot check every 3-5 years.</li> <li>• Question on the wetland bank; can you go outside the watershed? Steve W. – yes, but we prefer to see it in the same area. There are some provisions to go outside the area in certain parts of the state. If you go out of some areas, you need to replace more.</li> <li>• Add WDs/SWCDs to regulatory controls; what regulatory controls the watershed districts have. Also include counties. Invite Annalee Garletz from AMC for the counties.</li> </ul>	
Oct. 17, 2011	<p><b>Presentations/Notes:</b></p> <p><b>Regulatory tools: local units of government</b></p> <ul style="list-style-type: none"> <li>○ <b>Cities:</b> Craig Johnson, LMC</li> <li>○ <b>Counties:</b> Annalee Garletz, AMC</li> <li>○ <b>Watershed districts:</b> Louis Smith, Smith Partners</li> <li>• Annalee described what counties, cities and local government are doing. MN Statutes (394, 462) give authority to LGUs to do planning and zoning. Counties do local water planning for surface and groundwater. Rural counties and cities are the authority for shoreland ordinances. Counties</li> </ul>	<p><a href="#">Craig Johnson</a>, LMC, 651-281-1259</p> <p><a href="#">Annalee Garletz</a>, AMC, 651-789-4322</p> <p><a href="#">Louis Smith</a>, Smith Partners, 612-344-1400</p>

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	<p>are delegated for feedlot ordinances, septic. LGUs are the designated authority for the Wetland Conservation Act.</p> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• Talk about enforcement of statutory requirements. Developing, implementing, enforcement. If something is not in compliance, it's up to local government to go out and enforce. Annalee – there are a number of ways for LGUs to bring into compliance. Point of sale inspections are done; opportunity for LGUs to look at other things.</li> <li>• How many counties are delegated for feedlots? 55. Counties not delegated are under the MPCA. Marilyn – cities and counties and townships can be more restrictive than agencies, but not less.</li> <li>• If LGUs opt in to something, it comes with set of rules and regulations and some funding. Annalee – feedlots, wind tower siting, beverage, lodging - counties can opt in. It provides a service for residents; provides a local contact. Craig – outside the metro, cities and counties can opt in on building code enforcement. Victoria – funding is a primary issue.</li> <li>• Craig – most of what applies to counties, applies to cities. Cities have their own comprehensive plans. There was a change in how variances work during the last Legislative session based on a court case. Change in law so variances are tied to comprehensive plans and are at least in harmony with the ordinance.</li> <li>• Craig – LGUs have a lot of authority. They have to balance things – how to move forward as a community and protect the rights of individuals. There already is a tremendous amount of regulatory pressure on local governments for septic issues, stormwater MS4 permits, groundwater use/appropriation, drinking water requirements (state and federal), wellhead protection, wastewater, solid waste. In statute, stormwater, wastewater and drinking water are services cities provide.</li> <li>• More programs, more requirements, all getting more complicated to administer. How well do comprehensive plans work in integrating these requirements? Craig – comprehensive plans get flavored by the politics of the community. They are meant to reflect the needs of the community, so it varies by community.</li> <li>• Annalee – water and land environmental protection outcomes are secondary in comprehensive plans. Water plans address those issues. They should be reflected in comprehensive plans.</li> <li>• Do you see capacity problems? Craig/Annalee – yes. Craig – it's stunning how bad it is for communities trying to run programs with limited staff. Some are looking at using city council</li> </ul>	

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	<p>members to help out occasionally. Legislative changes in property value taxes will have a big impact. Annalee – counties have to do a lot of triage on their programs. It's hard for limited staff to cover many programs and large areas. They can't always physically go out to see areas with problems. Craig – some cities no longer send someone out if a non property owner has a complaint.</p> <ul style="list-style-type: none"> <li>• How much are stormwater permits really addressing local issues? Craig – that's a capacity issue. TMDLs are having an effect on stormwater permits. They need to be more specific. Communities can try and show the MPCA how what they are doing already meets requirements and try to get credit for what they are doing.</li> <li>• How do we as the Clean Water Council try to get more dollars to LGUs to do the things required by the state? Craig – CWC budget recommendations for how CWF dollars are spent are critical and help keep the focus on getting the money on the ground. Some of the recommendations are for doing TMDLs, which is important. The rest focuses on getting work done on the ground. The way you're doing it is great and it's hard to quantify.</li> <li>• There's a disconnect with mandates coming down and capacity is going away. Does the money we're recommending target that piece? Annalee – it's allowing LGUs to do more than they would have been able to do. We like to see funds go to programs, rather than projects.</li> <li>• What assurances do we have that the money is getting to your priorities? Have we bought into your priorities? Craig – yes, because LGUs are the only ones who can deliver on those priorities. It's hard to measure results, it takes time, and we need water quality data to show that it's working. We can't get up to full speed until have more data. State agencies have said what they want, LGUs have said (what they need), and it's time to see if it works.</li> <li>• LGUs - there is a huge capacity need for nonpoint. Cities have wastewater and stormwater responsibilities, which is the regulated segment. If we can't show progress on the nonpoint side, there is concern about further requirements on point sources and the tremendous costs for cities. What's the balance in the capacity to move forward? Craig – MPCA has to show EPA that they are making progress. Only way to do that now is to use the permitted community. The concern of the permitted community is that nonpoint is not doing as much because it's voluntary. We need to do a better job to target and drive actual land use changes. Example of a stormwater permit where the regulated community's contribution is less than 5% and non-regulated is 95%. Huge cost to address 5% of problems (\$843 million). It's not economically smart to focus that much money on 5% of the problem.</li> </ul>	

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	<ul style="list-style-type: none"> <li>• BMP effectiveness, priorities, targeting of BMPs is what we struggle with. What if it doesn't work? We need more data. Craig – we need more specifics about which BMP works best in each area. How do you respond if it doesn't work? If you don't get the reductions you're looking for? Craig - in cities it will likely mean a change in the stormwater permit to fix that.</li> <li>• Annalee – counties have already done a lot of work to determine where the work needs to be done. Caution you not to make reporting too complex or too different for various programs or counties won't apply for grants (because of limited staff).</li> <li>• Craig's example of stormwater permit allocations is a good reason to have trading. We don't have a functioning trading system yet. MPCA is working on developing system, but it's very complicated. There is a problem with excess nitrogen in the Gulf of Mexico. Minnesota is 1% of the nitrogen problem. It would make sense for Iowa to do some nitrogen trading to get work done in Minnesota, for example.</li> <li>• Deb Swackhamer – the state of Minnesota contributes 7% of the nitrate that goes to the Gulf of Mexico. The Minnesota River is 80% of the 7%.</li> <li>• <b>Louis Smith, Watershed Districts (WDs)</b> – Regulatory tools to deal with point and nonpoint. Handout – WDs cover about one third of the state. They exist because people locally wanted a special district to deal with water issues. Minnesota adopted watershed district authority in 1955. WDs have taxing authority. WDs are unique to Minnesota. WDs in general have adopted rules that overlay city or county authority. Gene Merriam sponsored legislation for water planning in the metro area in 1982. There are watershed organizations in the 7-county metro; WDs or WMOs (joint powers/cities). In general, WDs do a lot more regulating. Regulate the impact of land uses on water uses. WDs can develop rules and municipalities can adopt those rules. Most leave it to WDs. Relationship and tension between WDs and municipalities, between land uses and water uses. Best when they work together to develop rules and ordinances that work for both land and water uses. It is a complex process. Example, Minnehaha Creek Watershed District has several TMDLs. The watershed plan took account of the TMDLs and embraced the requirements of the TMDLs. They set a nondegradation standard for the watershed – no phosphorus from new development using volume control. Balance between what can be obtained from land use and what needs to be controlled. Brownie Lake TMDL achieved the TMDL reductions more as a result of partnerships with voluntary actions. Opportunities to achieve reductions through redevelopment and development that are not as costly.</li> </ul>	

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	<ul style="list-style-type: none"> <li>• Craig – <a href="http://www.lmc.org">League of Minnesota Cities web site</a> (LMC.org); Handbook for Cities, Chapter 14 is on comprehensive planning.</li> </ul> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• How far have watershed district plans evolved to deal with the challenges today of clean water? Louis – they do vary. Metro plans are generally better at addressing current issues. Steve W. – some districts were established for flood control issues and they want to continue with that, but most have gotten in the game.</li> <li>• Chair Hanson – all three presenters have talked about TMDLs. How are we going to maintain the existing water quality? Louis – nondegradation standard needs to be embraced. Volume control for new development/redevelopment. Is it a focus in management plans to address protection? Steve W. – most plans are addressing protection. With the 10 year monitoring and assessment plan, the statewide data is being assessed and used by plans and they can consider protection. Craig – a base level of protection already exists in the regulatory requirements we have to meet.</li> <li>• How do public drainage authorities integrate into this? Annalee - not certain of the level water plans deal with drainage. It all depends on what's going on. Louis – the public drainage authority is set up to achieve the drainage and assess property owners. We try to bring the watershed/subwatershed approach to drainage, and integrate planning to achieve multiple benefits. Up to now we haven't expected drainage systems to deal with water quality issues. Craig - municipalities have to deal with drainage. Any new development in a city has to not affect water quality in any way. We don't have that same expectation in a rural setting. We have to figure out how to address this. Warren – a lot of drainage areas drain a mixture of land uses, which makes it complicated. Dave L. – there's still a lot of drainage going on. Craig – rural drainage is now where we were 30 years ago with stormwater. It's all about getting water off the land. What is the percent of the pollutant load from rural drainage vs. stormwater, and the cost? Craig – MPCA can best answer that. The last budget cycle the mix of money was about \$2 for nonpoint, \$1 for point sources (to cities).</li> <li>• Does the money match up with the level of the problem for nitrates? Gaylen – total suspended solids (TSS) report that will be published soon says the major source is from rural contributions; 60% from ravines, erosion. WWTP, stormwater are a small contribution. For phosphorus, agriculture is a large contributor. The point sources have reduced already. Nitrates and bacteria – more equal contributions (from point and nonpoint sources). Mike – it would be nice to have a</li> </ul>	

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	<p>scorecard. Shift resources to bigger sources of pollution, away from mandates. Gaylen – we can't continue to allocate money project by project. When we have the 81 watershed plans, we will be better able to determine where the loads are and focus on the priorities. Craig – urban areas are usually much more expensive to do. The problem is even though it's expensive it's mandated. It makes it tricky to shift the focus.</p> <p><b>Presentations/Notes:</b>  <b>Interagency Measures and Outcomes reporting</b></p> <ul style="list-style-type: none"> <li>○ Suzanne Hanson, MPCA and Andy Holdsworth, DNR</li> <li>• Presentation slides; Tracking Minnesota's Clean Water Legacy Effectiveness Clean Water, Land and Legacy Amendment <ul style="list-style-type: none"> <li>○ Legacy Amendment is a big investment.</li> <li>○ The big question: How is it being spent and what is being accomplished?</li> </ul> </li> <li>• Accountability to results, develop a framework. Minnesota is the only state developing a framework. EPA is pleased with the work. 36 measures. This is focused on the clean water funds. It's not about all the money coming to the state for clean water.</li> <li>• Andy – hierarchy of measures (triangle) seven criteria to rank; measures that come closest to answering the common questions in amendment that passed (clean water).</li> </ul> <p><b>Five common questions for Clean Water Performance Report: 2012;</b></p> <ol style="list-style-type: none"> <li>1. <b><i>How much and where is money being spent?</i></b> (Include other financial questions: <i>Where are clean water dollars being spent across the state? How much money is being spent on the ground? How much money is being leveraged in matching dollars from local, state, and federal monies?</i>) <ul style="list-style-type: none"> <li>• Percent of total funds by category of expenditure (monitoring/assessment, TMDL development, protection and restoration, and drinking water protection).</li> <li>• Total dollars spent per watershed or statewide on monitoring, planning, implementation, and research.</li> <li>• Total dollars passed through from state agencies to external partners.</li> <li>• Total dollars leveraged by Clean Water Fund.</li> </ul> </li> <li>2. <b><i>Is our water getting cleaner?</i></b> <ul style="list-style-type: none"> <li>• Rate of impairment/unimpairment of surface water statewide and by watershed.</li> <li>• Changes over time in key water quality parameters for lakes, streams, and wetlands.</li> </ul> </li> </ol>	<p><a href="#">Suzanne Hanson</a>, MPCA, 218-302-6614  <a href="#">Andy Holdsworth</a>, DNR, 651-259-5536</p>

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Meeting Date	Presentations/Discussion	Contact
	<ul style="list-style-type: none"> <li>• Number of previous impairments now meeting water quality standards due to corrective actions.</li> <li>• Number of BMPs implemented with Clean Water funding and estimated pollutant load reductions.</li> <li>• Percent of state's major watersheds intensively monitored through the watershed approach.</li> <li>• Changes over time in pesticides, nitrates and other key water quality parameters in groundwater.</li> </ul> <p><b>3. <i>Is our water safe to drink?</i></b></p> <ul style="list-style-type: none"> <li>• Changes over time in raw water quality from community water supplies.</li> <li>• Number of new public water supply systems assisted with developing and implementing source water.</li> <li>• Number of local government partners participating in Clean Water funded nitrate monitoring and reduction activities.</li> </ul> <p><b>4. <i>Can we eat fish caught in Minnesota Lakes?</i></b></p> <ul style="list-style-type: none"> <li>• Cumulative number of waterbodies sampled annually for fish contaminant concentrations.</li> <li>• Measure to be developed: mercury levels in fish.</li> </ul> <p><b>5. <i>How are emerging clean water issues being addressed?</i></b></p> <ul style="list-style-type: none"> <li>• Number of new health-based guidance values for contaminants of emerging concern.</li> </ul> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• Question on the bullet, how much money is being spent on the ground. Is there any way to micromanage that? Is there any way to break down costs to the project; capitol costs, administrative costs, etc.? Suzanne – we are working on getting that kind of data and roll it up into the process, to the higher level measures. Dave B. – we need to know if we are efficient in our administration, cost effective, etc. Andy – new reporting requirements require some of that project level reporting. It's important, but we also need to keep in mind the bigger picture.</li> <li>• How do you prioritize and does the spending match the priorities? Suzanne – we have to tell a story about the context. It has to be part of the story we roll out. The communication team is looking at that.</li> <li>• What I want to know is what difference it makes to spend the money. Andy – there will be measures fact sheets.</li> </ul>	



## Accountability and Outcomes

September-October 2011

Meeting Date	Presentations/Discussion	Contact
	<ul style="list-style-type: none"><li>• Question about the pyramid; do we need all those measures? Suzanne – the base measures are not included in the report, but they may be important measures for an agency or program. Gaylen – more detailed measures that may be critical in the future to answer questions. They will help answer questions brought up here today, and provide data for future questions. Andy – measure what we value, some say we value what we measure.</li><li>• What are we doing with measures #4 and 5? For example, the PCB method of detection level will change, so there will be many more polluted waters even though there's not more PCBs. Mercury makes sense for waters in a TMDL – already in an implementation plan.</li><li>• The three bullets under measures #4 and 5 don't address the two measures the same way the bullets do for the other measures.</li><li>• Andy – helped address relevant questions. CWF won't have much of an effect on mercury contamination for example, but the trend is important, also it is regional. Minnesota has a lot of data on fish consumption. Much more than other states. (Canada also has a lot of data.) Develop a trend measure for the 40 years of data.</li><li>• We already have information on the number of impairments. We also need to focus on protection and that's not up there. Suzanne – it's hard to measure protection. We may add case stories for that.</li><li>• Those three bullets are performance measures, not outcome measures. They will cause confusion if they are in this report.</li><li>• Question on including mercury in the measures, the Council didn't have anything to do with the mercury TMDL. Also it's a global issue. Chair Hanson – for PCBs, the problems are based on past practices. We can't do anything about it.</li><li>• Report how much and where the money is spent and what are the results. But impairments will go up as more data collected. Will the public get the message about why impairments are going up? Andy – we are aware of that and it will be important in our messaging.</li><li>• How long does it take from time the waterbody is listed until it's delisted? That's something the public would want to know. Suzanne – we don't have a lot of trend data now, but we will include that in the stories.</li><li>• Maybe the question is, is the trend going in the right direction? Delistings are more important for EPA reporting. Suzanne – fact sheets will be developed. There's lots of information in the more detailed work the group has done.</li></ul>	

## Accountability and Outcomes

September-October 2011

Meeting Date	Presentations/Discussion	Contact
	<ul style="list-style-type: none"> <li>• Gaylen – the Measures and Outcomes presentation slide with the wastewater treatment plant (WWTP) trends for phosphorus is something we've been working on for many years. It tells the story that significant progress has been made to reduce phosphorus loads from WWTPs. We hope to be able to have trends like this for nonpoint pollutants in 10 years.</li> <li>• There is a tension between spending funds on collecting more data and work on the ground.</li> <li>• Deb – there are not very many outcome measures. They were very carefully thought through. The biggest problem will be communicating the measures. I stand by and defend the measures very strongly. Suzanne – we may need to develop some communication for some of these points first before we roll this report out. Keith – this is the type of information we need.</li> </ul> <p><b>Presentations/Notes:</b>  <b>Minnesota's Legacy website Information item</b>, Greg Hubinger and Sally Olson, Legislative Coordinating Commission (LCC), <a href="#">Clean Water Fund</a>, <a href="#">Minnesota's Legacy</a></p> <ul style="list-style-type: none"> <li>• Greg Hubinger – the LCC is a joint House-Senate committee given the charge to develop the legacy website. Staff are working with an advisory group to develop the site. The website currently has information on about 1300 projects. This will increase over the years. Develop a tool to accommodate various agency databases. The site went live in January. Provisions were added in this year's legislation to increase the amount of project information on the site (handout). No appropriations for staffing the website.</li> <li>• Sally Olson shows how the web site works. All legacy projects funded to date are listed. There are various search functions.</li> </ul> <p><b>Questions:</b></p> <ul style="list-style-type: none"> <li>• Do you reconcile the total projects with the total appropriations? Greg – they get close but don't add up; don't include agency administration costs. Many projects are multi-year projects. We're still working on how to report and track those expenditures.</li> <li>• Any statistics on usage of site? Sally – pretty good, but it's not advertised a lot. It's important to pay attention to who uses what to see if this kind of reporting is useful. MPCA web sites have clear links to this site.</li> <li>• Are other agencies coordinating with this? Greg – we have good cooperation with the agencies. Data is structured so the data is put in by agencies. Do projects always stay on there or do they</li> </ul>	<p><a href="#">Greg Hubinger</a>, LCC, 651-296-2963  <a href="#">Sally Olson</a>, LCC, 651-296-9002</p>

## Accountability and Outcomes

September-October 2011

Meeting Date	Presentations/Discussion	Contact
	come off? Greg – we're trying to figure out how to deal with old data. Projects listed by fiscal year shows the amount available for that fiscal year. Not sure how to deal with longer term monitoring funds. The website shows projects funded with the four legacy funds and the Environment and Natural Resources Trust fund.	

*(Endorsed by the Clean Water Council at the May 17, 2010 Council meeting)*

**Ground Water Protection Strategy**  
**Developed by Interagency Team with Clean Water Council Input**  
**April 14, 2010**

**Introduction**

The vast majority of Minnesotans (73 percent) rely on groundwater as their drinking water source. Groundwater also feeds many of our surface water systems, supporting sensitive ecosystems throughout the state. Although the State has relatively abundant supplies, it has been recognized by the Clean Water Council, Minnesota state agencies and others that a coordinated management and protection strategy for Minnesota's groundwater is needed.

Due to slow travel times to and within most aquifers, the consequences of actions we take today may take a long time to materialize in groundwater and a long time to reverse. For example, contaminants introduced at the land surface today may not reach an aquifer for many years. Conversely, if an aquifer becomes contaminated it may be extremely difficult if not impossible to completely clean up. . Additionally, the effects of adding impervious surface and increasing groundwater withdrawals may not be fully realized until an irreversible impact on aquifer levels or surface water features containing sensitive biota has occurred.

Increasing reliance on groundwater resources for water supply continues to place greater demands on a resource once thought of as unlimited. Declining water levels in deeper aquifers and slower recovery in shallower systems reflects an increasing trend in use and resulting stress on our limited natural resources. A comprehensive approach to groundwater management is needed to address potential conflict between users, avoid adverse impacts on surface water features, reduce potential public health impacts associated with exposure to contaminants in drinking water, and ensure supplies are available to meet future needs.

**Purpose**

This document outlines the strategies developed by state agencies to ensure coordination of groundwater/drinking water management and protection activities. The document was further refined by the Clean Water Council's Prevention and Monitoring Work Group (Work Group) to meet their needs for a groundwater protection strategy. The following are the overall purposes developed for this Protection Strategy:

- To provide policy and program recommendations to state agencies and the legislature;
- To ensure coordination state agency groundwater management and protection activities
- To serve as a communication tool with local government; and
- To identify overall goals and "high-leverage" activities for achieving the goals.

The Strategy should be a living framework that is periodically reviewed/refined so new ideas can be integrated.

**Background/Need**

Groundwater supplies drinking water to almost 100 percent of the rural population of Minnesota and the vast majority of community water supply systems. Concerns over the impacts that land

use, improper waste disposal practices and increased demand for water resources have on groundwater quality and quantity have resulted in broad-based groundwater protection laws in Minnesota, including the Groundwater Protection Act (Minnesota Statutes Chapter 103H). The key ground water protection activities identified by these laws are:

- Mapping and monitoring to understand the quality and quantity (i.e. supply) of groundwater;
- Assessment activities to determine the health and environmental hazards associated with contaminated water and to identify and characterize emerging health and environmental concerns;
- Planning activities, such as source water protection planning and the state's Pesticide Management Plan, which focus on identifying threats to groundwater quality and strategies to mitigate those threats;
- Implementation activities aimed at protecting or improving groundwater quality (for example, sealing abandoned wells or adjusting land management practices to prevent pollutants from entering groundwater);
- Remediation activities focused on addressing problems that have occurred (such as a spill or chemical release that is threatening a groundwater aquifer), and preventing future problems;
- Compliance and enforcement activities designed to prevent contamination from entering groundwater; and
- Management and permitting activities focused on ensuring groundwater supplies are used wisely.

In more recent legislation, groundwater protection was included as an element of the Clean Water, Wildlife, Cultural Heritage and Natural Areas Constitutional Amendment passed by Minnesota voters on Nov. 4, 2008. The Amendment was created to:

- **protect** drinking water sources;
- **protect**, enhance, and restore wetlands, prairies, forests, and fish, game, and wildlife habitat; to preserve arts and cultural heritage; to support parks and trails; and
- **protect**, enhance, and restore lakes, rivers, streams, and groundwater.

Minnesota Statutes Section 114D.50 further specifies the allowed uses of the Clean Water Fund established via the constitutional amendment; those allowed uses include:

- Supporting measures to prevent surface waters from becoming impaired, and
- Supporting measures to prevent the degradation of groundwater in accordance with the groundwater degradation prevention goal under section 103H.001.

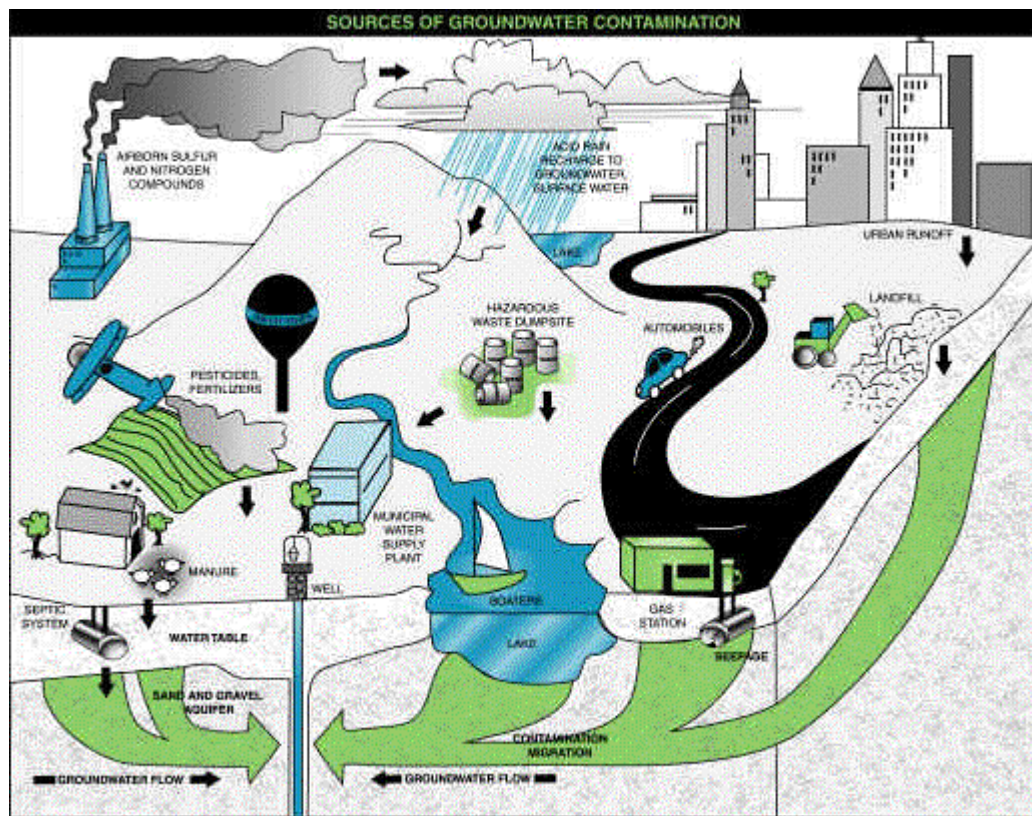
The following points summarize key considerations for the continued effort to prevent problems and protect groundwater resources from degradation:

- There is a close link between protecting, restoring, and preserving the quality of Minnesota's groundwater resources and the ability to develop the state's economy, enhance its quality of life, improve its public health, and protect its human and natural resources;
- Achieving the state's water quality and quantity (e.g. groundwater sustainability) goals will require long-term commitment and cooperation by all state and local agencies, and other public and private organizations and individuals with responsibility and authority for water management, planning and protection;

- A key to long-term success involves focusing on providing assistance and incentives to protect groundwater quality in vulnerable areas, and identifying and encouraging implementation of conservation and protection measures to prevent waters from becoming degraded.

### Minnesota's Hydrogeology

The availability and sources of potable groundwater vary significantly across Minnesota. In some parts of the state groundwater resources are limited and local aquifers of limited extent may be extremely important as a primary potable water supply. These aquifers may be overlain by relatively impermeable layers of glacial till and therefore be more protected from surface sources of contamination, or they may be at the ground surface and highly vulnerable to contamination. In the Twin Cities area and extending to the southeast most potable groundwater comes from large regional aquifers that extend over significant distances. When an aquifer is composed of limestone or dolomite, groundwater may flow rapidly through large fractures and be extremely vulnerable to contamination. This is referred to as a karst aquifer and is common in southeast Minnesota. In central Minnesota, extensive shallow sand deposits from glacial outwash are the primary source of groundwater and may also be highly vulnerable to contamination. In much of Minnesota, the characteristics and conditions of an aquifer may vary significantly over very short distances. Because of this variability in the characteristics of aquifers, information is generally needed on a local scale to properly manage groundwater resources.



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## **Recommendations:**

### **1. Approach Groundwater Management and Protection as One Part of a Comprehensive Hydrologic Flow System**

Measuring and understanding groundwater resources and the complexity of groundwater-surface water interactions is very challenging. Groundwater and surface water are commonly thought of as separate resources that can be managed and protected individually. While it is useful – and often necessary – to separate groundwater and surface water monitoring and protection efforts to manage the scale of these efforts, it is important to always keep in mind that groundwater and surface water are interrelated components of the hydrologic cycle. Since surface water may infiltrate to groundwater, and groundwater discharges to surface water, they need to be considered together to fully understand either, and to fully protect and restore both.

This interrelationship presents a challenge in developing a framework for groundwater monitoring and protection efforts. In some cases, it is useful to consider groundwater within the context of surface water watersheds to help understand flow patterns within a watershed and the effects of groundwater quality and quantity on surface water resources (and vice versa). In addition, the education and prevention actions within a specific watershed that will occur in response to surface water impairments and protection activities may also be used to protect groundwater, providing a significant leveraging of limited resources.

Watersheds are not always the most useful way to organize groundwater evaluation and protection efforts, however. Significant aquifers may cross more than one watershed, and recharge and discharge areas for some aquifers are in different watersheds. In these cases, the planning and management of groundwater resources will need to be managed across multiple watersheds, and may be best accomplished by considering aquifer management areas or source water protection areas.

Finally, many best management practices designed to protect groundwater are likely to be based on field characteristics such as soil types and cropping practices, or focused on a specific product or activity. In these cases, groundwater protection efforts are best organized according to locations that are most at risk for degradation based on land use characteristics or stressors, regardless of the watershed or aquifer management area.

As the above paragraphs illustrate, multiple approaches to understanding, protecting and managing groundwater will be needed to achieve protection goals, with the best approach dependant upon the specific stressors, aquifers or watersheds of concern.

### **2. Adopt a Long-Term Focus for Monitoring and Prevention Activities**

Except for karst areas, groundwater flow through aquifers is generally very slow. In some deeper aquifers in Minnesota the water may be many thousands of years old, and even some shallow aquifers may contain surprisingly old water. Water withdrawals and land use practices can change the natural timing and response in the groundwater system and changes in practices may take years to show declines or improvements in water quality or supply. For these reasons it is

particularly important to emphasize prevention in protecting these aquifers and to adopt a long-term focus for groundwater monitoring and protection activities to protect environmental and public health and ensure sustainable supplies. This is also important for aquifers that have relatively young water that are more susceptible to contamination from land use practices.

### **3. Enhance Data Collection for Current and Future Groundwater Management Efforts**

There are many types of data and information required to effectively manage and protect groundwater. Information on aquifer characteristics, groundwater levels and quantity, and groundwater quality data are all needed to provide information to make decisions that will be protective of Minnesota's groundwater resources now and into the future.

In order to manage and protect groundwater and to develop models and other tools that are useful for groundwater sustainability planning, specific types of information are needed regarding the physical and chemical characteristics of aquifers and groundwater, and the movement of groundwater within aquifers, between aquifers, between the land surface and aquifers, and between aquifers and surface waters. Given that groundwater systems are largely underground and out of sight, this information can be relatively difficult and expensive to collect, but it is required to understand groundwater flow sufficiently to make prudent management decisions. Ongoing efforts to identify gaps and coordinate this data collection – such as the recent work of the DNR, Freshwater Society and University of Minnesota to identify data needs for managing groundwater sustainability – should continue to be integrated with other groundwater planning and management efforts.

Groundwater monitoring data is needed for both identifying the need for protective actions and to evaluate the effectiveness of those actions. Without groundwater monitoring data to establish long-term water quality trends it is difficult to evaluate the outcomes from groundwater protection activities. Routine monitoring should be conducted as needed to evaluate water quality trends in major aquifers and to manage groundwater availability across Minnesota. In deciding on where and when to monitor, a risk-based approach is needed to prioritize monitoring towards the most vulnerable aquifers/those with greatest potential for use conflicts – to allow us to identify and fix problems and put practices in place to prevent them in the future.

In addition to “routine” monitoring of groundwater conditions, data should also be periodically collected on the presence and trends of contaminants that are just beginning to be investigated and are not well understood (such as endocrine disrupting compounds). This monitoring should start where the data will be most useful to inform health risk assessments, policy development and further investigation.

In keeping with Minnesota's multi-agency approach to managing groundwater, agencies routinely share resources for monitoring and data management, and work together on specific projects. The Clean Water Legacy Act funding allowed state agencies to efficiently coordinate surface water quality restoration and protection activities. In the same way, the groundwater monitoring activities under the Clean Water Fund need to proceed in a collaborative manner that will allow the state to fully realize the collaborative, prevention-focused approach to groundwater management envisioned for Minnesota.



#### **4. Accelerate Efforts to Enhance Data Sharing and Simplify Public Access to Data**

Easy access to accurate data and information is important to ensure sound management decisions and maximize the use of available resources. Over the last 25 years or more, data has been collected for a wide variety of groundwater management purposes in Minnesota. This information is useful to help evaluate groundwater levels, aquifer characteristics, groundwater quality, and project strengths and weaknesses. In order to make the most efficient and cost-effective use of existing information and available funds for groundwater monitoring and protection, state agencies should continue to move forward with cooperative efforts to share and simplify public access to environmental and technical data. This information should be made accessible in a variety of formats to encourage adoption by citizens, interest groups, local units of government, watershed groups and other interested parties.

State agencies should form a work group(s) to accelerate data sharing activities among agencies and between agencies and the public. For example, the state should develop and maintain a “clearing house” for information on groundwater BMPs, research and demonstration activities, and the state should move forward with developing and maintaining an information “portal” which will provide a link to all sources of environmental data.

#### **5. Encourage Local Engagement in Management, Prevention and Demonstration Efforts**

The state of Minnesota, local governments, special purpose units of government, federal and tribal partners, interest groups, other stakeholders and citizens are all key partners and have a role to play in protecting water resources in Minnesota. Because water resource boundaries typically cross multiple jurisdictions and because local communities and groups can have a dramatic impact on the availability of funding and the adoption of desired practices, protection efforts must have an effective process for local engagement. Given the variety of protection approaches available to citizens and local units of government, significant resources should be focused on local involvement in groundwater protection activities.

The Prevention and Monitoring Work Group has noted that that local involvement and engagement is key to the success of protection efforts, since the implementation of BMPs typically relies on local government or individual action. The following steps should be taken to enhance local engagement in prevention (and restoration) work:

- Ensure that local planning efforts (county water plans, city comprehensive plans, source water protection plans, etc.) that protect groundwater are promoted and implemented.
- Provide information and technical support from state agencies to support local groundwater protection efforts.
- Recognize individual and local efforts that contribute to groundwater protection goals.
- Research the connection between incentives, education, regulation and local action to help develop new approaches to encourage local/individual action
- Establish tools and protection strategies within each local plan that are intended to enhance local engagement.

- Look for opportunities to integrate state agency plans, programs and activities with local water planning to enhance those efforts, in a coordinated way that avoids conflicting objectives.

## **6. Deliver Up-to-date Protection Tools and Recommended Best Management Practices**

One of the critical success factors in protecting groundwater quality is protection tools and best management practices (BMPs) that are effective in reducing groundwater contamination. It is important to note that BMPs may be effective in certain situations and inadequate in others. Many practices also change rapidly over time, and the BMPs must be revised to stay current. It should not be assumed that a BMP is always effective. While much work has been done to evaluate BMPs, there are still data gaps.

Community water supply plans and aquifer management plans are key tools to manage sustainable, high-quality groundwater supplies. These tools provide a means to look at the existing water supply, evaluate potential demands and provide for allocation planning to meet current and future needs. As with the BMPs described above, these and other tools and management strategies must be continually reviewed and revised to ensure they remain effective.

In light of this need, adequate sustained funding should be provided for continued assessment and promotion of BMPs, BMP demonstration and implementation projects, and the development of other tools or approaches that are effective in protecting groundwater.

## **7. Consider the Risk from Unintended Consequences**

While many practices may result in increased protection for both surface water and groundwater, some practices that benefit surface water may have a negative effect on groundwater, and vice versa. The potential for unintended consequences to public health, the environment, water quantity and sustainability, economics, etc. should be considered when evaluating and promoting specific BMPs and other actions to protect and manage water resources.

For example, infiltration basins may be useful to reduce contamination entering surface waters as a result of overland flow and to increase recharge to aquifers, but they may degrade groundwater quality if care is not taken in their placement and design. This is an example of a tradeoff between the potential benefits and potential problems associated with a specific practice. When selecting a practice these tradeoffs should be explicitly investigated and documented, and the plan adjusted to reduce potential negative impacts, prior to a final decision or implementation.

## **8. Provide Adequate Financial Resources**

Adequate quantities of clean, potable groundwater are extremely important for the Minnesotan's that currently use groundwater as a drinking water source, and for the future needs of Minnesota. Our knowledge of the status of the groundwater system and the resources needed for sustainable management is evolving based on new information and new pressures on the system. As easily accessible groundwater supplies are used up or become contaminated so that they require treatment prior to use, the cost or availability of groundwater may become a significant limitation

on future growth. Further, once land use and water appropriation decisions are made it may be extremely difficult to reverse their long-term effects. For these reasons it is important that adequate funding be provided for actions needed to understand, protect and manage groundwater into the future.

Resources are needed to implement the BMPs and the strategies identified above, including completing the up-front work needed to identify key threats to groundwater quality and quantity, to evaluate BMP and management approach effectiveness and to select BMPs and management strategies to most effectively address those threats. Clean Water Fund implementation and research projects should also include groundwater protection activities. The critical role of local governments and individual landowners in helping implement the identified steps is apparent; funding actions to expand and encourage their involvement is essential.

To meet these needs, agencies should look for opportunities to pilot and fund groundwater protection projects, especially those that involve local protection efforts. This will help to inform the development of groundwater protection efforts and also serve as examples of how an interest group or local government might seek to integrate protection and restoration activities into local planning documents and ordinances.

In addition to these goals, the following criteria should be used when looking at funding priorities to protect groundwater quantity and quality:

- Projects that define the quality, geology, flow pathways and movement rates of water.
- Projects that enhance local awareness and engagement.
- Use of innovative tools/approaches to achieve protection goals.
- Emphasis on preventing pollution/threats (rather than treating problems).
- Projects that pilot prevention approaches that could inform groundwater protection efforts in general.
- Degree to which the aquifer or surface water features are threatened (Focus on aquifers with declining trends, areas where withdrawals have the potential to impact surface water features, areas where significant increased demands are projected, etc. as opposed to aquifers with few or no threats).
- Implement projects that target their efforts to provide the greatest amount of protection and public health benefit for the least cost, or that provide additional benefits beyond water quality and quantity protection.
- Projects that assess the ability of resources to supply projected demands without adverse impacts to natural resources.
- Projects that result in enhanced data accessibility and sharing.

**Groundwater / drinking water activities**

Clean Water Fund appropriations FY10-11 and 12-13

Clean Water Fund Activity	FY10-11	FY12-13
Assessment/monitoring	\$21.012M	\$23.41M
Watershed restoration and protection strategies	\$21.700M	\$24.56M
<b>Drinking water protection</b>	<b>\$13.050M / 9%</b>	<b>\$17.008M / 9%</b>
Nonpoint source protection, restoration and preservation	\$60.808M	\$69.118M
Education and civic engagement	\$250k	--
Research and tool development	\$2.70M	\$10.30M
Point source protection and restoration	\$32.700M	\$35.02M
Legislative	\$25k	\$13k
<b>Total</b>	<b>\$152.245M</b>	<b>\$179.429M</b>

Groundwater / drinking water activities			
		FY10-11	FY12-13
MPCA	Groundwater assessment: Continue to enhance ambient network, modeling to support TMDL stressor ID, and continued effort to look for CECs in subset of monitoring wells.	\$2.25M	\$2.25M
MPCA	Groundwater protection: Under consideration: augmenting/accelerating groundwater protection practices, BMP evaluation and implementation, source water protection support, data access/integration.	\$5M (transferred to DNR)	--
MPCA	EQB I94 groundwater study (transferrable)	--	\$450k
MPCA	Enhanced county inspections / SSTS corrective actions	--	\$1.570M
MDA	Increase monitoring to evaluate trends in the concentration of nitrate in groundwater both in high risk areas and regionally. Promote and evaluate regional and crop specific nutrient Best Management Practices. Work directly with local communities dealing with identified nitrate problems. Facilitate planning by community public water suppliers, local farmers and fertilizer dealers. Increase grant funding to local governmental units to encourage and pilot different approaches for sustainable locally driven response activities.	\$1.125M	\$1.7M
DNR	Water supply planning, aquifer protection & monitoring: Continue to map, monitor, and manage groundwater systems to improve sustainable management decisions being made by other agencies, units of government, businesses, and citizens. This work will improve understanding of how water moves between the land surface and aquifers and then flows back into wetlands, lakes, streams, and rivers. This information is necessary to help other agencies and governments do their jobs more effectively. It supports MDH, MDA and MPCA in their work to implement more effective programs and best management practices to protect public, economic and, environmental health. It will support agencies using an integrated and targeted approach for areas in greatest	\$1.125M	\$3M

	need or at greatest risk from water quantity or quality problems. It will include development of improved groundwater models to allow increase understanding of how land use management decisions can affect groundwater and guide more sustainable solutions.		
<b>DNR</b>	To be used for intensive groundwater monitoring in 11-county metro area	\$4M (transferred from MPCA)	\$1M
<b>Met Council</b>	TC metro water supply plan: Conduct local assessment and develop sustainable supply options for 2 areas in the region. Develop tools for stormwater management to protect and recharge aquifers. Evaluate water conservation program effectiveness. Continue the collection, analysis, and sharing of hydrogeologic information to refine the understanding of groundwater availability. Update the regional groundwater model with new information, and apply the model to test different approaches to water supply development.	\$800k	\$1.0M
<b>MDH</b>	Assess, evaluate, and develop health-based guidance for 12 additional contaminants of emerging concern. Screen 24 substances from list of nominated substances. Evaluate alternative risk assessment methods. Expand public communication and outreach efforts.	\$1.335M	\$2.040M
<b>MDH</b>	Accelerate source water protection planning statewide through introduction of new communities into plan development and grants to local governments. Expand MDH capacity to provide technical assistance.	\$2.415M	\$2.830M
<b>MDH</b>	County Well Index: Migrate and recompile existing data from historic database to standardized database architecture. Maximize public, local government and agency access to updated County Well Index through a user group and expanded capabilities.	--	\$668k
<b>MDH</b>	Well Sealing Cost Share: Protect groundwater used for drinking water from contamination by assisting public and private well owners to seal unused wells by sharing up to 50% of the cost.	--	\$500k
		<b>\$13.050M</b>	<b>\$17.008M</b>

## 2011/2012 Workplan (114D.30 Subd. 5)

Timeline	Work Plan category	Element of Law	Strategy/Purpose	Activities	Desired outcomes
March – June 2011	<u>Targeted Implementation</u>  Issue statement: Determine how data drives priority & sequence of strategies to be pursued.	114.20D Subd. 6	<ol style="list-style-type: none"> <li>1. Determine on-the-ground improvement and protection approaches are working, and approaches that appear to not be working in areas of the state.</li> <li>2. Understand current approaches for implementing unregulated NPS management practices and identify opportunities that may improve effectiveness.</li> <li>3. Make recommendations on how to improve implementation of water quality improvement projects.</li> </ol>	<ol style="list-style-type: none"> <li>1. Have a dialogue with local implementers on how their experience would lead them to change the process, increase success, and make biggest difference. <b>(4/18/11: engaging landowners)</b></li> <li>2. Discuss with experts the current standard approaches and practices for implementing unregulated NPS management practices and address. <b>(3/21-11: Watershed assessment and conservation targeting tools, 4/18/11: engaging landowners, 6/20/11: Craig Cox)</b></li> <li>3. Have a dialogue with presenters on how their experience would lead them to change the process:               <ol style="list-style-type: none"> <li>a) Identify the extent of Agricultural NPS contributions, what is currently being done, and what are the most effective ways to achieve reductions. <b>(4/18/11: 20-year report on MN River, Engaging landowners)</b></li> <li>b) USDA efforts and discussion on ways to leverage the federal programs. <b>(5/16/11: Don Baloun)</b></li> </ol> </li> </ol>	Council makes policy recommendations on targeting BMPs to earn the best outcome for both implementers and water resources.

				<ul style="list-style-type: none"> <li>c) Tools and requirements utilized in other states to reduce NPS. <b>(6/20/11: Craig Cox)</b></li> <li>d) Review current state and local authorities that may not be being used or effective and understand why. <b>(5/16/11: Sustainability Framework)</b></li> <li>e) Review the extent of NPS contributions from public sources (i.e. stream bank, bed, lands) and evaluate tools and practices to manage such sources. <b>(4/18/11: 20-year report on MN River)</b></li> </ul> <p>4. Discuss recommendations from the 25 year Framework Plan. <b>(5/16/11: Sustainability Framework)</b></p> <p>5. Identify key ideas and approaches the CWC believes could improve effectiveness to protect and improve water quality. <b>(6/20/11 or 7/18/11 meeting)</b></p>	
<b>July 2011: meeting cancelled due to state shutdown; August 2011: Council field tour / meeting in Duluth</b>					
<b>September-October 2011</b>	<u><b>Accountability &amp; Outcomes</b></u>  Issue statement:	114D.30 Subd. 6 and .7	<ol style="list-style-type: none"> <li>1. Track progress of implementation of Clean Water Legacy Act activities funded by the Clean Water Fund.</li> <li>2. Review results and outcomes of Clean Water Legacy Act activities funded by the Clean Water Fund.</li> <li>3. Review progress and effectiveness of approaches and make recommendations for adjustments if necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Acquire and review the Measurable Outcomes report prepared by the interagency team: <b>(10/17/11)</b> <ol style="list-style-type: none"> <li>a) Review the report to ensure focus</li> <li>b) Ensure that the proper tools are available to secure measurable outcomes.</li> </ol> </li> <li>2. TMDL provision for enforcement of agreed-to allocation requirements for the watershed. <ol style="list-style-type: none"> <li>a) Understand the difference between expectations and requirements of the CWA. <b>(9/19/11: CWA backgrounder)</b></li> </ol> </li> </ol>	<p>Council members understand, make recommendations to and/or endorse the interagency measures and outcomes methodology.</p> <p>Council makes recommendations to agencies and LGUs on improving TMDL</p>

				<p>b) What can be done to improve implementation: <b>(10/17/11)</b></p> <ul style="list-style-type: none"> <li>• Regulations.</li> <li>• Address issue of selective compliance – assumes there is enough regulation.</li> <li>• Identify creative measures for non-regulatory approach (utilize 1. peer pressure, 2. See if the marketplace can motivate people, 3. Remove all cost-sharing in the watershed).</li> </ul> <p>c) Improve TMDL allocation fairness:</p> <ul style="list-style-type: none"> <li>• Tie allocation to hydrology of the stream.</li> <li>• Consider actions that take into account flood events occurring as a result of other protective measures e.g., farm field storage of flood waters resulting from community protection actions resulting in TSS excursions.</li> </ul> <p>3. Public input process tailored to identified impacts and allocation scenarios – provide reasonable assurance that the public had adequate opportunity for input.</p> <p>Resources:</p> <ul style="list-style-type: none"> <li>• Legislative Coordinating Commission website: <b>(10/17/11)</b> <a href="http://www.cdf.leg.mn/">http://www.cdf.leg.mn/</a></li> </ul>	implementation plans, including how to best engage the public.
<b>November 2011 – January 2012</b>	<b><u>Groundwater/drinking water</u></b> Issue statement: Prioritize recommendations on the allocation of resources using sound science and cost-effectiveness	114D.10	<ol style="list-style-type: none"> <li>1. Understand what is known about the quantity and quality of groundwater supply and drinking water.</li> <li>2. Understand the roles and responsibilities of each agency as they relate to groundwater/drinking water.</li> </ol>	<ol style="list-style-type: none"> <li>1. Have presentation from interagency team on collaboration, and clarification of roles relating to groundwater activities as necessary.               <ol style="list-style-type: none"> <li>a) Have presentations by appropriate agencies (DNR, MPCA, MDH) on status of source waters.</li> <li>b) Become educated on the breakdown of source waters (demographics).</li> </ol> </li> </ol>	<p>Council is well-versed in groundwater and drinking water issues in Minnesota.</p> <p>Council makes</p>



	measures.		<p>3. Understand the “state of water reuse” in Minnesota.</p>	<p>c) Learn current state of groundwater (and drinking water) gaps and where to head in the future.</p> <p>d) Become educated on the connectivity between groundwater and surface water.</p> <p>2. Have presentation by Met Council on status/use of metro area water plans.</p> <p>3. Have presentations from current producers, including benefits and disadvantages about water reuse (Mankato, Sioux, Burnsville) (informational item).</p> <p>a) Learn state agency perspective.</p> <p>b) Become educated on water reuse and how it works.</p> <p>c) Become educated on conservation drainage: what works and doesn’t work.</p> <p>4. SSTS issues – roles, responsibilities and funding mechanisms</p> <p>Resources:</p> <ul style="list-style-type: none"> <li>List of interagency reports (with abstracts): Dave Leuthe.</li> <li>Drainage workgroup.</li> <li>SSTS ad hoc work group</li> </ul>	<p>educated policy and budgetary recommendations, based on sound science and cost effective measures for Minnesota’s groundwater and drinking water resources.</p>
February-April 2012	<p><b><u>Applied Research &amp; Tool Development</u></b></p> <p>Issue statement(s):</p> <ul style="list-style-type: none"> <li>What tools and research needed to address CWF priorities?</li> <li>What is missing that prevents outcomes and progress toward goals?</li> </ul>	<p>114D.30 Subd. 1 and 114D.35 Subd. 2</p>	<p>To inform Council on (1) research needs and (2) tool development to develop future CWF investment recommendations.</p>	<p>1. Research needs</p> <p>a. Review Minnesota Water Sustainability Framework research recommendations</p> <p>b. Review ongoing research activities/portfolio of state agencies</p> <p>2. Tool development (the development of modeling tools is a subset of research, and is to develop a specific tool to address a specific need)</p> <p>a. Review current tools available and being used</p> <p>b. Review ongoing activities that are</p>	<p>Council provides recommendations and advice on research directions, priorities, gaps to inform future CWF investments and to Agencies to inform research strategic planning</p>

	<ul style="list-style-type: none"> <li>How do we ensure that the right tools are used?</li> <li>How do we get the developed tools to the right users (eg LGUs, WDs, etc)?</li> </ul>			<p>evaluating current tools (Interagency effort being led by USACE; EPA and USGS decision support tools, etc)</p> <p>c. Identify gaps in tool availability for various priority tasks of the CWF</p>	
May - June 2012	<p><b><u>Public participation and education</u></b></p> <p>Issue statement:</p>	114D.35 Subd. 1 and .3	<ol style="list-style-type: none"> <li>To evaluate progress of public participation in monitoring, TMDL development and implementing restoration of impaired waters.</li> <li>To recommend strategies for informing, educating and encouraging participation in improving water quality.</li> </ol>	<ol style="list-style-type: none"> <li>Have presentations that describe success and challenges in implementing public participation for monitoring, developing TMDLs and in implementing activities for water quality improvement.</li> <li>Have a dialogue with presenters on how their experience would lead them to improve the process.</li> <li>Have a dialogue to agree to what is included in the definition of education.</li> <li>Bring in experts to provide advice on strategies for education.</li> <li>Develop strategy recommendations for informing, educating and encouraging participation in improving water quality.</li> <li>Discuss the recommendations from the 25 year Framework Plan.</li> <li>Identify key ideas and approaches the CWC believes could improve effectiveness to protect and improve water quality.</li> </ol>	Council develops a brief report that recommends strategies for informing, educating and encouraging participation in improving water quality.
June-July 2012	<p><b><u>Local Capacity</u></b></p> <p>Issue statement:</p>	114D.20 Subd.5, .6 and .7	<ul style="list-style-type: none"> <li>Clarity on what the real needs are regarding local capacity</li> <li>Need to address all areas of state, not just agricultural areas, also depends on environmental issues</li> </ul>	<ol style="list-style-type: none"> <li>Understand how dollars get converted to projects, practices or behavior</li> <li>Define local capacity and what it does – feds, state, regional, local citizen, NGO, and how it's organized.</li> <li>What package of funding is currently out there?</li> <li>Examine how capacity is influenced by</li> </ol>	

			<ul style="list-style-type: none"> <li>• Get input from BWSR and other agencies on capacity needs</li> <li>• Understand overlap on what may work in rural and urban settings</li> </ul>	<p>population, tax base (ability to match) and leveraging ability. Make policy recommendations to address high variability of farm bill money, water resources, and financial resources.</p> <p>5. Is it acceptable to have holes?</p>	
<b>August - November 2012: Funding Priorities / Legislative report completion [Report due to Legislature and Governor's office December 1, 2012]</b> <ul style="list-style-type: none"> <li>• Public vs. private funding for stabilizing large banks (natural degradation)</li> </ul>					
<b>August or September 2011: Annual field tour (metro?)</b>					

## **CWC Steering Committee Agenda**

**Monday, November 21, 2011; 2:30 p.m.**

Freeman Building, Room B145

625 Robert Street North, St. Paul

- 1. Follow-up from November meeting**
- 2. Work plan topics: targeted implementation and accountability and outcomes:**
  - Are there other presentations and/or information to cover, or can the BOC move forward with their process?
- 3. BOC schedule / 2012 legislative report timeline**
- 4. December 12, 2011 meeting agenda – *(meeting will be held in the MPCA Board Room)***

**9:00-9:15      Convene Full Council**

- Comments/additions to the agenda
- Approve 11/21/11 meeting minutes
- Council introductions and updates

**9:15-9:30      Steering Committee Report**

**9:30-10:30      Clean Water Fund audit findings (programmatic and financial)**

Judy Randall, James Nobles, Office of Legislative Auditor

**10:30-10:45      Break**

**10:45-12:00      Groundwater / surface water interaction – Andrew Streitz,  
MPCA**

**12:00-12:30      Lunch**

**12:30-2:15      Ecosystem hydrologic modification**

**2:15-2:30      January meeting agenda / adjournment**

***2:30~3:30 Council Steering Team***

***2:30~4:30 SSTs ad hoc committee meeting***

***Next Meeting: January 23, 2012***

***Location: MPCA Board Room***

# Review Process for Budget Recommendation Report

## 3-18-11

