Clean Water Council Meeting Agenda
Monday, May 21, 2012
9:00 a.m. – 2:30 p.m.
MPCA Board Room
520 Lafayette Road North, St. Paul

9:00-9:15	**Convene Full Council** • Comments/additions to the agenda • Approve 4/16/12 meeting minutes • Council introductions, updates and conflict of interest notifications	
9:15-9:30	**Steering Team Report** • Membership update • Legislative update • "Member check-in"	**Information item**
9:30-9:45	**BOC update**	**Information item**
9:45-10:00	**Break**	
10:00-11:45	**Stormwater: Applied research, tool development and implementation** Lisa Thorvig (MPCA); Randy Neprash (Minnesota Cities Stormwater Coalition)	**Information / discussion item**
11:45-12:00	**Member check-in**	**Discussion item**
12:00-12:30	**Lunch**	
12:30-1:30	**Precision conservation: Tools and strategies for effectively targeting conservation practices and resources** Dr. David Mulla (University of Minnesota)	**Information / discussion item**
1:30-2:15	**Update on Clean Water Fund research projects** Adam Birr (MDA)	**Information / discussion item**
2:15-2:30	**Member check-in**	**Discussion item**
2:30	**June meeting agenda / adjournment**	

2:30~3:00 Council Steering Team

Next Meeting: June 18, 2012

wq-cwc2-12e

Clean Water Council Meeting Minutes
Monday, May 21, 2012
9:00 a.m. – 2:00 p.m.
MPCA Lower Level Board Rooms
520 Lafayette Road North, St. Paul

Council members present: Marilyn Bernhardson, Linda Bruemmer, Warren Formo, Keith Hanson, John Harren, Scott Hoese, Frank Jewell, Mark Knoff, Michael McKay, Julie Westerlund for Dave Leuthe, Gene Merriam, Gaylen Reetz, Victoria Reinhardt, Todd Renville, Sandy Rummel, Deb Swackhamer, Rep. Paul Torkelson, Matthew Wohlman, Steve Woods.

Absent: Pam Blixt, Rep. Kent Eken, Patrick Flowers, Bradley Kalk, Dave Leuthe, Senator John Pederson, Louis Smith, Senator Dan Sparks.

1. **Convene Full Council**
    - Comments/additions to the agenda
    - Approve 4/16/12 meeting minutes
    - Council introductions, updates and conflict of interest notifications

- Chair Hanson called the meeting to order and asked members for comments on the agenda. There were none. John Herron moved to approve the 4/16/12 meeting minutes, Sandy Rummel seconded. Motion passed.
- Council member introductions and conflict of interest announcements.
- Gaylen Reetz gave an update on the two total suspended solids (TSS) draft TMDL reports currently on public notice, the Minnesota River TSS and the South Metro Mississippi River TSS. The public notice period ends in one week on May 29, 2012. There has already been one request for a contested case hearing and hundreds of comments.
- Frank Jewell said he was in the BWCA recently and the area is still very dry.
- Linda Bruemmer – MDH staff have been working at the Living Green Expo (talked about legacy funding) and they are preparing for the State Fair.
- Victoria Reinhardt – the low water level in White Bear Lake is the biggest concern in White Bear Lake. They will continue to work on trying to resolve it. One homeowner suggested pumping water from the aquifer into the lake. Water is already being pumped from the aquifer for golf courses and other recreational interests so the question will be, why not for the lake. Question for Victoria on a newspaper report about pumping water from Bald Eagle Lake to White Bear Lake. Victoria – suggestion is that excess water going into Bald Eagle Lake be pumped into White Bear Lake. But Bald Eagle Lake is impaired and White Bear Lake is not. So you don't want to pump water into an unimpaired lake that may cause a problem.
- Matt Wohlman - the Minnesota Agriculture Water Quality Certification Program received 60 applicants. Interviews will be this week. They hope to make decisions soon.
- Marilyn Bernhardson – a drainage workshop will be held in the Yellow Medicine River watershed, July 31-August 1. This will be a good demonstration. She encourages everyone to attend. Email will be sent when the locations have been chosen.
- Matt Wohlman - there will be three Agricultural Drainage Workshops held across the state in the Red River Basin, Yellow Medicine/Lac qui Parle watershed, and a central Minnesota location.

- Deb Swackhamer is preparing for the U of MN's Water Resources conference in October.
- There were no conflict of interest notifications from any of the Council members.
- Audience introductions.

2. Steering Team Report

  - Membership update
  - Legislative update
  - "Member check-in"

- Chair Hanson gave the steering committee report. Patrick Flowers of Excel Energy has been confirmed as one of the Council's business representatives.
- Jen Maleitzke – there has been one application for the Council fishing representative and township representative. Applications are still open for both of these.
- Chair Hanson explains the member check-in on the agenda. The idea is to get the thoughts of members at the end of the meeting while they are still fresh in your mind.

3. BOC update

- Vice Chair Scott Hoese gave the BOC update. The May meeting packets have BOC information. The BOC will meet with the agencies on May 31st.
- Jen – information the agencies submitted is on their web site. If you have questions about agency information, send them to Scott or Jen. After the June meeting, members can get feedback from the organizations you represent.
- Chair Hanson – we will have the month of September for public comments on the recommendations. We received some good comments a few years ago, so it was worthwhile. This year we will have more time for public input.

4. Stormwater: Applied research, tool development and implementation; Lisa Thorvig (MPCA); Randy Neprash (Minnesota Cities Stormwater Coalition)

- Lisa Thorvig gave some introductory remarks about the stormwater program.
- Why is stormwater runoff an environmental issue? Runoff carries pollutants and increased volume. Stormwater runoff is the main source of pollution to our wetlands. Runoff comes from increased impervious development.
- Stormwater program – purpose is to reduce pollutant loading and reduce volume.
- One page handout – 1987 Federal Clean Water Act amended to require stormwater be addressed in two phases; Phase 1 and 2 stormwater permits. Municipal, construction and industrial stormwater permits.
- 4 major challenges;
  1. Increasing impervious surface in metro areas.
  2. Rainfall increasing or decreasing in areas.
  3. Historically we have used natural waterbodies (wetlands, etc.) to treat stormwater
  4. NPDES permits for some – TMDLs may require NPDES permitted areas to reduce pollutants; mainly affects cities.
- Lisa introduced three stormwater staff in the audience; Brian Livingston, Ann Gelbmann and Bruce Wilson.

- Presentation: total phosphorus background loading: 20-50 parts per billion (ppb) in northern Minnesota, 300-600 ppb in southern Minnesota, 100-125 ppb in central Minnesota. That is the target for the areas.
- Burnsville rain gardens reduced volume of runoff by 90%, pollutants by 80% (?)
- Maplewood Mall Tree Trench (Infiltration) Project used Clean Water Fund money plus other funding.
- Grand Rapids Rain Garden – reduce temperature and remove nutrients.
- How many inches of rainfall will this retrofit reduce? Does rain fill up the trench? Randy – 90% of rain events are one inch or less. Something like this will address 60-65% of events.
- What about maintenance on pervious cement street? It depends on soils in the area.
- How does it work in winter? Lisa – funding for research projects. One will be to study performance in winter.
- Is the city of Shoreview willing to pay for maintenance? Yes.
- Steve Woods talked to someone in Shoreview about the pervious cement street. Better than expected performance. They have to use less sand so as not to plug up the cement.
- Ramsey-Washington Metro WD has porous asphalt which has a darker surface. On a sunny day the snow melts and drains rather than refreezing. So you use less salt too.
- Scott - Council members will see an impervious parking lot on our tour this summer.
- Costs for impervious are higher. In the long term, it costs less. You have to take in to account the long term cost and benefits.
- What is the percolation rate? Where does excess rain go if there's no underlying storm system? Bruce Wilson – if we can deal with the first inch of the storm, that's a lot. You need a storm system in place to deal with the bigger events.
- Lisa – Stormwater Management 2002-2012 slide.
- Frank Jewell asked if Duluth is special circumstance because it is on a special waterbody. Lisa – Duluth is regulated because the population of the city is greater than 10,000 and because of the population density, so they need a NPDES stormwater permit.
- The Stormwater Steering Committee developed a stormwater manual on how to implement best management practices (BMPs). We are discussing how to update it. The manual is being revised based on new research.
- Is the manual a set of regulations or BMPs? Lisa – it's a recommendation for BMPs. What you choose and put in your permit is regulated, or you may choose BMPs that will be part of your voluntary approaches. Do I have to comply with the manual? Lisa - if the impairment is due to stormwater runoff, then yes, it's mandatory. If you want to do more, it's voluntary. Randy – the manual is a set of instructions on how to build your BMPs. Lisa – it's not regulatory, but guidance. Ideas on what kind of reduction you'll get with different BMPs.
- Frank – Miller Hill Mall stormwater issues; tax forfeit land issue. They let go of the land to avoid stormwater issues; permit. Lisa – that's a local issue.
- U of MN developed the "Minnesota filter", an innovative treatment. Removes soluble phosphorus which is hard to treat. Multiple BMPs are used. What is the expected life expectancy? Bruce – 30-40 years. What about maintenance? Bruce – you need BMPs to keep stuff out first. Maintenance is to scrap out the sand and replace it.
- Lisa – good point about stormwater management. Coal tar sealant pavement has issues too. Some stormwater ponds have high coal tar residues.

- Do these iron filings really last 20-30 years? Better than an old car? Bruce – the numbers are based on science, research.
- Lisa - the U of MN added the idea of compost amended soil to the Minnesota Filter. If you add compost, the hydrocarbons are pulled out. Compost can pull out phosphorus, metals.
- How long does the compost last? Bruce – finite life. There will be long term maintenance.
- Lisa – good point for any of our pollution control for air, water or land. You have to figure out what to do when you're pulling out the pollutants. But, you are protecting our resources. Deb – it's really about looking at the whole life cycle. Lisa – pollution prevention is important. It's far cheaper.
- MIDs (Minimal Impact Design Standards) – partnership with the cities and others. Volunteer partners have been a great asset.
- Are ditch check dams permanent or temporary? Lisa said they are permanent.
- How much science is there behind the credits? Bruce – extensive modeling; 35 years of rainfall data. Simulated runoff through models. Lisa – we are doing more monitoring. MIDs is wrapping up this fall. You may want to hear about that then.
- What about concern with PAHs in rain gardens? Are we creating potential hot spots for PAHs with the thousands of rain gardens? Agencies took the lead on banning phosphorus in fertilizer. Why isn't the agency taking the lead on banning coal tar sealants? Lisa – we are not seeing significant increases in PAHs in rain gardens. MPCA has taken the lead on banning PAHs. The industry group opposes a statewide ban. We have worked with businesses, commercial applicators individually to stop using coal tar sealants. That has been successful, perhaps more successful than trying to get a statewide ban.
- What do we know about applications to lawns for weeds, etc.? Lisa – we work with MDA on this. Dan Stoddard – MDA does monitoring and we've found no impairments.
- How rigorous will model verification be? Bruce – in the Twin Cities we have cities doing state of the art monitoring. Also in Duluth up the North Shore, and Sauk River Watershed. The real data is the test. The next five years, there will be a quantum leap in information.

Break

Legislative Update; Rep. Paul Torkelson

Rep. Torkelson is now a resident of Brown County. He purchased a home on a Lake Hanska in Brown County. They need to upgrade the septic system. Invite the SSTS ad hoc committee and BOC to see the issues that come up when property changes hand.

2012 Legislative session – basically, the recommendations of the Council went into the legislation. Tried to increase funding for invasive species but the Senate wouldn't go along with that. He went over changes in the legislation.

- Deb asked about changes for wetlands and water planning. Rep. Torkelson – it's in the law, Wetland Conservation Act (WCA). Also mention legislation that will allow permittee to identify violations without the threat of fines or other actions.
- Rep. Torkelson has been asked to serve on the LCCMR.
- Can you give highlights of changes to water planning and wetlands? Rep. Torkelson – permissible language for water planning, move it towards watersheds, better coordination between groups. WCA – minor changes to de-minimus language. Shorten definition, easier

to understand. After bill signed, Governor signed executive order to try and…. Other changes – relationship with NRCS, etc.

- How do you see the relationship between Council and LCCMR now that you will be on both? Rep. Torkelson said he will hopefully be a connection between all three – Legislature, Council, LCCMR.

5. Stormwater continued; Randy Neprash (Minnesota Cities Stormwater Coalition)

- Randy Nepresh – happy to be here. Our organization is glad to know that the Clean Water Council is interested in what we do. Cities have a unique role in stormwater.
- Cities are regulators and implementers – owners of very expensive stormwater systems, write and implement regulations and standards, and have enormous influence on shaping the landscape in Minnesota.
- Randy expresses appreciation for the support of the Council for the MIDS process, which is a very effective stakeholder process.
- Power of stormwater regulations – great leverage.
- Questions - what is the value of Rochester's stormwater infrastructure? Randy – we don't know that yet. How typical is Rochester? The city was greatly influenced by the floods of 1977. Randy – flood control is not included in these numbers. What is the percent of the overall budget for the city for stormwater? Randy – don't know.
- Linkage to TMDLs
- City of Maplewood – estimate 770 rain gardens. Most are homeowners.
- Concerns – paperwork continues to increase. Paperwork does not improve water quality.
- Minnetonka Shoreland Ordinance – 300 people showed up in opposition, ordinance failed. Regulatory effort far ahead of the stakeholder process. Cities can't provide the foundational public education support needed.
- Concerns – cities can't afford the local match for grants. Use those funds instead to support research, tool development and public education.
- Cliff Aichinger's statement.

Questions:

- Minnetonka failure; Mae Davenport was here last time. What if they proposed regulations on some of the lakes first that needed it. Randy – that would have sold better. We need a broader education effort.
- Where are the priorities? Randy – question addressed to Minnesota Stormwater Coalition. Research question. Develop research council.
- Is GIS mapping high priority? Randy – I believe so. Victoria – MnGEO; counties and cities---- GIS mapping making some progress.
- Concern about your recommendation to take grant money away from cities because some cities may be counting on those funds. That's a broad statement. Randy agrees the statement is broad, overly simplistic. Beginning of discussion.
- Gene had a question for Randy and Lisa about disparate aggressiveness among cities. For example, in Minneapolis the stormwater costs are different based on the estimate of a landowner's impervious surface. Other cities spread the cost evenly. Randy – maximum extent practicable (MEP). City stormwater systems vary tremendously. Cities are

encouraged to implement BMPS, but are not told which ones. Audit cities and that will help MPCA see and understand the range of responses.

- Lisa Thorvig – the cities of Minneapolis and St. Paul have been working on this since the 1990's. Some cities have a stormwater utility, some don't. Some cities have lakes, some don't, etc. Wide variety of issues for cities.
- Bruce Wilson – the Metropolitan Mosquito Control District has a GIS system. Pull together that resource with MnGEO.
- Question for Randy about a having stormwater conference. Randy said they rely on the U of MN's Water Resource Center conference.
- Victoria – metro GIS; knit together data. Technology has evolved so you can put together a lot of data.
- Chair Hanson asked for reflections from the Council members.
- Deb – we want to recommend funding for stormwater to make the biggest difference, but we're still not sure what that is. We would appreciate recommendations from the Stormwater Committee.
- Gene – think holistically, not just water quality – infiltration, retention.
- Mike – also the sequence that goes with this. Do some things first.
- Deb – information matrix – 2D.
- Frank – issue of regulations around wetlands. (There is an) incredibly negative view around agencies who regulate wetlands. Information and public education first is important.
- Gaylen – the comments the MPCA has received from the TSS TMDLs on public notice might be useful for the Council to review. It might be a way to sort some of this out. He will prepare a summary of the issues so the Council can get a sense of the range of the comments.
- Steve – Mark raised good issues about PAHs. Prevention is best. Source reduction ideas would be helpful.
- Victoria – we all have same goal. Listening to each other is way to go. If something doesn't work for a city, then what will work?
- Deb – a graduate student did a policy analysis of the salt/sand tradeoff. The best approach is to invest in better machinery and reduce both salt and sand.
- Steve – the city of Richfield did that.
- Mark – cost factor is an incentive to reduce salt use. Precision technology over time. City used to use an old school bus, cut the bottom out and shovel salt out of the bottom of the bus onto the road. Frank – if you decrease the amount of salt used, you decrease the amount of chloride. Good regulation. Mark – it's hard to overcome the expectations for bare roads, public safety.
- Deb – we also need to keep in mind the cost of the TMDL – the bigger picture.
- Randy – we now have a couple of chloride TMDLs (Shingle Creek Chloride TMDL Project; Nine Mile Creek Turbidity, Impaired Biota, and Chloride TMDL Project; Metro Area Chloride Project). They can use the implementation plan for grant applications. Cities haven't used the plans yet for grants to purchase better machinery.

Lunch

6. **Precision conservation: Tools and strategies for effectively targeting conservation practices and resources**; Dr. David Mulla (University of Minnesota)

- Presentation we gave at the Water Resources Conference.
- Clean Water Funding Initiatives – trying to spend the money wisely rather than spreading it out evenly. Target your BMPs to areas most needed. Seven Mile Creek example. How do we identify these critical source areas?
- Clean Water Funding Initiatives:
  1. Passage of the Clean Water Legacy Amendment provides badly needed funding for protection, restoration and enhancement of impaired waters and damaged wildlife habitat
  2. Funding from the Clean Water Legacy Amendment is being spent on the most critical landscapes and sources of degradation rather than spread evenly across the state
  3. There is a pressing need to identify critical sources of water quality degradation and their locations in order to select and implement BMPs
- DEM data/Terrain Analysis
- Critical areas/SPI (Stream Power Index) signatures – identify parcels with high erosion potential. Did the field work to verify work. 85% accuracy for SPI. Also can identify upland areas that are contributing to erosion.
- EBI is the Environmental Benefits Index. Every parcel in the state is ranked, even urban areas. Everybody who wants to apply for RIM funding must use the EBI website. BWSR uses those scores to help determine funding. Use to identify critical source areas.
- BWSR Ecological Ranking Tool website
- Do scores ever change if conservation practices are done? Dr. Mulla – yes, local SWCD techs know which parcels have conservation practices and can use that to adjust their scoring.
- Scenarios for various practices. CRP land - where should we re-enroll CRP land?
- Look at EBI for CRP parcels. Do an economic analysis of parcels. Prioritize CRP parcels by EBI scores. A lot of acres in very productive land. Smaller amount of acres in marginally productive land (56,000 acres).
- Conclusions:
  1. Conservation practice implementation is neither economically nor environmentally efficient when done uniformly across the landscape
  2. Disproportionate amounts of sediment and phosphorus are generated from small areas of the watershed
  3. The effectiveness of BMPs depends on placing them in vulnerable portions of the landscape
  4. Precision conservation strategies involving LiDAR based DEM terrain analysis may prove very helpful in the future to guide conservation efforts
  5. Tools for analyzing LiDAR based DEMs need to be developed and integrated with existing conservation planning tools such as MN P-Index, RUSLE2, SWAT, etc.
  6. Incentives are needed for CRP re-enrollment on marginal cropland

Questions:

- Rep. Torkelson – it's not the lands that are expiring, it's the contacts that are expiring. Nice to see that the investment in LiDAR is paying off.
- Can we get access to Dr. Mulla's presentation? Yes.

- Put this in context of other states. Dr. Mulla – we are ahead of other states, though Iowa is pretty far along. Other states interested are Iowa, Michigan, Indiana, and Illinois.
- Powerful tool. How many people are needed to get the data used? Dr. Mulla – we are partnering with BWSR. There are some issues with web site maintenance, updates. Water planners are partnering with us to get data out.
- What does BWSR need? Steve – we need to get the localized tweaks. Do we need 10 regional staff? Not sure. Marilyn – we do our own. We use it, but it takes time for us.
- Steve – power user can do a lot more. Dr. Mulla – super computer at the U of MN can run data 1000 times faster than a desk top. Can provide greater efficiency in using LiDAR data.
- Julie – what about linking LiDAR data with other models, hydrologic models?
- Dr. Mulla – scenario slide is example of use with models. Hydrologic conditioning – essential for flood planning, not as important for upland areas. Important in some cases, not in others.
- Rep. Torkelson - speaking as a farmer who just re-bid his CRP areas, can we use this data for that? Marilyn – we calculate EBI on all CRP lands, but it hasn't made a difference. Cost is a more important factor. Dr. Mulla – in addition to EBI, you can use the CPI (Crop Productivity Index) too. Could this be available on the MDA website? Matt - potentially yes.
- Linda – drinking water. Interface Arc info. Dr. Mulla – source water protection for groundwater is trickier.

7. **Update on Clean Water Fund research projects**; Adam Birr (MDA)

- MDA Clean Water Fund Research - overview of projects we have invested in with Clean Water Funds.

MDA's Role in Impaired Waters:

- Evaluating Agriculture's contribution to impaired waters
- Developing Best Management Practices and evaluating their effectiveness
- Promoting and evaluating BMP Adoption

Load allocation: Where are the pollutants coming from and what is the magnitude of each source?
BMP effectiveness: How will we improve water quality?
Time scales: How long will it take for a system to recover and improve?
Targeting: Where in the landscape should we focus limited protection and restoration funds?

- MDA's Clean Water Fund website

8. **Member check-in**

- Vice Chair Hoese - member check in.
- Gene – great presentations, great work from Dr. Mulla to enable targeting BMPs. Challenge is how we can target our resources, how agencies can target their resources. Culture change.
- Gaylen – the tools are amazing. What you see on the landscape with the crop prices of the last few years are huge piles of logs that were trees in wooded areas protecting resources. There is a desire to have open areas to accommodate equipment. Dilemma is what can be done to bring these two things together in order to change things.

- Julie – funding for Outdoor Heritage fund is also benefiting clean water. For some, it's hard to sell the investment in conservation programs, targeting BMPs.
- Gaylen – Ag WQ Certification Program and the ability to identify high priority source areas. Perfect marriage to identify a piece of land with high priority areas.
- Scott – is there any way we can get some of Dr. Mulla's information made available to landowners? Ask BWSR.
- Julie – one of the activities we've identified is local capacity building. We will help with local capacity in partnership with BWSR and MDA.
- Dan Stoddard – targeting is a central part of the strategy, local capacity.

9. June meeting agenda / adjournment

- Jen – we'll focus on BOC Recommendations. We will also have an update from the water governance project again, per MPCA Commissioner John Linc Stine.
- Victoria – U of MN Extension Service – every county names a farm family of the year. For Ramsey County, it's an Aquaponics farm in Maplewood raising lake trout and tilapia and the water is used for plants (lettuce). Farm families are honored at Farm Fest every year.
- Vice Chair Hoese – meeting adjourned.

2:00~2:30 Council Steering Team

Next Meeting: June 18, 2012
Location: MPCA Board Room

BOC Committee Meeting
Friday, May 4, 2012
9:30 a.m. – 2:00 p.m.

Barr Engineering office
4700 West 77th Street, Minneapolis, MN

Attendees: Gene Merriam, Paul Torkelson, Todd Renville, Scott Hoese, Marilyn Bernhardson, Pam Blixt, Keith Hanson, Jennifer Maleitzke, Mark Knoff (by phone), Mary Reilly
Absent: Deb Swackhamer

Agenda

- BOC process for review of agency submittals
    - MPCA
    - MDA
    - PFA
    - DNR
    - BWSR
    - Met Council
    - MDH
- Discuss structure of June 1 BOC meeting
- Discuss structure of June 18 Council meeting – ask agency representatives to present?

Notes

BOC process for review of agency submittals

- BOC decided the target dollar amount for budgeting purposes should be $188M, based on guidance from Minnesota Management and Budget (MMB)
- Main goal today of meeting is to evaluate agency submissions and develop follow-up questions for the June 1 meeting
- BOC went through each agency submission and developed follow-up questions, which are available at the BOC webpage

Representative Paul Torkelson's update

- Paul gave a brief update about the Legacy bill; signed by the Governor and basically carries the Council's recommendations; in the future, he anticipates AIS research money will come from LCCMR funds
- Council may want to be aware of Governor's Executive Order on Wetlands, including possible de minimus change and wetland regulation changes
- Council may want to follow the continuing effort to look at EQB and how Council fits in; also follow possible changes to the PCA Citizen's Board
- Paul is considering a summer field tour to his new lake home because he's putting in a new septic system would like to invite the SSTS Ad Hoc Team, local contractors, local county staff and commissioners, etc.

- Paul and the BOC discussed if Clean Water funds could be used to build local capacity; Paul suggested there may be possibilities elsewhere

Discuss structure of June 1 BOC meeting

- BOC moved meeting to be held May 31, 2012
- Smaller-budget agencies will have 30 minutes; larger-budget agencies will have 60 minutes; BOC will ask follow-up questions
- Following the last agency interview, BOC members will prepare draft budget numbers to bring to the full Council at the June meeting

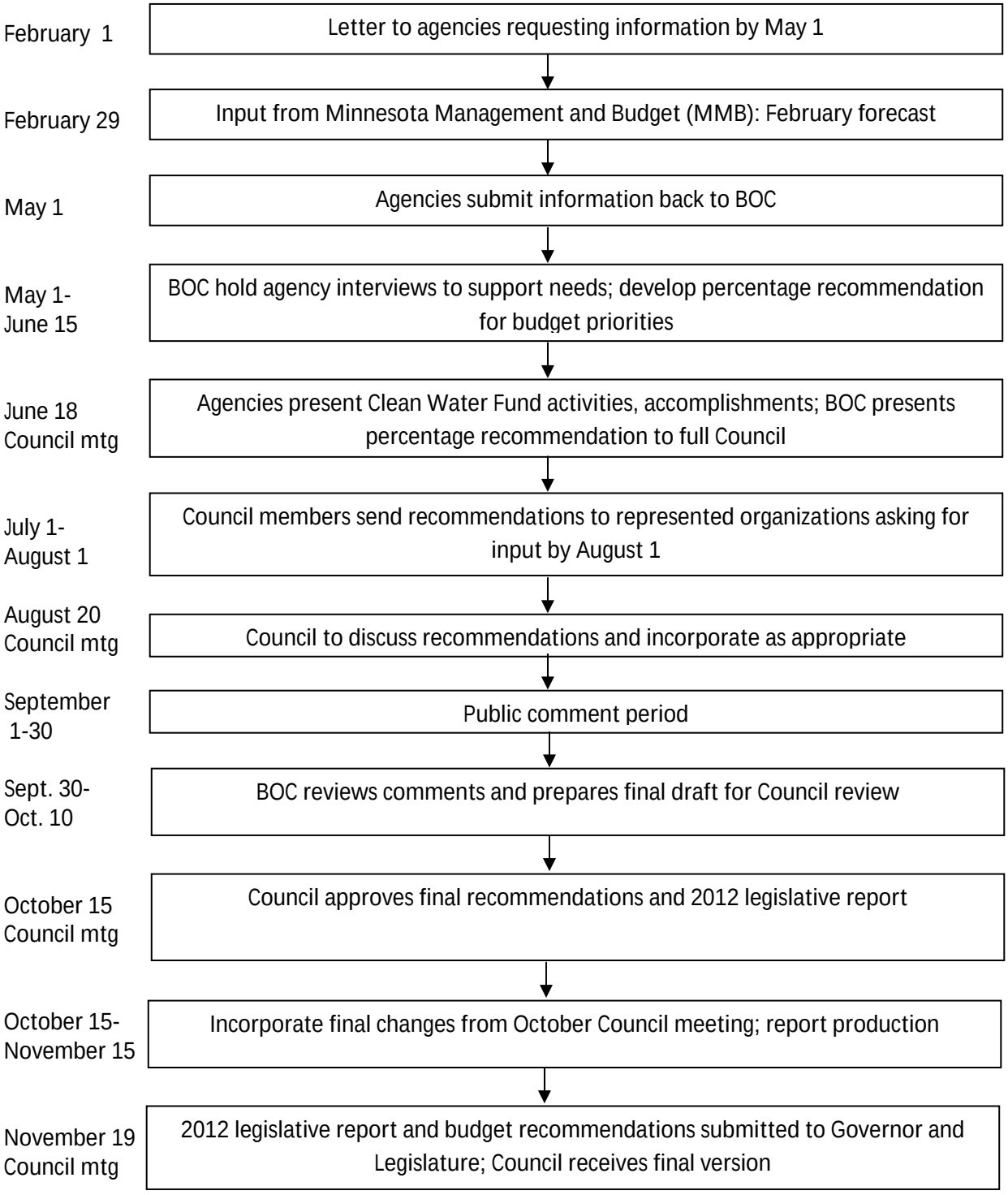
Discuss structure of June 18 Council meeting

- BOC will ask agency representatives to be briefly present their submissions at the June meeting, after which BOC will give its draft recommendations

Clean Water Council

Advising the Legislature and the Governor on state programs to restore and protect Minnesota's waters.

2012 Budget Recommendation Process



Clean Water Council

Presenter Worksheet

Doc Type: Reporting

Instructions: The Clean Water Council (Council) is responsible for advising the Legislature and the Governor on state programs to restore and protect Minnesota's waters. Thank you for agreeing to present to the Council; we value your time and preparation. In order for members to gain a better understanding of your information, please fill out the following worksheet, answer all questions, and send via e-mail by clicking the submit button. If you have any questions, please contact Jennifer Maleitzke at 651-757-2549 or jennifer.maleitzke@state.mn.us.

Presentation Information

Presentation title: Urban Stormwater Applied Research and Tools for Implementation

Organization: Minnesota Pollution Control Agency

Presenter name(s), titles, and short bio for presenter introduction

1. Lisa Thorvig is the Municipal Division Director at the Minnesota Pollution Control Agency. She is responsible for directing the agency's municipal wastewater, septic system, and stormwater programs as well as agency-wide rulemaking activities. She has worked for the agency 34 years in a variety of land, air and water programs.

2.

3.

Presenter needs (Please submit to staff one week in advance of Council meeting for member review or bring 30 copies to meeting.)

☒ Handout for Council

☒ PowerPoint presentation

☐ Other presenter needs: _____

Topic overview (A summary ***[limited to 250 words]*** of your presentation, including current status of topic, gaps, needs that address the gaps, other parties involved in the topic, and any related activities. This will be shared with Council members prior to your presentation.)

Urban stormwater management has evolved substantially over the past decade with Minnesota considered a national leader in applied research, partnerships and new tool development to protect our valuable lakes, streams and wetlands. Just as wastewater treatment technologies have made quantum leap improvements over the past 25 years, stormwater management is catching up quickly. We will provide an overview of the past decade of achievements (and challenges) beginning in 2002 from three perspectives:

- Regulatory changes (Federally required permit updates)
- Partnerships (Stormwater Steering Committee and associated charter efforts) to leverage resources to find better, faster and cheaper stormwater treatments. Minimal Impact Design Standards (MIDS) being advanced with 24 supporting groups.
- Applied Research and Tool Development (Updating the Stormwater Manual).
  - UM is a national leader in applied research and developing practitioner tools -SAFL Baffle, Minnesota Stormwater Filter, Enhanced Iron Filtration, trout streams (MINUHET Model), certification training, P8 urban model
  - Significant advances in stormwater treatment performance and tracking for restoration (TMDLs) and protection (antidegradation).

Additional questions, please respond as appropriate:

1. What research and tools are necessary to forward implementation of this topic:

    a. Are the research and/or tools currently funded by Clean Water Funds? ☒ Yes ☐ No
    b. If no, please provide an estimate of the cost of research/tools:

2. How do we ensure the right tools are used:

3. Are there any capacity issues which need to be addressed? ☐ Yes ☐ No If yes, describe:

4. Are there any obstacles preventing outcomes and progress towards this topic's goals? ☐ Yes ☐ No
   If yes, describe:

Please include your top five key messages (A summary no more than three lines of text.)

Key message #1:

Key message #2:

Key message #3:

Key message #4:

Key message #5:

Submit Reset

MPCA Stormwater NPDES/SDS Permitting Program

1987- Federal Clean Water Act amended to require stormwater be addressed in two phases	**Phase I** EPA Rules: Nov. 16, 1990 Deadline: 1991-1996	**Phase II** EPA Rules: Dec. 8, 1999 Deadline: March 10, 2003
Municipal (MS4) 	Large and medium MS4s (Under federal definition, populations over 100,000) *Minneapolis/St. Paul - 2 Individual Permits*	Small regulated MS4s (up to populations of 100,000) • In an Urbanized Area – Cities, townships, counties – Non-traditional MS4s • Designated by the MPCA (under MN Rules) – >10,000 population (city or town) – >5,000 population and discharge to special/impaired waters • Petition • Commissioner determination *~233 General Permits*
Construction 	• Activity disturbing <u>> 5 acres</u> • Smaller sites that are part of a common plan of development disturbing > 5 acres *~900 General Permits/yr., ~1800 active on average (sites open for ~2 yrs. on average)*	• Activity disturbing <u>>1 acre</u> • Smaller sites that are part of a common plan of development disturbing > 1 acre *~1800 General Permits/yr., ~2700 active on average (project sites open for ~1.5 yrs. on average)**
Industrial 	10 Industrial Categories (Construction = 11th) • Only "Light Industrial" category could apply for 'no exposure certification' and not need a permit • 29 Sectors within the 10 categories *2,200 Multi-sector General Permit* *1,900 No Exposure Certifications*	• Allowed all categories (except construction) to be able to apply for the 'no exposure certification' • Municipally owned or operated industrial facilities (Hwy shops) required to have coverage that had been exempt *1,200 Multi-sector General Permits* *1,400 No Exposure Certifications**

<u>Terms:</u>

- **MS4s** - Municipal Separate Storm Sewer Systems. Publicly owned/operated storm sewer conveyance systems that are separate from the sanitary sewer. Includes gutters, piping, ditches, etc.
- **Urbanized Areas** - defined in federal law by the Federal Bureau of Census, includes areas of Twin Cities, Rochester, St. Cloud, Duluth, Fargo, ND, Grand Forks, ND, and LaCrosse, WI. (Mankato area predicted for 2010 census)
- **Non-traditional MS4s** - MS4s that are not cities, counties, or townships. Publicly owned/operated systems on universities, prisons, Dept. of Transportation's highways, etc.
- **Designated MS4s** (Designation Criteria)- At a minimum, cities and townships with populations over 10,000 must be considered by the MPCA for permit coverage according to federal law.
- **NPDES/SDS** – National Pollutant Discharge Elimination System (delegated permitting program by EPA to the MPCA) and State Disposal System (addresses MN specific rules).
- **Many variables impact # of permits/yr. including the recession (construction/industrial)*

Clean Water Council

Presenter Worksheet

Doc Type: Reporting

Instructions: The Clean Water Council (Council) is responsible for advising the Legislature and the Governor on state programs to restore and protect Minnesota's waters. Thank you for agreeing to present to the Council; we value your time and preparation. In order for members to gain a better understanding of your information, please fill out the following worksheet, answer all questions, and send via e-mail by clicking the submit button. If you have any questions, please contact Jennifer Maleitzke at 651-757-2549 or jennifer.maleitzke@state.mn.us.

Presentation Information

Presentation title: Precision conservation: Tools and strategies for effectively targeting conservation practices and resources

Organization: University of Minnesota

Presenter name(s), titles, and short bio for presenter introduction

1. David Mulla, Professor, Dept. Soil, Water & Climate. Dr. Mulla studies (1) non-point source pollution of surface and groundwater; (2) precision farming and precision conservation; (3) alternative farm management strategies for improved soil quality and sustainability; and (4) alternative policies for soil and water resource management.

2.

3.

Presenter needs (Please submit to staff one week in advance of Council meeting for member review **or** bring 30 copies to meeting.)

☐ Handout for Council

☒ PowerPoint presentation

☒ Other presenter needs: computer, projector and screen

Topic overview (A summary ***[limited to 250 words]*** of your presentation, including current status of topic, gaps, needs that address the gaps, other parties involved in the topic, and any related activities. This will be shared with Council members prior to your presentation.)

Precision conservation puts the correct conservation practice in the right location at the right time to protect soil, water and habitat, while optimizing the production of food, feed, fiber and biofuel. Small portions of the landscape can have a disproportionately large impact on soil and water degradation. Some tools long have been available to target conservation practices to these critical areas. But over about the last decade, new tools and strategies have been developed that use digital elevation models from LiDAR imaging to dramatically improve our ability to target conservation practices efficiently and effectively.

Additional questions, please respond as appropriate:

1. What research and tools are necessary to forward implementation of this topic:

   Further research is needed to evaluate the effectiveness of BMPs placed in critical source areas. Tools needed include computers, GPS, GIS, remote sensing, water quality models and water quality monitoring equipment. Social and economic implications of treating critical areas (e.g. full cost accounting) should be included in research.

   a. Are the research and/or tools currently funded by Clean Water Funds? ☐ Yes ☒ No

   b. If no, please provide an estimate of the cost of research/tools:

      An annual research budget of $150,000 for five years is needed to support this type of project.

2. How do we ensure the right tools are used:

   The main issue is funding more field testing of tools to identify and evaluate the impact of installing BMPs in critical source areas.

3. Are there any capacity issues which need to be addressed? ☒ Yes ☐ No If yes, describe:

   Technical service providers have weak training and expertise to identify critical source areas.

4. Are there any obstacles preventing outcomes and progress towards this topic's goals? ☒ Yes ☐ No
   If yes, describe:

   Farm and water policy do not adequately value ecosystem services, and high commodity prices make it very expensive to install BMPs in critical source areas.

Please include your top five key messages (A summary no more than three lines of text.)

Key message #1:

Conservation practice implementation is neither economically nor environmentally efficient when done uniformly across the landscape.

Key message #2:

Disproportionate amounts of sediment and phosphorus are generated from small areas of the watershed.

Key message #3:

The effectiveness of BMPs depends on placing them in vulnerable portions of the landscape.

Key message #4:

Precision conservation strategies involving LiDAR based DEM terrain analysis may prove very helpful in the future to guide conservation efforts tailored to specific landscapes and to maximize their placement in critical source areas.

Key message #5:

Tools for analyzing LiDAR based DEMs need to be developed and integrated with existing conservation planning tools such as MN P-Index, RUSLE2, and SWAT.

Submit Reset

Clean Water Council

Presenter Worksheet

Doc Type: Reporting

Instructions: The Clean Water Council (Council) is responsible for advising the Legislature and the Governor on state programs to restore and protect Minnesota's waters. Thank you for agreeing to present to the Council; we value your time and preparation. In order for members to gain a better understanding of your information, please fill out the following worksheet, answer all questions, and send via e-mail by clicking the submit button. If you have any questions, please contact Jennifer Maleitzke at 651-757-2549 or jennifer.maleitzke@state.mn.us.

Presentation Information

Presentation title: Update on Clean Water Fund Research Projects

Organization: Minnesota Department of Agriculture

Presenter name(s), titles, and short bio for presenter introduction

1. Adam Birr-Impaired Waters Technical Coordinator: He earned his BS in Environmental Science from Calvin College and his MS and Ph.D. degrees in Water Resources Science from the University of Minnesota. His primary role with the MDA is to identify research gaps related to agricultural impacts on water quality and to develop, coordinate, and manage research and demonstration projects to address these gaps in conjunction with various research entities.

2.

3.

Presenter needs (Please submit to staff one week in advance of Council meeting for member review or bring 30 copies to meeting.)

☐ Handout for Council

☒ PowerPoint presentation

☐ Other presenter needs: _____

Topic overview (A summary ***[limited to 250 words]*** of your presentation, including current status of topic, gaps, needs that address the gaps, other parties involved in the topic, and any related activities. This will be shared with Council members prior to your presentation.)

With the passage of the Clean Water Legacy Act in 2006 and more recently the constitutional amendment creating the Clean Water Fund, the Minnesota Department of Agriculture (MDA) has been able to build upon existing activities to investigate the relationship between agricultural practices and water quality. MDA's research and demonstration projects have focused on two broad areas related to impaired waters: pollutant load allocations and Agricultural Best Management Practices (BMPs). There are a number of impairments that have implications for agriculture including bacteria, turbidity, pesticides, nitrates, and phosphorus in lakes. MDA's focus is to collaborate with various partners in an attempt to characterize and quantify agriculture's contribution to these impairments. The National Research Council reports that one of the primary needs of the impaired waters program is information on the effectiveness of BMPs and the related processes of system recovery. MDA is using multiple methods including computer simulation modeling, monitoring, and experimentation conducted at edge-of-field and watershed scales to evaluate load allocations and BMPs.

Additional questions, please respond as appropriate:

1. What research and tools are necessary to forward implementation of this topic:

   There remains considerable knowledge gaps related to quantifying the sources of impairments and water quality responses to BMP implementation. MDAs CWF appropriation ensures that we can address those gaps particularly as they relate to challenges that are unique to Minnesota waters.

   a. Are the research and/or tools currently funded by Clean Water Funds? ☒ Yes ☐ No

   b. If no, please provide an estimate of the cost of research/tools:

2. How do we ensure the right tools are used:

   We continue to seek multiple sources of input into our research priorities and selection of projects. We employ a rigorous evaluation method to ensure that projects funded address our priorities, are technically sound, and are undertaken by researchers with demonstrated capabilities.

3. Are there any capacity issues which need to be addressed? ☐ Yes ☒ No If yes, describe:

4. Are there any obstacles preventing outcomes and progress towards this topic's goals? ☒ Yes ☐ No
   If yes, describe:

   We continue to seek effective methods for transferring technical information and findings generated from these projects stakeholders working on impaired waters issues including state and local agency staff, local watershed groups, growers, and agricultural professionals.

Please include your top five key messages (A summary no more than three lines of text.)

Key message #1:

There remains considerable knowledge gaps about agriculture's contribution to impairments, and what specific BMPs need to be implemented (type and location) to actually improve water quality. MDA is using multiple methods to address these gaps including peer reviewed research, demonstration projects, and technology transfer initiatives.

Key message #2:

The strategies currently employed by MDA to identify and fund research projects is conducive to addressing emerging issues and support on-going research in a timely manner. The process to identify research needs and select projects is advised by multiple lines of input including inter-agency collaboration, academic entities, and agricultural groups with expertise on water quality issues.

Key message #3:

Research projects supported to date have resulted in knowledge and tools that have been effectively transferred from research entities to a number of stakeholders responsible for managing Minnesota's water resources including state and local agency staff, farmers, and agricultural professionals.

Key message #4:

The interest and need for research activities supported by CWF continues to evolve as evident by both the number of proposals and amount of funds requested over time. Funds have been awarded to a variety of research entities and partnerships thereof including the U of M, MNSCU, out-state academic institutions, private consulting firms, federal agencies, and local government units.

Key message #5:

Submit Reset

CWC Steering Committee Agenda
Monday, May 21, 2012; 2:00 p.m.
MPCA Board Room
520 Lafayette Road North, St. Paul

1. **Follow-up from May meeting**

2. **Council field tour – August**
   - Steve Woods – speaker suggestion: Brad Carlson, U of M extension "how to talk to farmers"

3. **BOC / agency "interviews" – May 31**

4. **Ag drainage conference / speaker to CWC? –** Marilyn

5. **DRAFT June 18, 2012 meeting agenda** – *(meeting will be held in the MPCA Board Room)*

9:00-9:15 **Convene Full Council**
- Comments/additions to the agenda
- Approve 5/21/12 meeting minutes
- Council introductions, updates and conflict of interest notifications

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

9:30-10:00 **Interagency data portal proposal** (possibly strike and include in MPCA's update below)
Glenn Skuta (MPCA)

10:00-10:15 **Break**

10:15-12:00 **Agency presentations of past and current Clean Water Fund activities and FY14-15 proposals**

Met Council	(10:15-10:30 a.m.)
Public Facilities Authority	(10:30-10:45 a.m.)
Department of Health	(10:45-11:00 a.m.)
Department of Agriculture	(11:00-11:15 a.m.)
Pollution Control Agency	(11:15-11:30 a.m.)
Department of Natural Resources	(11:30-11:45 a.m.)
Board of Water and Soil Resources	(11:45-12:00 p.m.)

Question for agency reps: is this enough time to give a brief overview of the information you submitted to BOC?

12:00-12:30 **Lunch**

12:30-1:30 **BOC draft recommendations, Council discussion, directions on seeking input from represented organizations**

1:30-2:00 **Water Governance Project preliminary findings**
Suzanne Rhees, John Linc Stine (MPCA)

2:00 **July meeting agenda / adjournment**

2:30~3:00 Council Steering Team

Next Meeting: July 16, 2012