### 8:30 - 9:00 MSRC Annual Administrative Updates - John Bilotta

#### 9:00 - 9:45
**Current research portfolio – Part I, 3 projects 15min each**
- Equipping cities with climate change data for stormwater - Jonathan Birkel
- Stormwater system monitoring - Daniel Furuta
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#### 9:45 - 10:00 break

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A year in review
- Summary of accomplishments
- Advisory Board members and updates
- New Clean Water Fund support
- Launch of pooled funding request
- Future RFP for new research
- Technology transfer plans

For more about each of the current projects, visit the [Current Projects](http://www.wrc.umn.edu/projects/stormwater) portion of the website.
1. Welcome

1. Meeting and Zoom logistics

Please ensure your audio and video are muted.
We choose Zoom meeting mode so you can see who is here, private message each other etc.

1. We will take questions through the chat function.
   • We will not have much time for live Q&A. We will save the chat. We welcome you to chat with the researchers, project teams and with each other.
   • We have many small breaks and a long lunch break to alleviate Zoom fatigue

1. Visit the websites for more information. Presentations will be posted.

www.wrc.umn.edu/msrc
www.wrc.umn.edu/projects/stormwater
Urban Stormwater

WRC urban stormwater efforts focus on research, Extension education, and technology transfer to industry professionals and all levels of government to prevent, minimize, and mitigate the effects of runoff from the built environment.

2019-2020 - Highlights of the Urban stormwater and research council.pdf

To be updated on news and events regarding urban stormwater subscribe to our email announcements.

- Current Stormwater Research Projects
- Completed Stormwater Research Projects
- Stormwater Technology/Transfer - Education and Training
- Minnesota Stormwater Research Council

www.wrc.umn.edu/msrc
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Minnesota Stormwater Research Council
Annual Meeting Agenda | July 15, 2021

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Facilitate the completion of needed applied research that enables more informed decisions on stormwater management.

Accelerate research to improve BMP performance and develop new treatment technologies.

Promote coordination of research goals, objectives and funding among the research agencies and organizations.

Periodically assess the status of research and identify research priorities.

Provide direction for technology transfer (education) for public, private, and nonprofit sector entities.
The Council is composed of professionals, practitioners, managers, engineers and researchers that complete, participate, advise and provide direction for urban stormwater research in Minnesota.

*Subscribe to the Council on the website*

**Water Resources Center**

*Advancing science-based solutions for freshwater management*

**Stormwater Research and Technology Transfer Program**

The Council and the Center work in unison

**Take a look at the MSRC Guiding Framework – available online**

[www.wrc.umn.edu/msrc](http://www.wrc.umn.edu/msrc)
Minnesota Stormwater Research Council Advisory Board 2021-2023

Success driven by stakeholder engagement

- Bill Bartodziej (watershed rep) -2019
- Bob Fossum (watershed rep) -2021
- John Loomis (watershed rep) -2021
- Mike Isensee (watershed rep) -2021
- Udai Singh (watershed rep) -2021
- Seth Ristow (SWCD rep)-2018
- Ross Bintner (city rep)-2021
- Jack Distel (city rep)-2021
- Shahram Missaghi (city rep)-2019
- Ryan Granlund (city rep)-2019
- Lisa Vollbrecht (city rep)-2019
- David Fairbairn (agency rep)-2021
  - Mike Trojan (alternative PCA rep -2021)
- Joe Mulcahy (agency rep)-2021
- Brad Wozney (agency rep)-2021
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- Greg Wilson (private consultant rep)-2021
- Bridget Osborn (private consultant rep)-2018
- Rena Weis (private consultant rep)-2018
- Marty Long, (city, watershed, & private rep)-2018
- Dr. Valerie Brady (research institution rep)-2021
- Jeff Peterson (research institution rep)-2016

www.wrc.umn.edu/msrc
By the numbers

• Since 2017, 23 projects have been funded

14 projects have been completed

• The two most recent completed projects include
  – Inspiring community action for stormwater management (Mae Davenport, April 2021)
  – Identifying sources of contaminants in urban stormwater and evaluation of their removal efficacy across a continuum of urban best management practices (Heiko Schoenfuss, April 2021)

• Today, you will hear more about the 9 current projects.
Communicate the research
Minnesota Stormwater Seminar Series
Minnesota Research Spotlights
Written project briefs

Integrate the research
Stormwater Practice Inspection and Maintenance Certification Course
Manuals and guidance documents

Extend the research into communities
August 2021 new Stormwater Extension Educator
The value of investing in, completing and using urban stormwater research and in the Council

Comments from the Advisory Board
Research Program Funding
Diversified sources

1. Pooled funds from watersheds, cities, and private industry and organizations.

2. Research program funds from the Minnesota Clean Water, Land and Legacy Amendment.

3. WRC, CFANS, NIWR/USGS
Additional research funding, graduate student funding and in-kind administrative support.

www.wrc.umn.edu/msrc
www.wrc.umn.edu/projects/stormwater
Minnesota Stormwater Research Council
Funding Contributors

- Barr Engineering Company - 2019, 2020
- Capitol Region Watershed District - 2017, 2018, 2020
- City of Bloomington - 2019, 2020
- City of Edina - 2017, 2018, 2019, 2020
- City of Minnetonka - 2018, 2019, 2020
- City of Woodbury - 2018
- Comfort Lake-Forest Lake Watershed District - 2018, 2019, 2020
- Minnesota Cities Stormwater Coalition - 2018

- Nine Mile Creek Watershed District - 2018, 2020
- Upper Mississippi River Source Water Protection Project - 2020
- Valley Branch Watershed District - 2017
- Wenck Associates - 2018, 2019, 2020

❖ Recognized in 2021 Program Highlights
❖ Featured on a new website
❖ Acknowledgement in all research reports
❖ Don’t see you organization on this list? Then...
JOIN the Council in fulfilling the 2021 Pooled Funding Research Request

Following today’s meeting
- Receive funding request
- 2021 Council and Research Program Highlights
SUMMER
- Full council meeting w/project updates
- Launch pooled research funding campaign
- Continue development of pond research strategy
- Begin development of 2022 RFP
- New EE and TT plan

FALL
- Continue 2022 RFP development
- Continue TT plan
- Continued pool funding drive
- (maybe) September in-person meeting

LATE FALL – END OF YEAR
- Remaining 2018 projects finish
- Launch RFP
- Start/solicit pond research projects
- 2020 Rapid Response projects finish

JAN-MARCH 2022
- New research project selections
  - April 1st start date (goal)
- Launch update on research priorities
1. We (you) are accomplishing high priority stormwater research.
   *including a suite of rapid response projects finish later this year.*

1. Transfer the knowledge ++
   
   *Seminar series continues, new Extension Educator*
   
   *Interest in and adaptation by practitioners, professionals and policymakers is high*

1. Join us in achieving $175K this year to fund local applied research.
   
   *Watch for the new 2021 Highlights publication and request shortly*

1. Request for proposals late 2021

1. Several opportunities for Council engagement - **September 16th IN PERSON!**
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1. MSRC Advisory Board Stormwater Pond Research Committee established

1. Summary of activities and discussions

1. Future directions
Goal: Develop a strategy to address research on stormwater ponds including on the use of a directed research funding pool.

Rationale

- SW ponds are the most proliferous practice across the state. *Subject to interpretation and opinion.*
- Research on SW ponds is needed, however we don't necessarily have priorities determined.
- For the 2020 RFP, we received more than $1.1M in research requests related to SW ponds.
  - Total across all requests was $4M. We funded 8 projects totaling $906K; none on ponds instead setting aside funds for potential future research on ponds.

Planning for the future

- The Council and the Center have set aside a pool of funds for directed research, intended for urban stormwater ponds. The amount (~$300K), the direction, the exclusivity for ponds is all subject to discussion and change.
Minnesota Stormwater Research and Technology Transfer Program –
A comprehensive approach to collaborative research

- Additional committee work
- Data collected for the SWRR
- Literature review
- Engage with stakeholders
Minnesota Stormwater Research Council Advisory Board 2021-2023
Pond Research Committee

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Minnesota Stormwater Research Council
Stormwater Pond Research Investment Strategy
Actions

1. Define various types of SWP >>>> and initially focus on designed and constructed (completed)
2. Articulate and define what we want/expect designed and constructed SWP to do (completed)
3. How are why are DC SWP working and not working (completed)
4. How do we want DC SWP to work in the future (completed)
5. Extract research needs
6. Complete a lit review / compile all SWP research
7. Hold a SWP research symposium
8. Determine if retrofitting existing ponds could meet our current and future needs
9. Develop criteria to rank and prioritize research needs
10. Determine what may be appropriate for the MSRC to fund/support
11. Draft a 1yr, 5yr, and 10yr SWP research investment strategy
12. Fund and complete research
1. Define various types of SWP and initially focus on designed and constructed (completed)

1. Articulate and define what we want/expect designed and constructed SWP to do (completed)

1. How are or why are DC SWP working and not working (completed)

1. How do we want DC SWP to work in the future (completed)
1. We could invest in research to determine if these five things are actually working well, as designed, as desired.
   - Rate control
   - Flood control
   - Capture sediment
   - Capture particulates
   - Reduce stormwater energy

2. We could invest in research to determine WHY DC SWP are not working for the following objectives or items or HOW they could work (i.e. be redesigned, modified) to
   - Control dissolved P
   - Provide some biological treatment – for what?
   - Provide better habitat
   - Provide more pleasing aesthetics
   - Remove/capture trash, floatables, oil and grease
   - Increase or do better flood and rate control
   - Meet the needs of a changing climate. – meaning what?
   - Last longer – meaning what? Is this O&M?
Current stage

Develop hypothesis | research questions on the following

- Are designed and constructed stormwater ponds...__________?
- Can designed and constructed stormwater ponds...__________?
- Is there a way designed and constructed stormwater ponds could...___?
- Can designed and constructed stormwater ponds be redesigned, reconstructed, reconfigured, modified to ...__________?
Minnesota Stormwater Research Council
Stormwater Pond Research Investment Strategy

Next steps - Future Directions

• Committee continues to meet
• Discussion with full Advisory Board

• (In-process, review stage) Articulate research questions on DCPs
• Prioritize research questions and information needs on DCPs

Consider other actions on the list
• Complete a literature review
• Convene a stormwater pond research symposium
  – stakeholder, researcher, policymaker, practitioner engagement
  – Minnesota, but could include or have a second regional or national opportunity
• SWP would be its own category in the upcoming 2021 RFP and/or
• Directed study(s) or separate competitive RFP
Stay tuned for more information

Thank you for joining us today.