



Department of Public Works  
**Engineering Division**  
Robert F. Phillips, P.E., City Engineer

City-County Building, Room 115  
210 Martin Luther King, Jr. Boulevard  
Madison, Wisconsin 53703  
Phone: (608) 266-4751  
Fax: (608) 264-9275  
[engineering@cityofmadison.com](mailto:engineering@cityofmadison.com)  
[www.cityofmadison.com/engineering](http://www.cityofmadison.com/engineering)

**Assistant City Engineer**

Michael R. Dailey, P.E.

**Principal Engineer 2**

Gregory T. Fries, P.E.  
Christopher J. Petykowski, P.E.

**Principal Engineer 1**

Christina M. Bachmann, P.E.  
Eric L. Dundee, P.E.  
John S. Fahrney, P.E.

**Facilities & Sustainability**

Jeanne E. Hoffman, Manager

**Operations Manager**

Kathleen M. Cryan

**Mapping Section Manager**

Eric T. Pederson, P.S.

**Financial Manager**

Steven B. Danner-Rivers

**TO:** WDOT, District 1—Wendy Braun  
WDNR—**Eric Rortvedt**, Kim McCutcheon (South Central Region)  
University of Wisconsin—**Marisa Trapp, Matt Collins**  
Dane County Land Conservation—Kevin Connors, **Jeremy Balousek, Christal Campbell**  
Dane County Office of Lakes and Watersheds—Sue Jones  
Dane County Capital Area Regional Planning Commission—Mike Kakuska  
MMSD—**Dave Taylor**, Kathy Lake  
USGS—**Bill Selbig, Roger Bannerman**  
City of Fitchburg—Cory Horton, Rick Eilertson, Felipe Avila  
City of Madison—Rob Phillips, Mike Dailey, **Greg Fries, Lauren Striegl, Phil Gaebler**  
City of Middleton—**Rich Weihert, Gary Huth**  
City of Monona—Daniel Stephany, **Brad Bruun**  
City of Stoughton—**Rodney Scheel**  
City of Sun Prairie—Daryl Severson, **Tom Veith**  
City of Verona—Ron Rieder, Martin Cieslik  
Town of Blooming Grove—Mike Wolf, Tony Reigstad  
Town of Burke—Brenda Ayers  
Town of Madison—Renee Schwass  
Town of Middleton—David Shaw  
Town of Westport—Tom Wilson  
Town of Windsor—**Kevin Richardson**  
Village of Cottage Grove — Matt Giese  
Village of DeForest—Deane Baker  
Village of Maple Bluff—Tom Schroeder  
Village of McFarland—Allan Coville, Jim Hessling, Eric Rindfleisch  
Village of Shorewood Hills—Karl Frantz  
Village of Waunakee—Kevin Even  
AECOM—Theran Jacobson, **Carla Fischer** (*Verona, Burke*)  
Brown and Caldwell—Mike Wegner, **Jim Bachhuber**  
Clean Lakes Alliance—James Tye, **Paul Dearlove**  
Mead & Hunt, Inc.—**Anne Anderson**, Tim Astfalk, Levi Ney (*Blooming Grove*)  
MSA Professional Services, Inc. – Eric Thompson, Erik Sorenson, Amber Converse  
Nahn & Associates—**Chuck Nahn** (*Town of Madison, Maple Bluff*)  
Strand Associates, Inc.—Jon Lindert, **Justin Gutoski** (*UW-Madison, Westport, Waunakee*)  
Town & Country Engineering, Inc.—Brian Berquist, **Tom TeBeest** (*Shorewood Hills, McFarland*)  
Vierbicher Associates, Inc.—**Sarah Church**, Neil Pfaff (*Monona, Town of Middleton, DeForest*)

**RE:** Madison Area Municipal Storm Water Partnership Meeting Agenda

**DATE:** February 16, 2016

**TIME:** 2:00 PM

**LOCATION:** 1600 Emil St, Madison, WI – Training Room

1. MAMSWaP I&E Update

Christal Campbell (Dane County) updated the group on the actions of the MAMSWaP I&E committee. A summary of these actions can be found on the first attachment to these minutes, "Madison Area Municipal Stormwater Partnership (MAMSWaP) – I&E Update-February 16<sup>th</sup>, 2016."

Christal also discussed recent efforts in the Wisconsin Salt Wise program. WI Salt Wise has been partnering with area retailers to promote BMPs in an effort to reduce salt use. The WI Salt Wise team has compiled a list of approximately 100 retailers, both local and national (Home Depot).

Most vendors that they have talked with have been receptive to the concept behind WI Salt Wise and allowed the posting of fliers near their salt displays. In general, the team has found that independent retailers have been easier to get on board, as the larger sellers (like Home Depot) have more corporate levels that need to clear the idea. The posted fliers have tried to sell the three concepts of “shovel, scatter, and switch,” with the main message being that using salt below 15oF is ineffective. Many retailers have requested information about other salt formulations (MgCl, CaCl). WI Salt Wise continues to look for new ways to identify and approach vendors in the area for this year and in the future. A question was asked about where fliers should be posted; Christal responded that generally, posting the fliers as close to the point of sale of salt as possible seems to be the most effective approach.

## 2. Leaf Studies

Christal discussed that, due to the many different leaf studies being conducted in the Madison area, the I&E Committee has been trying to get leads from all of these studies together to discuss their projects and ways to push them forward together. Three project leads from three different leaf studies presented on the goals of, methodology behind, and preliminary results from their respective projects.

### a) Paul Dearlove (Clean Lakes Alliance) – DeForest Leaf Study

Funding for the DeForest leaf study was provided by a DeForest stormwater utility grant, the Clean Lakes Alliance (CLA), and Yahara WINS. This study was designed to “quantify” the amount of resident cooperation in leaf management efforts needed to achieve measurable reductions in total phosphorus (TP) runoff in a small community, and to assess the value of a social marketing campaign to such an effort. Slides from Paul’s presentation are shown in Attachment 2, “DeForest Leaf Study Summary.”

Paul discussed the CLA’s ultimate leaf management goal, which is to reduce TP runoff to the lakes by 50% by 2025. CLA believes that approximately 4,100 lbs of TP can be removed from the system by using better leaf management practices. Local municipalities have set a goal of increasing leaf collection efforts by 20%; however, achieving a removal of 4,100 lbs of TP can only realistically be achieved by increasing resident participation in leaf collection programs.

Based on the results of the DeForest leaf study, CLA estimates that, to achieve a reduction of 4,100 lbs of P by leaf management alone, a 50% resident participation rate in management efforts is required. Paul said that in this study, direct costs of the social marketing campaign were ~\$200/lb TP, but that CLA expects that further refinement of the system and expansion of the campaign could bring costs to ~\$100/lb TP.

Gary Huth (Middleton) asked if CLA had factored in the costs of the participants’ time and effort when estimating total costs for a campaign. Paul responded that they had not, since those costs would never be paid under a full campaign (all study assistants and residents were volunteers, and would be under this program). Gary responded that leaf pick-up would require power equipment, fuel, and other costs, and asked how this was factored into the study. Paul said that those costs are not included in the estimate, and that of course leaf management has trade-offs, but that estimating those was beyond the scope of this study.

### b) Roger Bannerman (USGS) – Leaf Bagging Study

Roger presented on his study, entitled “Reducing Fall P Loads – Three Pathways to a Final Answer.” The study had three components: 1) quantification of benefits of selected leaf management practices (raking and bagging), 2) extrapolation of measured values to determine average benefits using WinSLAMM, and 3) demonstration of potential for social marketing to help keep leaves out of street. His presentation slides are included in Attachment 3, “Leaf Bagging Report 01202016.”

Roger's study, like the DeForest study, compared areas of "light" and "heavy" social marketing. Light-touch areas, called the "control areas," received minimal communication. Heavy-touch areas, called the "leaf collection pilot study areas," received more communication as well as leaf bags. 1,200 leaf bags were distributed in the heavy-touch area (20 bags/house, 84 houses over 3 blocks), with instructions to obtain more at Roger's house should a resident run out of bags. Roger indicated that response to the program in the heavy-touch area was very good. Volunteers took pictures of the high-touch area every 2 weeks to document conditions. The maximum number of bags used by a single home was 84. The City of Madison collected bags of leaves by truck and removed them for composting. Results of the study are detailed in the slides.

- c) Bill Selbig (USGS) – Evaluation of a Leaf Collection and Street Cleaning Program as a Way to Reduce Nutrients in Urban Runoff

Bill presented on his study, which focused on the quantitative effects of removing leaves from the street during the spring, summer and fall on TP in stormwater runoff. The study and its preliminary results are summarized in an abstract, included with these minutes as Attachment 4.

As with the two earlier studies, Bill used a "paired basin" approach. 2014 was used as a calibration year for all four basins, while in 2015 extensive leaf pick-up operations were implemented in one of each basin pair. Results from the study are summarized in the abstract.

- d) Wrap-Up (Christal Campbell – Dane County)

Christal summarized the findings of all three leaf studies. Leaves do accumulate in the streets in the Madison area, and these leaves contribute a significant amount of TP to runoff water. Christal summarized several questions that she hopes that these leaf studies and further investigation can answer in the future, including:

- Are leaf management efforts effective at reducing TP loading to lakes?
- How do municipalities calculate the TP reductions achieved with these programs?
- What are the costs associated with the programs?
- How would a municipality obtain DNR credit for implementing a leaf management program?
- What does strategic community engagement look like for such a program?
- How would a municipality scale up the pilot-scale programs discussed here into a larger scale effort?

### 3. MS4 Group Permit Presentation and Discussion

Eric Rortvedt (WDNR) presented on his proposed updates to the MS4 group permit. He said that the draft permit has been to select reviewers, and that he hopes to have the select reviewer comments incorporated in the next week and will then make the updated draft available to all MAMSWaP members. Eric highlighted a number of significant changes in the new permit. These are summarized in Attachment 5, "Reissuance of Madison Area MS4 Group Permit," and include the following:

- a) Opportunity for additional MS4s to join the permit
- b) Consistency with the general permit
- c) Authorization of discharge from internally drained and pumped areas (specifically Tiedeman Pond and Paradise Pond)
  - A guidance memo is being internally circulated in the WDNR outlining how to account for these under the TMDL

- d) TMDL language has been taken from the general permit and added to the MS4 permit
- e) Changes to public education and outreach
- f) Dye testing – MS4 permit now requests a courtesy “heads up” to Eric or Kim if dye testing is to take place
- g) Changes to NR 151, including the addition of the 1-yr peak flow, and the adjustment/clarification of infiltration exemptions/exclusions
  - Dane County has already incorporated these changes into their ordinances, and most people/municipalities have already addressed them
- h) Pollution prevention
  - More information is included about snow management and de-icing, similar to language in the general permit
  - SWPPP for municipal facilities
    - i. This comes from the general permit, and has been mandated by the EPA for the City of Madison (at 8 sites)
    - ii. Timing: the MS4 general permit says March 2017; Eric is looking at a 5 year permitting period (maximum) for multiple sites)
  - Nutrient application schedule for a >5 acre site (e.g. golf courses)
- i) Identification of locations of WPDES permitted discharges on a storm sewer map

A question was asked regarding the frequency of identification of illicit discharges. Eric clarified that municipalities have always been required to look for illicit discharges, and that the easiest method is to observe them under dry-weather conditions. He said that originally municipalities were given the chance to set an interval for checking and identifying these discharges, and that all municipalities should have some sort of schedule. He said that the purpose of requiring the schedule and the map is to avoid situations in which municipalities do a one-time check, find little or nothing, and then cease monitoring efforts.

Eric said with respect to MS4 TMDL implementation, DNR expects the next MS4 reissuance application will have each municipality identify additional actions/measures it expects to implement over the following 5 year permit term. Each permit term will need to show some improvement, although the method of measuring and demonstrating improvement is still under discussion. He said that, if goals are not being met through these plans, the EPA may require the setting of more concrete goals.

Chuck Nahn asked how Adaptive Management (AM) will be measured in the permit. Eric responded that he will add some language to clarify this point, but that he wants the permit to be flexible. Dave Taylor (MMSD) stated that AM assumes that each participating municipality already meets 40%/27% TSS/TP reductions.

Eric said that he hopes to have the draft permit out for initial review in the next week, and that he would likely give approximately 10 days for review of the permit. He is hoping to open the permit for public comment by the end of March.

#### 4. Adaptive Management (AM) Update

Dave Taylor (MMSD) gave an update on AM. His goal is to execute the inter-governmental agreement (IGA) by the end of March. About 50% of participating municipalities have already executed that agreement. Gary Huth asked, if the Middleton council deferred, what is the drop-dead date to join? Dave responded that April 15 is the deadline. A municipality could join after that date, but would have to be voted in by all participants in AM. Greg Fries (City of Madison) said that the City of Madison Board of Estimates approved the City's participation on February 15<sup>th</sup>, and that he fully expected the Common Council to approve it as well. Gary asked if the program is definitely going forward now that Madison has signed on. Dave responded that yes, it is. Chuck Nahn asked how a municipality would pay if its stormwater quality model has not been updated yet. Dave responded that payment would be based on a municipality's old model, and that if the municipality overpaid (determined once the model is updated), that it would be credited in the future. Eric Rortved reminded all present that he is quite busy, so any municipality that wants him to review its model ought to get the model to him soon.