

DuPage River Salt Creek Workgroup
Meeting Minutes
Lombard Village Hall
August 27, 2014
9:00 – 11:00 AM

1. Approval of June 25, 2014 Meeting Minutes (Attachment 1)

Motion made by Nick Menninga, seconded by Steve Zehner, motion carried unanimously.

2. Reducing Urban Phosphorus Load: Identifying Sources and Controls.

Nutrients entrained in runoff, such as phosphorus and nitrogen, can be contributing factors that lead to eutrophication in receiving waters. Many regulated municipal separate storm sewer systems (MS4) around the country will soon be required to control the amount of nutrients, specifically phosphorus, entering surrounding water bodies as part of a Total Maximum Daily Load. Over the last 10 years, the USGS has evaluated several Best Management Practices that are commonly used by MS4s as a means to reduce pollutant load, such as street cleaning, biofiltration, and leaf collection programs. Results from these studies will be presented so the audience can better understand which BMPs have the greatest potential for removal of nutrients in urban stormwater.

Presenter: Bill Selbig, Research Hydrologist, USGS - Wisconsin Water Science Center

Tom McArdle asked what Bill thought about residential landowners mulching and leaving their leaves on their lawns. Bill stated that it's the leaves on the streets that are the problem. Their study will encourage residents to keep leaves away from the streets however they see fit (leave on lawn, mulching, bagging and breaking down in the back yard, etc.) next year, and the leaf collections will escalate. While there will be runoff, it takes a considerable event to move the leaves from green surfaces.

For stormwater loading from residential areas, Bill shared his opinion that mulching in place or onto landscaping is a good option to hauling leaves away. The concern is leaves on the streets. Spring contributes about 25% and fall contributes about 50% of the annual P load. Therefore, street sweeping in the spring is also important. He added that BMPs containing grass or compost can have the result of increasing the P load in runoff so BMP selection should consider the specific pollutants that are being targeted.

Bill Blecke asked if Bill's presentation would be posted online. Bill responded that he will need approval prior to posting his presentation. If approved, it will be posted on the DRSCW website.

Mike Ott inquired if the study had controls to account for the frequency and duration of rainfall occurrences. Bill answered that they study is a statistical game and that they can't control for rain events. MS4 communities most need to know when it is most important collect leaves. They may be able to conduct regression analysis; ie after 7 days focus efforts in subwatershed XXX first because this is where phosphorus will be. It will be tricky because there are lots of variables. They have had fairly decent success with significant regression. They found that precipitation intensity is not transferrable from one subwatershed to the

next, but it can help determine when actions are most useful. This year they are collecting data on the amounts of leaves/buds/seeds/sticks on the streets themselves to conclude, for example, that 100 lbs/mile can regress to show decisions that support when and where to go.

Stephen McCracken asked if intensive efforts during the fall reduces Total and Ortho P. Bill responded that it does. Both the notes and modeling show that if all leaves are off the streets you will probably get a 50% reduction. Fall being mid-September through November, if collection/sweeping is only done every 20-22 days, that means only twice for the season. Bill doesn't believe that is frequently enough and the schedule needs to be intensified during that period.

Lindsay Birt asked if Bill submitted the study's findings on filtration media to the International BMP database. Bill replied he has is trying to do better job of submitting their findings. Part of the project scope is submitting completed studies to the database. Lindsay also inquired whether other modeling for urban BMPs (craig) is used. Bill stated that he tends to stay away from statistical modeling. His data is used one of two ways: to amend or revise technical standards written by the DNR and to constantly improve data used in WinSLAMM to estimate pollutant loads.

Stephen asked about a pie chart showing that phosphorus came primarily from lawns and streets. Stephen asked about loading per unit area, pointing out that lawns and streets are the principal source areas for nutrients but roads make up less area than green space. Roads per unit area are more "productive" than lawns/urban green space. Bill agreed with that, noting that the loading often came from green space onto the road. Bill said a lot of work still needed to be done to understand nutrients and urban green space and continued that the study has well defined drainage areas and overhead tree canopies. Brand new subdivisions generally have lower phosphorus loads. This situation can be flipped if there is lots of fertilizer application. Dane County, has banned fertilizers.

Jennifer Hammer asked whether they are conducting any public awareness/outreach efforts. Bill stated that their four study basins are relatively small. The City sent letters communicating the study's idea, scope and goals, and what to expect in terms of maintenance crews. Response was fairly well received. Some want their leaves removed but most were open to the study. This attitude may change the longer the study endures, especially in the control basin; eventually residents will say "enough" they want the leaves gone.

Dan Bounds asked if the phosphorus ban in in Wisconsin had a positive impact. Was ambient water quality studied with regard to the ban? Bill responded that he was not involved in the study which was completed years ago. The main source of P in the lake system was agricultural and the ban was aimed at reducing loading from urban landscapes; however the removal of P from fertilizers for lawns probably represents too small of a percentage of overall load to make a difference. Bill also said there was a suspicion that fertilizer encourages healthy lawns and healthy lawns have better infiltration. The bottom line is, there is enough natural phosphorus in background levels that you don't need it in

fertilizers. Bill continued that he does not know the impact on water quality and that he expects that the change would be small and take years with additional studies to determine.

Given the data, Dan Bounds asked what Bill thought about Green Infrastructure increasing vegetated BMPs. Bill stated that his opinion is varied. He stated that GI works great if it is used appropriately in the right place and is scaled appropriately. Without these considerations, and others, people wonder why a rain garden draining a 50 acre parking lot gets clogged in the first year. There should be standards and guidance for them. These BMPs must be built correctly, in the right place in the right environment and with maintenance plans. A study conducted in the early 2000 found they performed well and did a very good job at reducing runoff versus curb-gutter approaches. Keep in mind there is no such thing as “no” impact stormwater treatment; low impact BMPs will still generate runoff with large storms. In general, as whole it is a good idea if carried out in the right way.

What Bill finds interesting which is not yet on the radar, for the most part, is temperature. If the intent is to run heated runoff from roads and parking lots right through to ponded areas for infiltration, it is subjected to solar exposure. The cooler runoff gets a thermal pulse and over time it all drains to a cool-water resource.

Nick Menninga asked if the findings were being used by POTWs or the agricultural community in trading under a TMDL or for fulfilling MS4 permits. Bill replied that it has. This leaf collection study is part of a larger approach Madison Sewage is spearheading. In order to meet the phosphorus TMDL a choice needs to be made about spending money to reduce P at point sources at a high cost – or the money can be spread amongst other source controls and agriculture. The EPA is looking at this as an option to new technology, potentially saving the City resources. Bill continued that they were trying to achieve a slice of the necessary reduction by modifying what they already do; it’s part of much larger effort. The study was fairly well vetted to get the most bang for their buck to reduce phosphorus in Lake Mendota; there were numerous ideas considered ranging from the standard (allum) to the innovative (like killing carp).

2. 2012 Bioassessment Study of the Lower DuPage River Watershed.

A biological and water quality study of the 168 sq. mi. Lower DuPage River and selected tributaries was conducted in 2012. The objective was to assess aquatic life condition status, identify proximate stressors, and examine chemical/ physical water quality and biological condition relative to publicly owned treatment works and other potential sources of stress. The 2012 survey data were also used to assess trends relative to a baseline fish and habitat. The results show a consistent inability of small drainages in the DuPage River basin to support general warm water assemblages while the DuPage River main stem hosted assemblages in the fair or lower good ranges.

Presenter: Jennifer Hammer, The Conservation Foundation

Stephen McCracken asked for clarification that the sample site near the mouth of the Lower DuPage River was downstream of the Channahon Dam and showed a connection to the Des Plaines River. Jennifer confirmed and stated the site is LDO1. Next year for sampling in their three-year rotation is 2015 and the Lower DuPage River Watershed Coalition has

budgeted to pay for two of the reference sites. They also purchased 3 probes from HACH with the assistance of Stephen, to add to the 3 their stakeholders already had.

Jennifer continued that the IPS can also be update with new tools. MBI has further refined the process developed for the DRSCW while working on a project in Columbus, OH.

Dave Gorman noted that the Channahon dam may be something we work on with the LDRWC, especially as we and learn more with the Fawell dam modification project. Though fisheries experts continue to see carp as an impediment to removal/modification, this needs to be looked at.

Stephen McCracken stated that the Forest Preserve District of DuPage County's urban stream research center may be a way around such physical barriers that are nearly impossible to modify. He has been thinking about capturing, propagating, and then releasing fish species upstream in areas identified by the assembled data as most likely to support them. To Stephen, this seems the most plausible way, even though the exercise may need to be repeated a number of times to get right.

Tom Richardson asked if things will be done differently on the Lower DuPage due to the increased presence of the agricultural community. Jennifer stated that they will have to start talking about this more. Perhaps they will look at trading and some of the work being done in wetlands in agricultural communities. What other options should we be looking at?

Larry Cox asked if the habitat and water quality in the mainstem is sufficient to fully support aquatic life, should we try repopulation efforts sooner rather than later to see what survival rates we get. Some of the data would suggest that this is the case.

Jennifer stated that there are another 9 fish species downstream of Shorewood. Chris Yoder developed a tiered table for species to target with the highest likelihood of survival – this list will be refined as we get more data. The data the LDRWC collects next year will be added and the IPS tool can be run again. The DRSCW budgeted a second run for the IPS tool in 2016/2017. LDRWC designated funds for this as well.

Larry Cox mentioned that 2016 is two years from now. We may not have the luxury to wait with additional funding on the horizon, we may need to re run the IPS sooner to identify projects and get sponsors. Stephen McCracken noted that the current iteration gives us around 80 projects. The order of the project list might change following implementation of priority projects (i.e. Fawell and Fullersburg) as the landscape of aquatic biology changes.

Jennifer stated that the LDRWC has their bioassessment data and that there is no need to wait for the technical support document to be completed.

3. Projects Committee (new business)

- Oak Meadows Project Update – The Forest Preserve Board has approved \$16M for the aquatic and upland habitat, stormwater and golf course project at Oak Meadows Preserve.

- Fawell Dam Modification and Channel Improvement – The DRSCW has voted to take advantage of a 319 grant made available through DuPage County. Contracts have been signed with Inter-Fluve and V3 Companies to complete a survey and gather data at the site. An additional \$13,000 moved from the project ID White paper preparation/review to the Other Projects Fawell Dam fish passage line. Thanks to DuPage County Stormwater Management for initiating the opportunity, our members for voting in favor of the opportunity and the Forest Preserve District of DuPage County for obtaining permits necessary for the survey so quickly.
Stephen thanked all members for voting and the FPDDC and DuPage County Stormwater Management for their roles in making this happen. The depth of refusal study has already been completed.
- PAHs & Coal Tar Sealants (CTS) – Update on state ban legislation
- Watershed Plan – A draft plan was submitted to Illinois EPA to support our partners seeking funding for projects on the Lower Salt Creek main stem. The draft can be found at <http://www.drscw.org/watershedplans.html>.
We have not yet received comments from Illinois EPA.

4. Monitoring Committee (old business)

- Water quality and sediment sampling on the East Branch and reference sites is nearly complete.
- The East Branch POTW chloride sampling will be carried out in September.
- The 2012 West Branch Report is currently under development.
- Update on the 2014 DO sonde deployment.

5. Chloride Reduction Committee (new business)

- 2014 Deicing Workshops – Save the date flyers are available for the Public Roads (September 25th) and Parking Lots & Sidewalks workshops (October 9th) on the website <http://www.drscw.org/winter.html>.
- 2014 Questionnaire – If you have not returned your community's questionnaire, please do so as soon as possible. Results of these are included in both the public roads and parking lots and sidewalks deicing workshops.
- The scope of work with CDM Smith for chloride reduction efforts was expanded for the remainder of the fiscal year (Attachment 2). This \$9,960 expansion was included in the annual budget (see page 16, Chloride Reduction Program Expenses, other initiatives, \$10,000).

Larry Cox asked if anything had been planned for a level of service workshop. Dan stated that nothing has been planned, but he hopes to hear more about any policy changes at the public roads deicing workshop on September 25th.

Lindsay Birt asked if the chloride data is being looked at for further analysis, for example, a correlation between the rate of snowmelt and peak snow events. Stephen McCracken stated that he has been thinking about correlating snowmelt and pavement temperature and identifying the combination of variables that best explained observed ambient chloride concentrations. This would help evaluate if ambient conditions are actually improving. Stephen noted that summer weather had an impact too.

Lindsay agreed that it would be beneficial to screen out weather to determine if there was any detectable benefit from the changes.

The parking lots and sidewalks deicing workshop offers registration discounts so please get your schools, libraries, etc. to attend.

6. DRSCW White Paper Proposal

- The Fox River Study Group (FRSG) met with permit staff from Illinois on August 14th to discuss draft special condition language for NPDES permits for POTWs in the Fox River watershed. Several DRSCW members attended.

Nick Menninga stated that Illinois EPA prescribed to US EPA the FRSG 4.5 year compliance schedule with additional studies on lower limits in a 5-10 year timeframe. The DRSCW completed the QUAL2K model 5 years ago, the FRSG has not yet completed theirs.

Abel Haile added that the FRSG is looking at monthly/ weekly averages in three years.

Stephen noted that their members have no way of knowing what their target will be three years from now.

Nick added that the Upper Des Plaines group resolved their differences with US EPA. He anticipates new permits for DRSCW members will be issued by the end of the year.

7. ILR40 Draft Permit

- DuPage County and the DRSCW provided comments to Illinois EPA. A copy of the DRSCW comments has been sent to members.

Rob Swanson said the State had hoped to have the new ILR40 out by Labor Day, but that due to other priorities they anticipate issuing the new/final MS4 permit by mid-September.

Stephen noted that Bill Selbig's studies show single grab analysis doesn't reflect actual conditions well. There is a need for comprehensive monitoring. That argument was made in the DRSCW comments.

Bill Blecke stated that letters from Illinois EPA notified communities in Lake County that NOI for the ILR40 went out in error. Contact Trisha at Illinois EPA for information.

8. Funding update (SB2081)

9. Watershed Permitting Update (old business)

10. Watershed Committee Updates – West Branch, East Branch and Salt Creek

11. Business Items (new business)

- Audit – FYE 2014 was completed and approved by the Executive Board. A copy of the audit is available on the DRSCW website (Financials Page)
- Tax Returns – 2013 Federal and State returns were completed, approved by the Executive Board and submitted.
- Membership Dues – Please help facilitate payment for your organization’s 2014-2015 membership dues if they have not been received (Attachment 3).
Welcome to our newest members: Clark-Dietz, Donohue and Associates, associate members; Mary Lou Kalsted, individual member; City of Northlake, agency member.
- Accounts Update – (Attachment 4)
- Other Business

12. DRSCW Calendar, Presentations and Press Coverage (new business)

- A newsletter is under development.
- The DRSCW will provide a presentation, “Winter Maintenance and Environmental Impacts,” at the University of Wisconsin-Madison’s course, *Managing Snow and Ice Control Operations*, in Madison, WI on October 7-8, 2014.

13. Workgroup Meeting Schedule

- October 29, 2014
- December 10, 2014
- February 25, 2015 (Annual Meeting)
- April 29, 2015
- June 24, 2015
- August 26, 2015

Dave Gorman reminded everyone to sign in. He will be issuing PDHs after the next meeting.

Meeting adjourned.