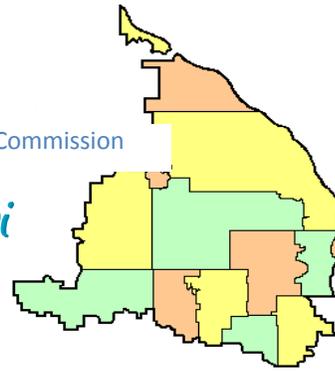




Watershed Management Commission



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MINUTES Regular Meeting December 13, 2018

(Action by the SCWMC appears in blue, by the WMWMC in green and shared information in black.
*indicates items included in the meeting packet.)

I. A joint meeting of the Shingle Creek Watershed Management Commission and the West Mississippi Watershed Management Commission was called to order by Shingle Creek Chairman Andy Polzin at 12:45 p.m. on Thursday, December 13, 2018, at the Clubhouse at Edinburgh, USA, 8700 Edinbrook Crossing, Brooklyn Park, MN.

Present for Shingle Creek were: David Vlasin, Brooklyn Center; John Roach, Brooklyn Park; Burton Orred, Jr., Crystal; Karen Jaeger, Maple Grove; Gary Anderson, Minneapolis; Bill Wills, New Hope; Harold E. Johnson, Osseo; Andy Polzin, Plymouth; Wayne Sicora, Robbinsdale; Ed Matthiesen and Diane Spector, Wenck Associates, Inc.; Troy Gilchrist, Kennedy & Graven; and Judie Anderson, JASS.

Present for West Mississippi were: David Vlasin, Brooklyn Center; Steve Chesney, Brooklyn Park; Gerry Butcher, Champlin; Karen Jaeger, Maple Grove; Harold E. Johnson, Osseo; Ed Matthiesen and Diane Spector, Wenck Associates, Inc.; Troy Gilchrist, Kennedy & Graven; and Judie Anderson, JASS.

Also present were: Andrew Hogg, Brooklyn Center; Jesse Struve, Brooklyn Park; Todd Tuominen, Champlin; Mark Ray, Crystal; Derek Asche, Maple Grove; Bob Grant, New Hope; Ben Scharenbroich, Plymouth; and Richard McCoy and Marta Roser, Robbinsdale.

II. Agendas and Minutes.

Motion by G. Anderson, second by Johnson to approve the **Shingle Creek revised agenda**. * Motion carried unanimously.

Motion by Butcher, second by Chesney to approve the **West Mississippi agenda**. * Motion carried unanimously.

Motion by Johnson, second by Roach to approve the **minutes of the November regular meeting**. * Motion carried unanimously.

Motion by Butcher, second by Jaeger to approve the **minutes of the November regular meeting**. * Motion carried unanimously.

III. Finances and Reports.

A. Motion by G. Anderson, second by Orred to approve the **Shingle Creek December Treasurer's Report**. * Motion carried unanimously.

Motion by Orred, second by G. Anderson to approve the **Shingle Creek December claims*** sans the City of Crystal cost-share invoice in the amount of \$50,000. Claims totaling \$87,941.82 were approved by roll call vote: ayes – Roach, Orred, Jaeger, G. Anderson, Wills, Johnson, Polzin, and Sicora; nays – none; absent - Brooklyn Center.

B. Motion by Jaeger, second by Johnson to approve the **West Mississippi December Treasurer's Report**. * Motion carried unanimously.



Motion by Johnson, second by Chesney to approve the **West Mississippi December claims.*** Claims totaling \$9,368.78 were *approved by roll call vote: ayes – Chesney, Butcher, Jaeger, and Johnson; nays – none; absent – Brooklyn Center.*

IV. Open Forum.

[Vlasin arrived 12:55 p.m.]

V. Project Reviews.

VI. Watershed Management Plan.

A. Champlin.* The City of Champlin submitted its Local Surface Water Management Plan for Commission review and approval on November 29, 2018. The 60-day review period extends through January 28, 2019. The Metropolitan Council, which has 45 days to review and comment on the plan, has, of this meeting date, not provided comments to the Commission.

The Plan does a good job laying out problems and corrective actions, and includes a detailed implementation plan. Staff recommend that Champlin's Local Plan be approved subject to the following comments:

1. Revise Section 4, Areas of Concern and Corrective Actions, to include the Mississippi River fecal coliform impairment and include corrective actions for both the bacteria and nutrient Mississippi River impairments.
2. Make other revisions set forth in the comment table included with Staff's memo.
3. Address any comments received from the Met Council.

Motion by Butcher, second by Chesney to approve Champlin's Local Plan per Staff's review and comments and pending response to comments received from the Metropolitan Council. *Motion carried unanimously.*

B. Brooklyn Park.* The City of Brooklyn Park had previously submitted its Local Water Management Plan for Commission review and approval. At the September 13, 2018 meeting the Commissions tabled consideration of the Plan and asked the City to provide more specificity regarding TMDL implementation as well as add the *E. coli* impairment and implementation strategies. The City has revised and resubmitted the Plan and Staff are now recommending its approval.

Motion by G. Anderson, second by Orred to approve Brooklyn Park's Local Plan per Staff's recommendation. *Motion carried unanimously.*

Motion by Chesney, second by Johnson to approve Brooklyn Park's Local Plan per Staff's recommendation. *Motion carried unanimously.*

C. Crystal.* The City of Crystal submitted its Local Surface Water Management Plan for Commission review and approval on December 6, 2018. The 60-day review period extends through February 5, 2019. As of this meeting date, the Metropolitan Council has not yet provided comments to the Commission.

The Plan does a good job laying out problems and corrective actions and includes an implementation plan and CIP.

Staff recommend approval of the Crystal Local Plan subject to the following comments:

1. Revise Table 6.1 to identify the Shingle Creek *E. coli* and DO impairments as problems and identify potential corrective actions
2. Revise Section 4 to describe the Shingle Creek DO/Biotic TMDL and Implementation Plan and the Upper Mississippi Bacteria TMDL that includes the Shingle Creek TMDL and wasteload allocations.



3. Address any comments received from the Metropolitan Council.

Motion by Roach, second by Orred to approve Crystal's Local Plan per Staff's recommendation.
Motion carried unanimously.

D. Osseo.* The City of Osseo has submitted a Supplement to its Stormwater Management Plan for Commission review and approval. The Commissions had previously approved the City's SWMP on July 9, 2015. The recent revision to Minnesota Rules 8410 requires cities to obtain watershed approval of their local water management plans no sooner than the two years before the due date of the City's Comprehensive Plan, or between January 1, 2016 and December 31, 2018.

This Supplement updates the current and future land use figures in conformance with the 2040 Comp Plan; updates the Implementation Plan; and adds reference to and strategies for the Shingle Creek *E. coli* TMDL. It was submitted November 26, 2018; the 60-day review period extends through January 24, 2019. The Metropolitan Council has, of this meeting date, not provided comments to the Commissions.

The Plan Supplement meets Commission requirements and brings the 2015 Plan up to date. Staff recommend that the Osseo Stormwater Management Plan Supplement be approved pending comments received from the Met Council.

Motion by Wills, second by Orred to approval Osseo's Plan Supplement in accordance with Staff's recommendations. *Motion carried unanimously.*

Motion by Johnson, second by Chesney to approval Osseo's Plan Supplement in accordance with Staff's recommendations. *Motion carried unanimously.*

E. Robbinsdale.* The City of Robbinsdale submitted its Local Surface Water Management Plan for Commission review and approval on November 28, 2018. The 60-day review period extends through January 26, 2019. The Metropolitan Council has, as of this meeting date, not provided comments to the Commission.

The Plan does a good job laying out problems and corrective actions and includes an implementation plan and a table comparing Shingle and Bassett Creek development standards compared to current City ordinances.

Staff recommend that the Robbinsdale Local Surface Water Management Plan be approved subject to the following comments:

1. Revise the Plan to include 2016 and 2040 land use figures.

2. Consider adding a corrective action to Table 6.2 and a generic implementation action to Table 8.4 that the City will incorporate BMPs into street and other municipal improvement projects where feasible.

3. Address any comments received from the Metropolitan Council.

Motion by Sicora, second by Wills to approval Robbinsdale's Local Plan in accordance with Staff's recommendations. *Motion carried unanimously.*

F. 2018 Work Plan in Review.* The Commissions' Third Generation Watershed Management Plan states that the Commissions will annually review progress toward their Third Generation goals and that this evaluation will become part of the Annual Report. Since the Third Generation Plan was adopted, BWSR adopted revised Minnesota Rules 8410 that requires WMOs to review progress every two years.

The purpose of the annual review is (1) to determine progress towards the goals and (2) to be sure the Commissions stay on track to reach them. The annual review is also an opportunity to discuss whether the goals and actions in the Plan still make sense or if they should be modified or enhanced, perhaps to add in new priorities. Ideally, this annual review is also an opportunity to start thinking about the 2019 work plan.



Some highlights of the past year include:

1. Continued effectiveness monitoring of biochar- and iron-enhanced sand filters on three ponds, two catch basins, and a filter box in the two watersheds.
2. The Shingle Creek Commission received a \$267,040 Clean Water Fund grant for the Bass and Pomerleau Lakes Alum Treatment Project. The first alum treatment will occur in spring 2019.
3. The Shingle Creek Commission received a \$50,000 grant from the DNR to update the Special Hazard Areas in the watershed.
4. Shingle Creek completed thirteen reviews of development/redevelopment projects and acted as the WCA LGU for two wetland delineation/wetland type reviews.
5. West Mississippi completed nine reviews of development/redevelopment projects and acted as the WCA LGU for five wetland delineation/wetland type reviews.
6. Completed the Cedar Island-Pike-Eagle chain of lakes nutrient TMDL 5-year review.
7. Continued work on a subwatershed assessment for that part of Minneapolis that is within the Shingle Creek watershed.
8. Continued to work cooperatively with the Metropolitan Council and Hennepin County on the Blue Line LRT Extension project, and with the Metropolitan Council on the C Line Bus Rapid Transit project.
9. The Commissions heard several guest speakers during the year: Drs. Beth Fisher and Josh Feinberg from the U of M spoke about their specialized monitoring of water quality and effectiveness of the biochar filter media; Joe Bischoff from Wenck, presented, "Why is Phosphorus so Persistent in the Watershed"; representatives from the Metropolitan Council brought the Commissions up to date on the Blue Line Extension; and Dr. John Gulliver from the U of M spoke on "Retention Ponds can be a Source of Phosphorus."
10. About 700 fourth grade students in 27 classrooms in the two watersheds participated in a Watershed PREP classroom lesson during the spring 2018 semester (fall 2018 is still being tabulated).

Tables attached to Staff's December 7, 2018 memo* show the Third Generation Plan goals, noting progress to date and expected completion. Each of the strategic actions identified for the goal areas are also shown, noting work completed in 2018 and to date, as well as expected completion as general status. For the most part the Commissions are on track to meet goals, with the following exceptions:

1. Work has not yet begun on the "sustainable water budget" project. Staff have had some discussions with USGS staff about this, but have not yet identified a funding source for this project.
2. While Lower Twin, Ryan, and Schmidt Lakes have been delisted from the draft Impaired Waters list, the Shingle Creek Commission has a stretch goal of achieving delisting for Bass, Eagle, Crystal, and Middle Twin Lakes. As Upper Twin improves, Middle Twin is likely to reach the state standard. It is hoped that the alum treatment on Bass Lake will bring that lake to the water quality standard, but not in time to be delisted prior to the expiration of the Third Generation Plan. This fall the Commission and the City of Robbinsdale had some preliminary discussion regarding a potential set of lake management actions for Crystal Lake that might include a one-time whole lake alum treatment, and aquatic vegetation and carp management.
3. P8 models for the lakesheds are being reviewed as part of the TMDL review process and is an ongoing task.
4. The Commissions have a goal to complete subwatershed assessments for at least 25% of that part of the watersheds that developed prior to Commission rules in 1984. West Mississippi is on track to complete this goal; but Shingle Creek will have completed only 14% of pre-1984 development at the time the Minneapolis Subwatershed Assessment is completed. A more achievable goal would be 15%.



5. The Commissions have a goal of maintaining the functions and values of priority wetlands, but have not established a process by which that would be evaluated.

Motion by Orred, second by G. Anderson to accept the 2018 Annual Progress Report. *Motion carried unanimously.*

Motion by Chesney, second by Jaeger to accept the 2018 Annual Progress Report. *Motion carried unanimously.*

VII. Water Quality.

A. Staff are requesting approval to **purchase a replacement In Situ AquaTROLL 100.*** The AquaTROLL 100 is a data logger that measures and records in-stream conductivity and temperature. These devices have been deployed at the Commission's stream sampling locations for several years. They record in-stream temperature and conductivity every 15 minutes. The AquaTROLL that has been designated for sampling station SC-3 was acquired in fall of 2012. The internal battery lasted 6 years, but is now dead. (Batteries are supposed to last 6-8 years, and colder conditions such as we have in Minnesota can lower battery life.) Unfortunately, because this instrument is welded closed, internal batteries cannot be replaced. Staff looked into buying external battery packs for about \$650, but these external batteries only last about 2 years and the cost did not seem worth the investment. Therefore, they think the best option is to purchase a new AquaTROLL 100 at an estimated cost of \$1,872. The remaining 2018 Shingle Creek stream monitoring budget can accommodate this purchase.

Motion by Roach, second by Vlasin to approve the purchase of the AquaTROLL 100 as described above. *Motion carried unanimously.*

B. The Technical Advisory Committee (TAC) met prior to this meeting. Among the topics discussed was **potential capital and cost share projects.** The purpose of this discussion was to ensure that the Commissions' CIP is set up with projects to maximize the Commissions' ability to qualify for grants, and to ensure that the BWSR watershed-based funding grant funds are fully expended in the next two years. The following are the CIP projects brought forward by the cities.

1. **Brooklyn Center** is requesting cost sharing by the Shingle Creek Commission to bring road salt brining equipment in-house. They currently go to Brooklyn Park to get their brine, which has many disadvantages. The estimated project cost is \$100,000. TAC members discussed the eligibility of cost-sharing equipment vs. projects and agreed that the resultant reduction of chloride runoff to waterbodies in the watershed is well in line with the Commission's goal of more effective and reduced use of chloride. This request was approved by the TAC at a cost-share expenditure of 50%, not to exceed \$50,000. Motion by Jaeger, second by Orred to approve the recommendation of the TAC. *Motion carried unanimously.*

2. **Crystal** is requesting cost sharing by the Shingle Creek Commission in the amount of \$50,000 to offset a portion of the design costs of the Becker Park Stormwater Infiltration Project. Members discussed the possible duplication of Commission funding on this project but agreed that the cost-share funds were not duplicative of the CIP funding awarded in 2018 for installation of underground storage to treat runoff from the site. Crystal's request was approved by the TAC in the amount of \$50,000. Motion by Roach, second by Orred to approve the recommendation of the TAC. *Motion carried unanimously.*

3. **Champlin** is requesting cost-sharing for the Mississippi Crossing Underground Infiltration System and Storm System Outlet to the Mississippi River to support new and existing uses at Mississippi Point Park. The system will treat stormwater prior to discharging into the river, reducing the rate of flows as well as the amount of total phosphorus and total suspended solids discharged. The City is requesting \$196,690 from the Cost-Share program of the West Mississippi Commission for this \$393,375 project. The TAC tabled action on this project since it appears to consist of multiple projects and may be eligible as a Capital Project. No action was taken by the Commission.

4. The total available city cost-share funds are: **Shingle Creek - \$240,000**, and **West Mississippi - \$235,000**. Applications are accepted until funds are encumbered.

5. It was requested that future TAC minutes be included in the regular meeting packets.



C. Twin Lake/Ryan Creek Flood Analysis. Wenck Associates has submitted a proposal to survey and investigate the channel and hydraulic capacity of Ryan Creek from upstream of the weir outlet of Lower Twin Lake to its outfall at Shingle Creek. Wenck will survey the creek, creating a hydrologic and hydraulic (H&H) model. It is assumed the city of Minneapolis will televise the 49th Avenue storm sewer. The proposal estimates the cost of this work will total \$18,000.

At their December 13, 2018 meeting the Technical Advisory Committee approved this proposal. Fifty-percent of the cost of the project will be borne by the Shingle Creek Commission, with the balance to be paid by the cities of Brooklyn Center, Crystal, Robbinsdale, and possibly Minneapolis, dependent on the latter's willingness to participate financially beyond the cost of the televising.

Motion by Orred, second by G. Anderson to approve the action of the TAC. Monies will be taken from the Subwatershed Assessment Account. *Motion carried unanimously.*

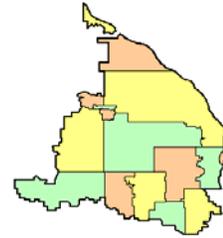
D. Crystal Lake Management Plan. The Crystal Lake Nutrient TMDL Five Year Review has been completed and provided a review of progress toward meeting the load reductions identified in the TMDL. The Shingle Creek Commission and stakeholders (Hennepin County, cities of Robbinsdale and Minneapolis, property owners) have implemented several actions to improve the biological integrity in the lake. Two actions have not yet been completed – aquatic vegetation management and fish community management. New data will be required to enhance an internal load reduction project. The City of Robbinsdale is interested in pursuing a wholistic lake management approach that would provide both ongoing internal phosphorus removal and management of invasive fish and aquatic vegetation species. The timeline for these tasks ranges from February 2019 to August 2020. Project costs total \$246,300-\$275,700.

1. Internal loading, sediment release. The current internal load reduction project was designed as a flocculation treatment facility that withdraws and treats nutrient-rich hypolimnetic (deep-lake) water from Crystal Lake. After being withdrawn from the lake, water is treated using aluminum sulfate (alum) to remove phosphorus (P), and the treated water is discharged back to the lake. While treating water from the hypolimnion has shown effectiveness (70 percent of required load reductions achieved), the treatment facility tends to produce unpleasant odors that have prompted complaints from residents. The field of sediment chemistry has evolved over the years and the current, more refined approach holds the potential to reduce treatment costs by thousands of dollars. Wenck's proposal* describes the process in calculating the most effective alum dosing determination for Crystal Lake. The information provided by the data collection will not only enable an alum dose appropriate for the conditions found in Crystal Lake, but also allow for a more accurate cost estimate that will include alum application, follow-up sediment coring to determine the effectiveness of the first treatment, a second alum application, and a final sediment coring that will show the final effectiveness of the overall treatment. Additional water quality monitoring and observation will also be required.

2. Fish Community Management. A fish survey conducted in September 2018 indicated that the carp population is at the critical impairment threshold, suggesting that while carp are certainly contributing to the water quality issues in Crystal Lake, they are not the sole reason. The carp identified in the survey were relatively small in size, suggesting that the carp issues in the lake are likely to worsen with time as the fish grow. A follow-up survey is recommended for the summer of 2019 to refine the density calculation and to determine a recommended course of action. Options could vary from no action to active removal of carp.

3. Aquatic Vegetation Management. Aquatic vegetation surveys carried out in 2013 and 2018 confirmed that the lake does not currently support native pondweed species common in healthy shallow and deep lakes throughout Minnesota. Upon completion of the alum treatments and fish management practices (if required), water clarity would be improved, and a positive vegetative response would be anticipated. A desirable outcome would be one in which a diverse system of native vegetation becomes established, out-competing aquatic invasive species (AIS) but remaining below nuisance levels.

Because small amounts of AIS have been observed in Crystal Lake during the recent surveys (curly-leaf pondweed and Eurasian milfoil) and anecdotal evidence suggests these species used to be at nuisance levels



along the northwest shore, the possibility exists that AIS have begun to establish themselves, requiring active management. Because a vegetation survey took place in 2018 and major changes to the vegetation population would not be anticipated prior to the alum treatments, aquatic vegetation management is not proposed to commence until following the alum treatments and assumed carp removal.

4. Funding Sources. The Commission's CIP includes generic "Lake Internal Load Improvement Projects," which could include rough fish removal and installation of fish barriers, chemical treatment such as alum, drawdowns, whole-lake aquatic vegetation treatment, etc. The Crystal Lake Management Plan could, with a Minor Plan Amendment, fall under that project which would be funded 100% by the Commission through the county tax levy to be certified in 2019 and collected in 2020. The Commission and Robbinsdale could also consider applying for a Clean Water Fund grant to fund a portion of the costs.

a. The Commission and City could begin this project in spring 2019 if the City was willing to front costs incurred prior to the receipt of tax levy proceeds, approximately July 2020. In this scenario the Commission probably would not apply for a CWF grant for implementation since a significant share of the cost would have already been incurred by the time a grant agreement was executed, and those costs would not be eligible to match grant funds. Funding for this project is not included in the City's 2019 budget.

b. If the Commission and the City decide to wait until 2020 to start, the Commission could undertake a Minor Plan Amendment and certify a levy as well as apply for a Clean Water Fund grant in 2019. The timeline noted above would then be pushed back a year. The TAC agreed to proceed under this scenario.

Motion by Sicora, second by Roach to authorize Staff to develop a CWF grant application for this project. *Motion carried unanimously.*

VIII. Education and Public Outreach - West Metro Water Alliance (WMWA).*

A. WaterLinks. Subscribe to *WaterLinks* at westmetrowateralliance.org/contact.html.

B. The next **WMWA meeting** is scheduled for 8:30 a.m., Tuesday, January 8, 2019, at Plymouth City Hall.

IX. Grant Opportunities and Updates.

A. Twin Lake Carp Management Project.*

1. In January 2018 the Commission, assisted by city and county staff, worked with a commercial fisherman to remove carp from Middle Twin Lake as part of the ongoing Twin Lake Carp Management project. Unfortunately, the fisherman's net snagged on some bottom obstruction and ripped, spilling some of the fish haul back into the lake. That harvest only accomplished about half the goal of carp removals from the lake, well short of the numbers needed to bring the carp population down to the management goal. Since that time Staff have been researching options to continue the harvest to try to achieve this goal. A December 10, 2018 technical memo* from Tom Langer details those options and their associated costs.

To continue removing carp from the Twin Lake system there are four methods to remove carp: (1) Open water seining; (2) Winter seining; (3) Box netting; and (4) Ryan Creek seining. Cost benefit analysis suggests that winter seining events likely provide the best removal option for carp in 2019. Assuming a similar removal rate as in 2018, Staff anticipates removing ~10,000 lbs of carp (~45% of removal goal). This would put the Twin Lakes near the 100kg/ha threshold and halfway to the target goal. There is the possibility that removals are more efficient and have an added value of bullhead removal as well. A budget of \$15,000 should be planned for this removal effort. Contact will be made with the commercial fisherman to determine if he is interested.

After the 2019 winter seine, removal effectiveness may significantly decrease, therefore, Ryan Creek seining is the next best removal option. Staff anticipate the ability to conduct four removal efforts (1 removal effort/week for a month) which would require a budget of \$10,000 in 2019. Staff estimate that



another 4,000 lbs of carp could be removed totally 14,000 of the 22,400lbs. This would achieve reducing carp densities below the critical threshold of 100kg/ha and be a significant milestone for carp management within the system.

To ensure carp densities remain low and the targeted removal goal is achieved, continued maintenance removals should be planned and budgeted for in future years. 2020 and 2021 should budget for intensive (4x/yr) removal efforts. If removal effectiveness and effort do not change in following years, by 2020 an 80% of removal goal could be reached and by 2021 the entire targeted removal goal achieved. After 2021, removals could become less intensive and subside to 1-2 efforts/year (pending observations). Though this plan may take a number of years to achieve removal goals, it will ensure carp are being removed and presents the ability to achieve densities below the 100kg/ha by the summer of 2019.

2019 costs = \$15,000 for winter seining, \$10,000 for Ryan Creek seining, and \$1,000 in custom nets and equipment. Since it appears the final cost of the fish barriers will be less than budgeted, this first year might be able to be funded from the Twin Lake Carp Management project funds. 2020 costs = \$10,000 for Ryan Creek seining. 2021 costs = \$10,000 for Ryan Creek seining

2. The Section 319 grant expires on August 30, 2019, although the Commission match funds do not have an expiration date. Staff's recommendations attempt to get as close as possible to meeting the goals of the Twin Lake Carp Management grant project, even if some of the recommended activities extend beyond that expiration date. Staff recommendations are:

a. Authorize a second lake harvest in January-February with the commercial fisherman. The estimated cost of this would be \$15,000. It may be less depending on whether the Commission will have to pay a premium per pound of fish if the fisherman cannot market the haul.

b. Authorize purchase of the block net and box seine for \$1,000 and at least one removal from Ryan Creek at an estimated cost of \$2,400, both from project funds. If city staff are available to help that cost would be less.

c. Following those efforts, review the status of the project budget and make a recommendation regarding any further removals in 2019. The Commission also needs to be able to pay for the spring curly-leaf pondweed treatment from that budget.

d. The number of future removal efforts in Ryan Creek will depend on the haul from the second lake harvest, but it is likely that at least one removal effort from Ryan Creek will become an annual "maintenance" occurrence. At this time no funding source has been identified for that ongoing activity and should be considered when the annual budget is discussed.

Motion by Orred, second by Vlasin to move forward with options a. and b., above, including development of an acceptable contract with the commercial fisherman. *Motion carried unanimously.*

[Johnson departed 2:03 p.m.]

B. Modular Green Roof Project.* Six years ago, the Shingle Creek Commission was awarded an EPA Section 319 grant from the MPCA to undertake a research project on green roofs. The objective of the project was to develop and test several versions of a do-it-yourself light-weight, portable, modular system of soil media and plants that could be constructed and installed by non-professionals on existing rooftops to catch and retain precipitation that would otherwise be converted to urban runoff. The modules would be suitable for installation on existing roofs without the need for supplemental structural reinforcement, membrane installation to combat leakage, or intensive maintenance such as supplemental irrigation.

This project was completed between 2012 and 2015 and included three phases. The first was a bench test to evaluate several planting mixes for moisture-retaining capacity and dry and wet weight. The second, field test was completed over three growing seasons and subjected to various watering regimes and intensively monitored and



weighed. During the final phase the trays were placed on test rooftops at three locations, at a Three Rivers Park District maintenance facility at the Coon Rapids Dam; at the Robbinsdale City Garage; and on the roof of Wenck's office building in Maple Plain. Soil moisture was periodically monitored and supplemental watering was provided when it fell below a threshold. Plant growth and robustness was noted. The trays were left in place when the project concluded in August 2015 for continued observation, although no additional monitoring or maintenance took place.

The results of this study were used to develop a brochure* guiding do-it-yourselfers through the process of designing, assembling, planting, and maintaining their own modular green roofs. While there are now modular systems available commercially, those are generally not planted with local-hardy plants, have a higher wet-weight load, and can be double the cost of constructing and planting your own. Staff recently reviewed conditions in the trays and were pleasantly surprised by the results. The final project report can be found on the Commissions' website: <http://www.shinglecreek.org/studies.html>

C. Watershed Based Funding.

1. **County Chloride Steering Committee.*** If you will recall, the County Chloride Steering Committee decided to initiate its work by engaging a facilitator to gather information and hold targeted focus group sessions to better understand knowledge gaps and barriers to proper chloride management. This information would be used to tailor countywide WMO-collaborative outreach and implementation efforts for both public and private salt applicators. Claire Bleser, administrator for the Riley-Purgatory-Bluff Creek Watershed District, has taken the lead on coordinating and the District is the fiscal agent administering the BWSR funds allocated to this joint effort. The Steering Committee (including Andrew Hogg, Brooklyn Center and Ben Scharenbroich, Plymouth) met once to brainstorm ideas for the RFP. Karen Galles from Hennepin County has been coordinating the Watershed Based Funding and provided this update:

a. Bleser has an executed grant agreement as of last week.

b. Bleser and Galles met with the Freshwater Society and Fortin Consulting just before Thanksgiving. They are awaiting a Scope of Work from Freshwater (that incorporates technical assistance from Fortin) based on the planning elements that were laid out at the meeting. The elements that are expected to be captured in the Scope of Work are:

- 1) Outreach/recruitment for focus groups
- 2) Logistics of focus groups (including producing communication materials, e.g., blurbs for newsletters)
- 3) Facilitating Focus Groups
- 4) Create/promote/collect data via online survey tool (and/or i-pad survey)
- 5) Capture and combine data from various sources
- 6) Analyze data
- 7) Report and Presentation on audience needs and barriers
- 8) Recommend strategies to address those needs and barriers – in the form of an action-oriented and time-bound workplan

c. The Road Salt Symposium is on February 7. The Freshwater Society has the room for the entire day, so we expect part of their plan to include holding a focus group that afternoon, after the Road Salt Symposium concludes. They understand that our target audiences (commercial applicators/ building managers) is different than the target/typical audience of the Road Salt Symposium (public). I [Galles] left the pre-Thanksgiving meeting feeling like Freshwater/Fortin really understood what we were looking for, so I'm hopeful that the proposed workplan will be very close to on target.

2. **Stakeholder Forum.*** The Board of Water and Soil Resources (BWSR) continues to evaluate options for distributing Watershed-Based Funding in the Metro area. The first round of funding was distributed to counties, and stakeholders in each county decided how to further allocate funds. In Hennepin County, the



eleven WMOs agreed to reserve 10% of the funds for collaborative chloride management activities and to distribute 90% using a formula based on land area and tax base.

After meeting with individual stakeholder groups, (i.e., watershed districts, joint powers WMOs, soil and water conservation districts) to get their input on how the funds should be distributed and on what basis, BWSR is now meeting with a group comprised of representatives of each of the groups of stakeholders to try to come to a consensus recommendation. Mark Zabel of the Vermillion River JPO and Laura Jester of the Bassett Creek WMO are representing joint powers WMOs.

Included in the meeting packet are the notes* of that first Stakeholder forum. In summary, while there is additional work and discussion to be done, there was no consensus about the scale of allocation other than it should not be Metro-wide. There was also a clear preference that funds should be allocated based on some formula rather than competitively. The second stakeholder meeting was scheduled for December 4.

X. Communications.

- A. November Communications Log.*** No items required action.
- B.** Discussion continues regarding the Commissions' **meeting site**. Staff will inform the Commissioners when new information becomes available. Struve volunteered to assist Staff in this endeavor.
- C.** Discussion will continue regarding the Commissions' **meeting site** when new information becomes available. [Following the meeting J. Anderson received an email from Lancer's informing the Commissions that D'Amico Catering has been awarded the contract for Edinburgh commencing on January 1, 2019. A contact name at D'Amico was also provided and Anderson will contact her.]

XI. Adjournment. There being no further business before the Commissions, the meetings were adjourned at 2:12 p.m.

Respectfully submitted,

A handwritten signature in black ink, reading "Judie A. Anderson". The signature is written in a cursive style and is positioned above the typed name.

Judie A. Anderson
Recording Secretary
JAA:tim

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