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August 15, 2016

Commissioners
 Shingle Creek and West Mississippi
 Watershed Management Commissions
 Hennepin County, Minnesota

The agenda and meeting packet are available on the Commission's web site. The direct path is <http://www.shinglecreek.org/pages/Meetings/>

Dear Commissioners:

Regular meetings of the Shingle Creek and West Mississippi Watershed Management Commissions will be held **Thursday, September 8, 2016**, at Clubhouse at Edinburgh USA, 8700 Edinbrook Crossing, Brooklyn Park, MN. Lunch will be served at 12:00 noon and the meetings will convene concurrently at 12:45.

The Commissions will suspend their meetings at 12:45 p.m. for the purpose of conducting a public hearing on the following improvement projects: **2016-01** Shingle Creek Retrofit Projects; **2016-02** Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofit Projects; **2016-03** Priority BMP Retrofit Projects; **2016-04** West Mississippi Retrofit Projects; and **2016-05** West Mississippi Iron and Biochar-Enhanced Sand Filter Retrofit Project. The regular meeting will resume immediately after the public hearings conclude.



Dave Weirens, Assistant Director for Programs and Policy for the Board of Water and Soil Resources (BWSR), will present an update on the status of buffer program development and what can be expected over the next few months as BWSR prepares the program's implementation and enforcement components.

Please email Kerstin at kerstin@jass.biz to confirm whether you or your Alternate will be attending the meeting. Your meal choices are

- _____ **Chef Salad.** Fresh lettuce, julienne ham, turkey, Swiss and Cheddar Cheeses, plum tomatoes, hardboiled egg, house dressing _____ Dressing on the side
- _____ **Clubhouse Sandwich.** Turkey and ham on a pretzel roll with crispy bacon, Swiss cheese, lettuce and tomato
- _____ **Chicken Stir Fry.** Breast of chicken and Asian vegetables in private recipe stir fry sauce served over Jasmine rice
- _____ I will be attending but DO NOT want a meal.
- _____ No one from our community will be attending the meeting on Thursday, September 8.

Signed _____

The Clubhouse at Edinburgh requires reservations eight days before the event. We must make final reservations by **noon, Tuesday, August 30, 2016**. Please make a reservation, even if you are not requesting a meal, so we can arrange for sufficient seating and meeting materials. Thank you.

Regards,



Judie A. Anderson
 Administrator

cc: Alt. Commissioners Member Cites Troy Gilchrist TAC Members Wenck Associates

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A combined regular meeting of the Shingle Creek and West Mississippi Watershed Management Commissions will be convened on Thursday, September 8, 2016, at 12:45 p.m. at the Clubhouse at Edinburgh USA, 8700 Edinbrook Crossing, Brooklyn Park, MN. The Commissions will suspend their meetings at 12:45 p.m. or shortly thereafter for the purpose of conducting a public hearing on the following improvements: **2016-01 SC Retrofit Projects, 2016-02 SC Iron and Biochar-Enhanced Sand Filter Retrofit Projects, 2016-03 SC Priority BMP Retrofit Projects;** and **2016-04 WM Retrofit Projects and 2016-05 WM Iron and Biochar-Enhanced Sand Filter Retrofit Projects.** The regular meeting will resume immediately after the public hearings conclude. An agenda for the meeting follows. Agenda items are available at <http://www.shinglecreek.org/minutes--meeting-packets.html>.

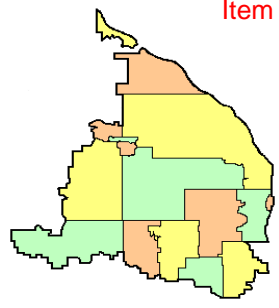
Prior to the meeting, at 12:30 p.m., Dave Weirens, Assistant Director for Programs and Policy for the Board of Water and Soil Resources (BWSR), will present an update on the status of buffer program development and what can be expected over the next few months as BWSR prepares the program's implementation and enforcement components.

- SCWM 1. Call to Order.
 - SCWM a. Roll Call.
 - ✓ SC b. Approve agenda.*
 - ✓ WM c. Approve agenda.*
 - ✓ SC d. Approve minutes of last meeting.*
 - ✓ WM e. Approve minutes of last meeting.*
 - 2. Reports.
 - ✓ SC a. Treasurer's Report.*
 - ✓ SC b. Approve claims.*
 - ✓ WM c. Treasurer's Report.*
 - ✓ WM d. Approve claims.*
- Suspend regular meeting.*
- SCWM 3. Public Hearing for 2016 Capital Improvement Projects.
 - SCWM a. Staff Report.*
 - SCWM b. Commission discussion.
 - SCWM c. Open Public Hearing.
 - SCWM 1) Receive comments from member cities.
 - SCWM 2) Receive comments from public.
 - SCWM d. Close Public Hearing.
 - SCWM e. Commission discussion.
 - ✓ SC f. Consider Resolution 2016-02 Ordering 2016 Improvements.*
 - ✓ WM g. Consider Resolution 2016-02 Ordering 2016 Improvements.*
 - ✓ SCWM h. Approve Memoranda of Understanding with Crystal, Robbinsdale and Champlin.**

Resume regular meeting.

- 4. Open Forum.

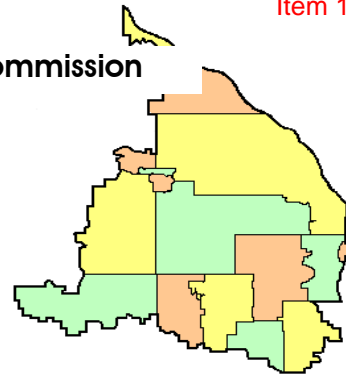
Meeting | Hearing Agenda
September 8, 2016



- 5. Project Reviews.
 - ✓ WM a. WM2016-07 Riverview Estates Second, Brooklyn Park.*
- SCWM 6. Watershed Management Plan.
- 7. Water Quality.
- ✓ SCWM a. Model snow and ice management policy.*
- 8. Education and Public Outreach.
 - SCWM a. Next WMWA meeting - 8:30 am, Tuesday, September 13, 2016, Plymouth City Hall.
- SCWM 9. Grant Opportunities and Updates.
 - a. Iron- and Biochar-Enhanced Sand Filter Bench Pond Retrofits.
 - b. Public Art Reaeration Structures.
 - c. Twin Lake Carp Management.
- 10. Communications.
 - SCWM a. Communications Log.*
- SCWM 11. Other Business.
- SCWM 12. Adjournment

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* In meeting packet or emailed ** Available at meeting ***Previously transmitted **** Available on website ✓ Item requires action



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**MINUTES
Regular Meetings
August 11, 2016**

(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 on Thursday, August 11, 2016, at 12:46 p.m., at the Clubhouse at Edinburgh, USA, 8700 Edinbrook Crossing, Brooklyn Park, MN.

Present for Shingle Creek were: David Mulla, Brooklyn Center; John Roach, Brooklyn Park; Janet Moore, Crystal; Karen Jaeger, Maple Grove; Bill Wills, New Hope; Andy Polzin, Plymouth; Wayne Sicora, Robbinsdale; Troy Gilchrist, Kennedy & Graven; Ed Matthiesen, Wenck Associates, Inc.; and Judie Anderson, JASS. *Not represented:* Minneapolis and Osseo.

Present for West Mississippi were: David Mulla, Brooklyn Center; John Roach, Brooklyn Park; Gerry Butcher, Champlin; Karen Jaeger, Maple Grove; Troy Gilchrist, Kennedy & Graven; Ed Matthiesen, Wenck Associates, Inc.; and Judie Anderson, JASS. *Not represented:* Osseo.

Also present were: Dave Vlasin, Shelley Marsh, and Andrew Hogg, Brooklyn Center; Jesse Struve and Steve Chesney, Brooklyn Park; Todd Tuominen, Champlin; Mark Ray, Crystal; Elizabeth Stout, Minneapolis; Shawn Markham, New Hope; Leah Gifford and Ben Scharenbroich, Plymouth; and Dan Parks, Westwood Professional Services, for Project SC2016-08.

II. **Agendas and Minutes.**

Motion by Jaeger, second by Sicora to approve the **Shingle Creek agenda**.* *Motion carried unanimously.*

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

Motion by Jaeger, second by Sicora to approve the **minutes of the July 14, 2016 Shingle Creek regular meeting**.* *Motion carried unanimously.*

Motion by Roach, second by Jaeger to approve the **minutes of the July 14, 2016 West Mississippi regular meeting**.* *Motion carried unanimously.*

III. **Finances and Reports.**

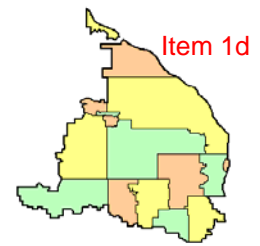
A. Motion by Sicora, second by Jaeger to approve the **Shingle Creek Treasurer's Report**.* *Motion carried unanimously.*

Motion by Sicora, second by Wills to approve the **Shingle Creek August claims**.* Claims totaling \$125,696.38 were *approved by roll call vote*: ayes – Mulla, Roach, Moore, Jaeger, Wills, Polzin, and Sicora; nays – none; absent – Minneapolis and Osseo.

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

Motion by Butcher, second by Jaeger to approve the **West Mississippi August claims**.* Claims totaling \$8,139.01 were *approved by roll call vote*: ayes – Mulla, Roach, Butcher, and Jaeger; nays – none; absent – Osseo.

*items are included in meeting packet



IV. Open Forum.

Moore inquired about the impacts of the recent FEMA updates. Matthiesen responded that the 1980s maps are being updated and digitized.

V. Project Reviews.

A. SC2016-08 Hy-Vee, Robbinsdale.* Construction of grocery store and parking lot on 10 acres located at 3500 Bottineau Boulevard. Following development, the site will be 91.5% impervious, an increase of 0.3 acres on the Terrace Theatre site. A complete project review application was received on July 28, 2016.

To comply with the Commission's water quality treatment requirement, the site must provide ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 80-85% TSS removal and 50-60% TP removal. If a sump is used the MnDOT Road Sand particle size distribution is acceptable for 80% capture.

Runoff from the parking lot is proposed to be routed to an underground filtration system. The applicant meets Commission water quality treatment requirements.

Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. Runoff from the site is routed to an underground filtration basin. The applicant meets the Commission's rate control requirements.

Commission rules also require the site to infiltrate 1.0" of runoff from new impervious area within 48 hours. The new impervious area on this site is 9.2 acres, requiring that 34,467 CF be infiltrated within 48 hours. Due to the high ground water and poor soils, the applicant proposes to filter the required volume within 48 hours, which meets Commission requirements. The site discharges to Crystal Lake.

The NWI does not identify any wetlands on site. There are no Public Waters or floodplain on this site. An erosion control plan was submitted with the project review and includes rock construction entrance, perimeter silt fence, slope checks, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

A public hearing on the project was conducted on July 20 as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.

Motion by Jaeger, second by Moore to advise the City of Robbinsdale that project SC2016-08 is approved with the condition that an operation and maintenance plan for the storm sewer system agreeable to the City of Robbinsdale be provided. *Motion carried unanimously.*

B. WM2016-06 Six Ten Crossings Retail Pad, Brooklyn Park.* Construction of a retail shop with parking lot on a site located at the southeast corner of Zane and 96th Avenues. Following development, the site will be 71% impervious, an increase of 2.12 acres. A complete project review application was received July 15, 2016.

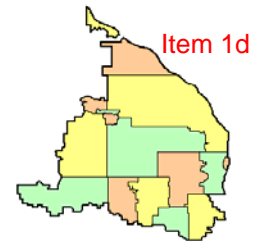
To comply with the Commission's water quality treatment requirement, the site must provide ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 80-85% TSS removal and 50-60% TP removal.

Runoff from 93% of the site is proposed to be routed to an infiltration basin with the remaining 7% running into the storm sewer on 96th Avenue. The applicant meets Commission water quality treatment requirements.

Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. Runoff from the site is captured and infiltrated up to the 1.3" rain event. The applicant meets the Commission's rate control requirements.

Commission rules require the site to infiltrate 0.5" of runoff from new impervious area within 48

*items are included in meeting packet



hours. The new impervious area on this site is 2.12 acres, requiring that 3,847 CF be infiltrated within 48 hours. The applicant proposes to infiltrate over the 1.3" rain event, a volume of 10,379 CF. The basin has the capacity to infiltrate the required volume within 48 hours, which meets Commission requirements.

The NWI does not identify any wetlands on site. There are no Public Waters or floodplain on this site. The low floor elevations of the buildings are 875.0', at least two feet higher than the high water elevation of the infiltration basins, meeting Commission requirements.

An erosion control plan was submitted with the project review, and includes rock construction entrance, perimeter silt fence, slope checks, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

A public hearing on the project was held on July 13 as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.

Motion by Jaeger, second by Roach to advise the City of Brooklyn Park that project WM2016-06 is approved with no conditions. *Motion carried unanimously.*

VI. Watershed Management Plan.

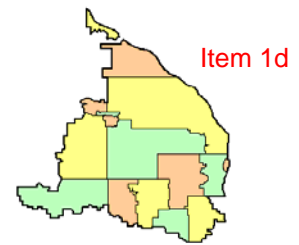
A. Earlier this year the Commissions undertook a Minor Plan Amendment to revise the Capital Improvement Program (CIP) for 2016. The next step in the CIP process is to receive and discuss feasibility studies for the proposed projects and call for a public hearing on those projects that the Commissions wish to move forward. The table below shows the projects under consideration, their funding, and the additional 1% levy discussed earlier this year to be added to account for uncollectable amounts.

2016 Capital Improvement Program	Total Project Cost	Commission Levy	Grant Funds	Applicant Funds
Shingle Creek Projects				
Cost share (city projects)	\$200,000	\$100,000		\$100,000
Iron and Biochar-Enhanced Sand Filter Retrofits	359,500	210,000	\$149,500	
Priority BMP retrofits (private projects)	100,000	50,000		50,000
TOTAL	\$659,500	\$360,000	\$149,500	\$150,000
1% additional for uncollectable levy		3,600		
TOTAL SHINGLE CREEK LEVY		\$363,600		
West Mississippi Projects				
Cost share (city projects)	\$100,000	\$50,000		\$50,000
Iron and Biochar-Enhanced Sand Filter Retrofits	129,875	80,000	\$49,875	
TOTAL	\$229,875	\$130,000	\$49,875	\$50,000
1% additional for uncollectable levy		1,300		
TOTAL WEST MISSISSIPPI LEVY		\$131,300		

B. Shingle Creek Projects.

1. Commission Fund for Retrofit Cost-Share (City Projects). This annual project provides cost-sharing to retrofit smaller Best Management Practices identified in Commission-prepared Intensive BMP Retrofit Studies. The TAC developed policies and procedures to administer these funds, and makes recommendations to the Commissions on which projects should be funded. In 2016 the Commission awarded cost-share funding to Brooklyn Park to install ponds and sumps in a park adjacent to Bass Creek. Another project in Minneapolis was for a "blooming alleys" project in the Cleveland Neighborhood, which drains to Crystal Lake. The annual levy is \$100,000, to be matched at least one-to-one by a member city or cities. Potential cost-share projects for 2017 will be solicited in November-December 2016.

*items are included in meeting packet



2. Iron and Biochar-Enhanced Sand Filter Retrofits. Three existing stormwater ponds will be retrofit with an iron-and bio-char enhanced Minnesota Filter Bench to increase the effectiveness of the ponds in removing dissolved phosphorus and bacteria from stormwater runoff. Lions Park Pond is in the Upper Twin Lake subwatershed, 45th Avenue Pond is in the Middle Twin Lake subwatershed, and Humboldt Pond discharges directly to Shingle Creek. This project also includes installing and monitoring catch basin filter inserts at two locations and a filter bed at the Webber Park falls to treat Shingle Creek discharge. This project is funded by a Section 319 grant and Commission levy; no city match is required.

3. Priority BMP Retrofits (Private Projects). No applications have been received in 2016. The annual levy is \$50,000, to be matched at least one-to-one by a private party through a member city or cities. Potential cost-share projects are open year round until the fund is depleted.

C. West Mississippi Projects.

1. Commission Fund for Retrofit Cost Share (City Projects). Similar to Shingle Creek, this annual project provides cost sharing to retrofit smaller BMPs. No project applications have been received in 2015 or 2016 to date.

2. Iron and Biochar-Enhanced Sand Filter Retrofits. One existing stormwater pond will be retrofit with an iron-and bio-char enhanced Minnesota Filter Bench to increase the effectiveness of the pond in removing dissolved phosphorus and bacteria from stormwater runoff. The pond at the intersection of Champlin Drive and 120th Avenue discharges to the Mississippi River. This project is funded by a Section 319 grant and Commission levy; no city match is required.

D. Call for Public Hearing.

Motion by Moore, second by Roach to receive the feasibility studies for the proposed 2016 Shingle Creek capital projects and call for a public hearing at the Commission's September 8, 2016 meeting to consider the proposed projects and associated levies. *Motion carried unanimously.*

Motion by Jaeger, second by Mulla to receive the feasibility studies for the proposed 2016 West Mississippi capital projects and call for a public hearing at the Commission's September 8, 2016 meeting to consider the proposed projects and associated levies. *Motion carried unanimously.*

Staff were requested to bring information regarding the benefits of these projects to the hearing.

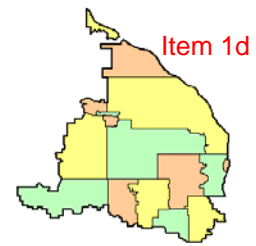
VII. Water Quality.

A. Included in the packet was the August update* for the **state buffers program**. In the future these updates will be uploaded to the website and will not be included in the meeting packets.

B. Model Snow and Ice Policy.* The Commissioners received correspondence from Steve Woods, Executive Director of the Freshwater Society, asking if the Commissions would be willing to join a consortium of other WMOs to provide a state-of-the-art model snow and ice removal policy for municipal use. A Technical Advisory Committee comprised of representatives from seven cities, three watershed districts, the Minnesota Nursery and Landscape Association, the Minnesota Pollution Control Agency, Fortin Consulting, and the Freshwater Society has been meeting and has crafted a third draft of the proposed policy. The Freshwater Society is asking the Commissions to consider a financial contribution of \$1500 to help fund their scope of work. This request will be considered at the September meeting in order to allow Commissioners time to review the draft policy with their city staffs.

C. Motion by Sicora, second by Roach to approve the **cooperative agreement with the USGS** for the period October 1, 2015 to September 30, 2017. The agreement provides for the operation and maintenance of specific conductance and water temperature monitoring instrumentation on Shingle Creek at Queen Avenue in Minneapolis, including field and analytical work associated with the program. The agreement is in the amount of \$14,506, with the Commission's share being \$7,600. *Motion carried unanimously.*

*items are included in meeting packet



VIII. Education.

A. The **West Metro Water Alliance (WMWA)** met on August 9 to discuss the fall **Watershed Prep** program and the newsletter. The educators will be contacting schools that had previously declined to participate to gauge their current interest.

WMWA will staff a booth at the **New Hope Farmer's Market Day** on September 17.

The next **Water Links** newsletter will be out mid-September.

Diane Spector's August 10, 2016 memo* enumerates the Commission's **Facebook page** likes and **Website** traffic. She is continuing to update the site with new information and news. Cities are encouraged to provide fresh local news and updates for posting.

The next **WMWA meeting** is scheduled for September 13, 2016.

B. **Minnesota Water Resources Conference,*** October 18-19, 2016, Saint Paul RiverCentre. Register at wrc.umn.edu/waterconf

IX. Grant Opportunities and Updates.

Matthiesen provided updates* regarding the grant-related projects.

A. Iron- and Biochar-Enhanced Sand Filter Bench Pond Retrofits. The pond shelf projects for all four pond sites have been designed and are being sent out for quotes. Under item IX.E. below, the Commissions will be asked to authorize a Memorandum of Understanding with the Minneapolis Park and Recreation Board (MPRB) to approve retrofitting an MPRB pond at Creekview Park with a filter as well as locating the temporary filter bed in a Jobox at the Webber Park Falls. When that is executed by MPRB (expected in September) that site will be good to go. Another of the pond sites is a MnDOT pond at TH100 and Bottineau Boulevard. That is being reviewed by MnDOT staff.

The two catch basin inserts have been installed near the intersection of 51st and Winnetka in New Hope and the Robbinsdale City Hall parking lot and one sample has been collected. A 90% reduction was shown at the New Hope site, although the incoming concentration was low. The temporary filter bed in a Jobox has been designed and will be fabricated in the coming weeks.

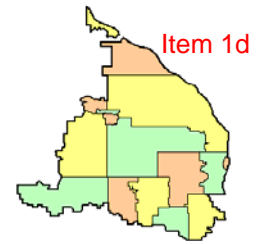
B. Public Art Reaeration Structures. The selection committee has met with the artist finalists and made a recommendation for two artists. Forecast Public Art will handle contracting the artists. When they are under contract, the final details regarding power, pumping, and footings needs will be determined. The payment to Forecast Public Art was approved as part of the claims submitted by Wenck Associates under item III.A., above.

C. Twin Lake Carp Management. The initial Mark and Recapture is tentatively scheduled for the first two weeks of September. The population estimates and tagging will likely be sometime in October as the cooler water helps the fish to heal and reduces the risk that the incisions made to insert the RTF tags will become infected. Staff will work with the cities to host a public meeting in the first few weeks of September. Dates for these events will be posted on the website.

D. Connections at Shingle Creek. The stream restoration portion of the project is essentially complete and the buffer vegetation is being established.

E. Memorandum of Understanding.* One of the ponds proposed to be retrofit with an iron- and biochar-enhanced sand filter pond bench as part of the biochar grant project is a pond at Creekview Park in Minneapolis, just north of 49th and Humboldt Avenues North. The project also includes installing a temporary off-line filter bed at Webber Park Falls. The purpose of these installations to test the efficacy of these filters at removing *E. coli* bacteria from stormwater runoff and from direct streamflow. The Commissions' attorney has worked with the Minneapolis Park and Reaction Board (MPRB) to prepare a Memorandum of Understanding,

*items are included in meeting packet



that authorizes the Commissions to install, construct, and maintain the improvements. Upon execution by the Commissions it will go to the MPRB for execution in September.

Motion by Jaeger, second by Sicora to authorize Chairman Polzin to execute the Memorandum of Understanding with the Minneapolis Park and Recreation Board on behalf of the Shingle Creek Commission. *Motion carried unanimously.*

Motion by Butcher, second by Roach to authorize Chairman Butcher to execute the Memorandum of Understanding with the Minneapolis Park and Recreation Board on behalf of the West Mississippi Commission. *Motion carried unanimously.*

F. On behalf of the Commission, Staff has submitted an application for a 2017 BWSR Accelerated Implementation grant to help fund the **Minneapolis subwatershed assessment**. The City has requested that the entire area of the city in the Shingle Creek watershed be assessed, the cost of which will exceed the \$20,000 annually budgeted for these studies. This action was approved at the July meeting. Awards will be announced in December.

X. Communications.

A. The **July communications log*** was included in the meeting packet. No action required.

B. Matthiesen noted that the St. Anthony Falls Laboratory at the University of Minnesota has taken over monitoring at the **Paired Intersection sites** in Robbinsdale. It has been noted that the pores have become clogged. Remedial actions are being investigated.

C. The Commission had questions about the **Howe site** in regards to follow-up from the MPCA. City of Brooklyn Center staff is looking into the issue and will report back to the Commission on the status of the final closeout at the MBCII (Howe site), focusing on the final status of the environmental clean-up. The site is located at 49th Ave and Brooklyn Boulevard, near the city limits with Minneapolis.

XI. Other Business.

The **quasi-annual golf outing** is scheduled for after the September meeting.

XII. Adjournment.

There being no further business before the Shingle Creek Commission, motion by Jaeger, second by Moore to adjourn. *Motion carried unanimously.*

There being no further business before the West Mississippi Commission, motion by Butcher, second by Roach to adjourn. *Motion carried unanimously.*

The meeting was adjourned at 2:29 p.m.

Respectfully submitted,

A handwritten signature in black ink that reads "Judie A. Anderson".

Judie A. Anderson
Recording Secretary
JAA:tim

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*items are included in meeting packet

Technical Memo



Responsive partner.
Exceptional outcomes.

To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: September 2, 2016

Subject: Public Hearing 2016 Capital Projects
 Project 2016-01 Shingle Creek Retrofit Projects
 Project 2015-02 Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits
 Project 2015-03 Shingle Creek Priority BMP Retrofit Projects
 Project 2015-04 West Mississippi Retrofit Projects
 Project 2015-05 West Mississippi Iron and Biochar-Enhanced Sand Filter Retrofits

**Recommended Commission
Action**

Conduct the public hearing. Adopt resolutions ordering TAC/staff-recommended projects and certifying levies.

On August 11, 2016 the Shingle Creek Commission received feasibility reports on two proposed projects: Project 2016-02 Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits, and Project 2016-05 Lions Park Pond Retrofit. The Commission chose to proceed with those there projects. The Commission also chose to proceed with the annual cost-share project 2015-01 Shingle Creek Retrofit Projects and with a new cost-share project 2015-05 West Mississippi Iron and Biochar-Enhanced Sand Filter Retrofits. At that August meeting the Commissions called for a public hearing on September 8, 2016 to consider all five projects. Member cities and the county have been notified and notice has been duly published. Project details are presented below.

COMMISSION ACTION

The purpose of the public hearing is to present the proposed projects and proposed financing and to take comment from the member cities and the public. The recommended order of business is as follows:

1. Staff report on projects and proposed financing
2. Commissioner discussion
3. Each Commission should open a public hearing, which can run concurrently
4. Take comments from member cities
5. Take comments from the public
6. Close the public hearings
7. Commissioner discussion
8. The Shingle Creek Commission should consider the following resolution (a 2/3 majority is required):
 A RESOLUTION ORDERING 2016 IMPROVEMENTS, MAKING FINDINGS AND CERTIFYING COSTS FOR 2016 IMPROVEMENTS TO HENNEPIN COUNTY PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251
9. The West Mississippi Commission should consider the following resolution (a 2/3 majority is required):
 A RESOLUTION ORDERING 2016 IMPROVEMENTS, MAKING FINDINGS AND CERTIFYING COSTS TO HENNEPIN COUNTY PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251
10. Continue with regular meetings

Table 1. Proposed Shingle Creek 2016 capital projects.

Shingle Creek Projects	Total Project Cost	Commission Levy	Grant Funds	City Funds
Cost share (city projects)	\$200,000	\$100,000		\$100,000
Iron and Biochar-Enhanced Sand Filter Retrofits	359,500	210,000	\$149,500	
Priority BMP retrofits (private projects)	100,000	50,000		50,000
TOTAL	\$659,500	\$360,000	\$149,500	\$150,000
1% additional for uncollectable levy		3,600		
TOTAL LEVY		\$363,600		

Table 2. Proposed West Mississippi 2016 capital projects.

West Mississippi Projects	Total Project Cost	Commission Levy	Grant Funds	City Funds
Cost share (city projects)	\$100,000	\$50,000		\$50,000
Iron and Biochar-Enhanced Sand Filter Retrofits	129,875	80,000	\$49,875	
TOTAL	\$229,875	\$130,000	\$49,875	\$50,000
1% additional for uncollectable levy		1,300		
TOTAL LEVY		\$131,300		

STAFF REPORT*Discussion of Projects 2016-02 and 2016-05*

These projects would retrofit three ponds in Shingle Creek and one in West Mississippi with biochar- and iron-enhanced sand filters. For typical capital improvement projects, the Commissions order the projects and then enter into a cooperative agreement with one or more member cities who then serve as lead agency and manage project construction. However, these projects are unique in that they are not true capital improvement projects but are instead research projects testing the efficacy of a new BMP so that the Commissions may make technical recommendations to the member cities regarding its use. The filter benches will slightly modify existing ponds, so no new infrastructure is being created.

In this case the Commissions' attorney believes the Commission has authority granted to it under Section VI. Subparts 12 and 13 of the Joint Powers Agreement to act as the lead agency for the installation of these BMPs:

- Subdivision 12. It may establish and maintain devices acquiring and recording hydrological and water quality data within the Watershed.
- Subdivision 13. It may enter upon lands within or without the watershed to make surveys and investigations to accomplish the purposes of the Commission.

Given the unique nature of these projects, staff and attorney recommend that the Commissions execute Memoranda of Understanding with Crystal, Robbinsdale, and Champlin similar to the MOU requested by the MPRB and approved by the Shingle Creek Commission in August. By this MOU the cities allow the Commissions to modify their existing ponds with the proposed filter benches and undertake effectiveness monitoring.

Project Descriptions**Project: 2016-01, Shingle Creek Retrofit Projects**

Location: Within the Shingle Creek watershed.

Description: Small BMPs such as iron-enhanced pond filter benches; bioinfiltration basins; native buffers; and tree trenches that can be retrofit in existing areas to provide additional infiltration and water quality treatment.

Cost: The estimated project(s) cost is \$200,000, with \$100,000 borne by the city(ies) in which the project(s) are located. The Shingle Creek Commission proposes to fund a matching \$100,000 by certifying this cost to Hennepin County for collection with the county ad valorem tax levy.

TAC/Staff Recommendation: Recommends that the Shingle Creek Commission order the project and that cost share projects be solicited and selected based on the Cost-Share Program Guidelines.

Project: 2016-02 Iron and Biochar-Enhanced Sand Filter Retrofits.

Location: In three locations in ponds in Crystal, Minneapolis, and Robbinsdale.

Description: Modify three existing stormwater treatment ponds with enhanced Minnesota Filter benches. Monitor inflow, outflow, and ambient water quality to assess effectiveness of filters.

Cost: The estimated project cost is \$364,300 with \$154,300 funded by a grant from the MPCA. The Shingle Creek Commission proposes to fund the balance of \$210,000 by certifying this cost to Hennepin County for collection with the county ad valorem tax levy.

TAC/Staff Recommendation: Recommends that the Shingle Creek Commission order the project.

Project 2016-03 Shingle Creek Priority BMP Retrofit Projects

Location: Within the Shingle Creek watershed.

Description: Provide cost-share incentives to public and private property owners for BMP retrofit projects.

Cost: The estimated project(s) cost is \$100,000, with \$50,000 borne by city(ies) in which project(s) are located. The Shingle Creek Commission proposes to fund a matching \$50,000 by certifying this cost to Hennepin County for collection with the county ad valorem tax levy.

TAC/staff Recommendation: Recommends that the Shingle Creek Commission order the project and that cost share projects be solicited and selected based on the Cost-Share Partnership Program Guidelines..

Project: 2016-04 Iron and Biochar-Enhanced Sand Filter Retrofits.

Location: In one location on a pond in Champlin

Description: Modify an existing stormwater treatment pond with an enhanced Minnesota Filter bench. Monitor inflow, outflow, and ambient water quality to assess effectiveness of filter.

Cost: The estimated project cost is \$125,075, with \$45,075 funded by a grant from MPCA. The West Mississippi Commission proposes to fund the balance of \$80,000 by certifying this cost to Hennepin County for collection with the county ad valorem tax levy.

TAC/Staff Recommendation: Recommends that the West Mississippi Commission order the project.

Project: 2016-05, West Mississippi Retrofit Projects

Location: Within the West Mississippi watershed.

Description: Small BMPs such as iron-enhanced pond filter benches; bioinfiltration basins; native buffers; and tree trenches that can be retrofit in existing areas to provide additional infiltration and water quality treatment.

Cost: The estimated project(s) cost is \$100,000, with \$50,000 borne by the city(ies) in which the project(s) are located. The West Mississippi Commission proposes to fund a matching \$100,000 by certifying this cost to Hennepin County for collection with the county ad valorem tax levy.

TAC Recommendation: Recommends that the West Mississippi Commission order the project and that cost share projects be solicited and selected based on the Cost-Share Program Guidelines.

SHINGLE CREEK WATERSHED MANAGEMENT COMMISSION

RESOLUTION NO. 2016-02

ORDERING 2016 IMPROVEMENTS, MAKING FINDINGS,
AND CERTIFYING COSTS TO HENNEPIN COUNTY
PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251

WHEREAS, on April 11, 2013, the Shingle Creek Watershed Management Commission adopted its *Shingle Creek and West Mississippi Third Generation Watershed Management Plan*, which includes a Capital Improvement Program (CIP) that has subsequently been amended three times to modify the CIP; and

WHEREAS, the *Third Generation Watershed Management Plan* specified a county tax levy under Minn. Stat. § 103B.251 as the source of the Commission's share of funding for capital projects proposed in the Commission's CIP; and

WHEREAS, on August 11, 2016 the Commission received a Feasibility Study on proposed CIP project Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits, hereby known as "Project 2016-02;" and

WHEREAS, the CIP includes annual allocations for Shingle Creek Retrofit Projects, hereby known as "Project 2016-01," and Shingle Creek Priority BMP Retrofit Projects, hereby known as "Project 2016-03," and specified a county tax levy under Minn. Stat. § 103B.251 as the source of the Commission's share of funding; and

WHEREAS, on September 8, 2016, following published and mailed notice in accordance with the Commission's Joint Powers Agreement and Minnesota Statutes Section 103B.251, the Commission conducted a public hearing on the projects.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Shingle Creek Watershed Management Commission as follows:

1. The 2016 Projects will be conducive to the public health and promote the general welfare and are in compliance with Minnesota Statutes Sections 103B.205 to 103B.255 (the "Act") and with the Commission's surface water management plan as adopted and amended in accordance with the Act.
2. The cost of the projects is estimated to be: Project 2016-01: \$200,000; Project 2016-02: \$359,500; and Project 2016-03: \$100,000, plus an additional 1% levy for administrative costs and uncollectable levy.
3. The Commission receives, accepts and approves the feasibility report for Project 2016-02, Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits prepared by Wenck Associates, Inc., which project is hereby ordered. The Project is described generally as installation of stormwater pond enhanced sand filter benches on three ponds in the watershed.

4. Up to \$210,000 of the cost of Project 2016-02 will be paid by the Commission from proceeds received from Hennepin County pursuant to Minnesota Statutes, Section 103B.251. Additional costs will be paid by a grant from the Minnesota Pollution Control Agency, but no costs will be charged to the members of the Commission.
5. Project 2016-02 is a research project testing the efficacy of a new BMP so that the Commission may make technical recommendations to the member cities regarding its use. The Commission will act as the lead agency for the installation of these BMPs under the authority granted to it under Section VI. Subparts 12 and 13. Memoranda of Understanding between the Commission and the Cities of Crystal and Robbinsdale setting forth the terms for constructing and maintaining Project 2015-02 are hereby approved and the Chair and Secretary are hereby authorized and directed to execute the Memoranda. On August 11, 2016 the Commission approved entering into a Memorandum of Understanding with the Minneapolis Park and Recreation Board for that part of Project 2015-02 constructed on Park Board property.
6. On July 11, 2014 the Commission adopted Guidelines and procedures governing the use of the Commission Fund for Retrofit Projects. The Shingle Creek Watershed Management Commission will complete Project 2016-01 in accordance with those Guidelines.
7. On December 10, 2015 the Commission adopted Guidelines and procedures governing the use of the Commission Partnership Cost Share Program. The Shingle Creek Watershed Management Commission will complete Project 2016-03 in accordance with those Guidelines.
8. The Commission's \$363,600 share of the cost of the 2016 Projects is hereby certified to Hennepin County in accordance with Minnesota Statutes, Section 103B.251 for payment by the County in accordance with Minnesota Statutes, Section 103B.251, Subd. 6 and the Commission's joint powers agreement. The Commission understands that the County may pay such costs with taxes levied in 2016 and paid in 2017. The Secretary is directed to transmit a certified copy of this resolution to Hennepin County prior to October 1, 2016.

Adopted by the Commissioners of the Shingle Creek Watershed Management Commission the eighth day of September, 2016.

R.A. Polzin, Chair

ATTEST:

Judie Anderson, Recording Secretary

State of Minnesota

Hennepin County

I, Judie Anderson, do hereby certify that I am the custodian of the minutes of all proceedings had and held by the Board of Commissioners of said Shingle Creek Watershed Management Commission, that I have compared the above resolution with the original passed and adopted by the Board of Commissioners at a meeting thereof held on the eighth day of September, 2016, at 12:45 pm., that the above constitutes a true and correct copy thereof, that the same has not been amended or rescinded and is in full force and effect.

In witness whereof, I have hereunto placed my hand and signature this eighth day of September, 2016.

Print name: Judie Anderson Title: Administrator
Authorized signature: _____ Date: _____

(NO SEAL)

WEST MISSISSIPPI WATERSHED MANAGEMENT COMMISSION

RESOLUTION NO. 2016-02

ORDERING 2016 IMPROVEMENTS, MAKING FINDINGS,
AND CERTIFYING COSTS TO HENNEPIN COUNTY
PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251

WHEREAS, on April 11, 2013, the West Mississippi Watershed Management Commission adopted its *Shingle Creek and West Mississippi Third Generation Watershed Management Plan*, which includes a Capital Improvement Program (CIP) that has subsequently been amended three times to modify the CIP; and

WHEREAS, the *Third Generation Watershed Management Plan* specified a county tax levy under Minn. Stat. § 103B.251 as the source of the Commission's share of funding for capital projects proposed in the Commission's CIP; and

WHEREAS, on August 11, 2016 the Commission received a Feasibility Study on proposed CIP project Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits, hereby known as "Project 2016-05;" and

WHEREAS, the CIP includes an annual allocation for West Mississippi Retrofit Projects, hereby known as "Project 2016-04," and specified a county tax levy under Minn. Stat. § 103B.251 as the source of the Commission's share of funding; and

WHEREAS, on September 8, 2016, following published and mailed notice in accordance with the Commission's Joint Powers Agreement and Minnesota Statutes Section 103B.251, the Commission conducted a public hearing on the projects.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the West Mississippi Watershed Management Commission as follows:

1. The 2016 Projects will be conducive to the public health and promote the general welfare and are in compliance with Minnesota Statutes Sections 103B.205 to 103B.255 (the "Act") and with the Commission's surface water management plan as adopted and amended in accordance with the Act.
2. The cost of the projects is estimated to be: Project 2016-04: \$100,000 and Project 2016-05: \$129,875, plus an additional 1% levy for administrative costs and uncollectable levy.
3. The Commission receives, accepts and approves the feasibility report for Project 2016-05, Shingle Creek Iron and Biochar-Enhanced Sand Filter Retrofits prepared by Wenck Associates, Inc., which project is hereby ordered. The Project is described generally as installation of stormwater pond enhanced sand filter benches on one pond in the watershed.
4. Up to \$210,000 of the cost of Project 2016-02 will be paid by the Commission from proceeds received from Hennepin County pursuant to Minnesota Statutes, Section 103B.251. Additional

costs will be paid by a grant from the Minnesota Pollution Control Agency, but no costs will be charged to the members of the Commission.

5. Project 2016-05 is a research project testing the efficacy of a new BMP so that the Commission may make technical recommendations to the member cities regarding its use. The Commission will act as the lead agency for the installation of these BMPs under the authority granted to it under Section VI. Subparts 12 and 13 of the Joint Powers Agreement. A Memorandum of Understanding between the Commission and the City of Champlin setting forth the terms for constructing and maintaining Project 2016-05 are hereby approved and the Chair and Secretary are hereby authorized and directed to execute the Memorandum.
6. On July 11, 2014 the Commission adopted Guidelines and procedures governing the use of the Commission Fund for Retrofit Projects. The West Mississippi Watershed Management Commission will complete Project 2016-04 in accordance with those Guidelines.
7. The Commission's \$131,300 share of the cost of the 2016 Projects is hereby certified to Hennepin County in accordance with Minnesota Statutes, Section 103B.251 for payment by the County in accordance with Minnesota Statutes, Section 103B.251, Subd. 6 and the Commission's joint powers agreement. The Commission understands that the County may pay such costs with taxes levied in 2016 and paid in 2017. The Secretary is directed to transmit a certified copy of this resolution to Hennepin County prior to October 1, 2016.

Adopted by the Commissioners of the West Mississippi Watershed Management Commission the eighth day of September, 2016.

Gerald Butcher, Chair

ATTEST:

Judie Anderson, Secretary

State of Minnesota

Hennepin County

I, Judie Anderson, do hereby certify that I am the custodian of the minutes of all proceedings had and held by the Board of Commissioners of said Shingle Creek Watershed Management Commission, that I have compared the above resolution with the original passed and adopted by the Board of Commissioners at a

meeting thereof held on the eighth day of September, 2016, at 12:45 pm., that the above constitutes a true and correct copy thereof, that the same has not been amended or rescinded and is in full force and effect.

In witness whereof, I have hereunto placed my hand and signature this eighth day of September, 2016.

Print name: Judie Anderson Title: Administrator

Authorized signature: _____ Date: _____

(NO SEAL)

WEST MISSISSIPPI WATERSHED MANAGEMENT COMMISSION

PROJECT REVIEW WM2016-07 RIVERVIEW ESTATES SECOND

Owner: Todd Ganz
13635 Johnson Street
Ham Lake, MN 55304

Engineer: Ryan Armstrong, P.E.
Company: RFC Engineering, Inc.
Address: 13635 Johnson St NE
Ham Lake, MN 55304

Phone: 763.862.8000

Fax: 763.862.8042

Purpose: Subdivision of three single family lots and construction of two new homes on 2.0 acres.

Location: (see Figure 1)

Exhibits:

1. Project review application and project review fee of \$1,500.00, dated 08/25/2016, rcvd. 08/26/2016.
2. Site plan, preliminary plat, grading, utility, and erosion control plans dated 08/16/2016, rcvd. 08/26/2016.

Findings:

1. The proposed project is the West Mississippi Watershed. Following development, lot 1 will be 15 percent impervious and lot 2 will be 14 percent impervious, an increase of 0.08 acres. Lot 3 will remain unchanged.
2. The complete Project Review was received on 08/26/2016. To comply with the 60-day review requirement, the Commission must approve or deny this project no later than the October 13th meeting. Sixty calendar-days expires on October 25, 2016.
3. To comply with the Commission's water quality treatment requirement, runoff from the site is proposed to be routed over turf grass, The applicant meets Commission water quality treatment requirements.
4. Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. The majority of the site by observation will be directed to flow over turf.
5. Commission rules require the site to infiltrate 0.5" of runoff from new impervious area within 48 hours. The new impervious area on this site is .08 acres, requiring that soils need to be amended in all disturbed areas to meet Commission requirements.
6. The NWI does not identify any wetlands on site.
7. There are Public Waters on this site. The site is adjacent to the Mississippi River.
8. There is no floodplain on this site.
9. An erosion control plan was submitted with the project review, and includes perimeter silt fence. The erosion control plan meets Commission requirements.

WM2016-07: Riverview Estates Second

10. A public hearing on the project has been conducted as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.
11. All structures are proposed to be built outside of the OHW and outside of the bluff setback.
12. A Project Review Fee of \$1,500.00 has been received.

Recommendation: Recommend approval subject to the following condition(s):

1. Soil amendments per the Commissions BMP plate in all areas of soil disturbance.

Wenck Associates, Inc.
Engineers for the Commission

Ed Matthiesen, P.E.

Date

Figure 1. Site location.



From: Steve Woods [mailto:SWoods@freshwater.org]
Sent: Monday, July 18, 2016 2:01 PM
To: Judie Anderson (judie@jass.biz)
Subject: model snow and salt policy

This email is asking if the watershed is willing to join a consortium of other watersheds to provide a state of the art model snow and ice removal policy for municipal use.

As I shared over the phone with you, we are launching a quick cooperative project to develop a model snow and ice policy for road authorities and private commercial snow removal contractors. The project grew out of the February 2016 Road Salt Symposium where Louis presented on liability issues in the world of providing traction. The Symposium has been convened by Freshwater Society and Fortin Consulting for fifteen years. We've seen the big technical hurdles get mostly addressed and excessive road salt use now is driven in part by legal liability concerns—real and imagined.

The post-symposium feedback forms showed us we had a homerun of an issue that was very much on the minds of public works and maintenance supervisors. They WANT the public awareness and elected official support that comes with sound liability management achieved through careful policy adoption. Cities fully get that they have to balance multiple public goals for safety, water quality, operation costs, asset management all while weather conditions fluctuate. A good policy reference these multiple goals is desired by *everyone*.

We developed a scope of work that totals \$20,000. The scope includes these steps:

1. Form advisory committee
2. Review legal framework, sample policies; identify key issues and best practices; prepare memo and outline of model policy
3. Advisory Committee Mtg #1; Review and comment on memo and outline
4. Prepare Draft #1 of Model Policy; review with at least 3 city attorneys
5. Advisory Committee Mtg #2; Review and comment on Draft #1
6. Prepare Draft #2 and Statement of Need and Reasonableness (memo explaining research, best practices, reasoning of advisory committee)
7. Advisory Committee Mtg #3; Review, refine final Draft Model Policy & SONAR
8. Present Model Policy to larger forums (e.g. League of Minnesota Cities, Water Resources Conference, CEAM, APWA)
9. Integrate model policy(s) into training materials for Road Salt Applicator (certification) program.

We are hoping your WMO shares in the sense of value for this project and would consider a financial contribution of approximately \$1500. (We are estimating that there will be about 6-7 funding partners among watershed districts, WMOs and others.) Freshwater Society has agreed to serve as fiscal lead, Louis Smith is the legal sub-consultant, and Connie Fortin is the chloride sub-consultant in this endeavor.

I would be pleased to answer any questions you may have.

Steve Woods, PE,
Executive Director
The Freshwater Society
2424 Territorial Road, Ste. B
Saint Paul, MN 55114
651-313-5800 (gen'l)
651-313-5811 (direct)
651-387-0903 (cell)

Model Snow and Ice Policy Advisory Committee

Meeting Minutes

July 20, 2016

Present: Connie Fortin (Fortin Consulting), Becky Christopher (Minnehaha Creek Watershed District), Jeff Davies (City of Grand Rapids), Mark Maloney (City of Shoreview), Brooke Asleson (Minnesota Pollution Control Agency), Steven Lawrence (City of St. Cloud), Leslie Larson (Minnesota Nursery and Landscape Association), John Wickenhauser (Carver County), Craig Eldred (City of Waconia), Katrina Hilton (City of Saint Paul), Steve Woods (Freshwater Society), Louis Smith, Elizabeth Henley.

1. Welcome and Introductions

Ms. Fortin welcomed everyone to the meeting at the offices of the Freshwater Society and invited a round of introductions.

2. Review of June 29, 2016 Meeting Minutes

Ms. Fortin and Mr. Smith introduced the June 29 meeting minutes and invited comments, corrections, and additions. Mr. Smith noted that the intent is to capture the discussion at the Committee meetings to assist in creating the SONAR document that will accompany the model policy. Committee members expressed their appreciation for the detailed minutes. No corrections were requested. Ms. Fortin invited Committee members to email to her any corrections to the June 29, 2016 meeting minutes by July 22 (none were received).

3. Discussion of Draft Model Policy

a. Section A, Introduction

Mr. Smith asked the Committee to offer guidance on the Introduction section of the Model Policy. Mr. Smith asked Mr. Lawrence his opinion on whether the base template for the Model Policy should be the League of Minnesota Cities' model policy. Mr. Lawrence stated that he did not think it necessary to use the League's model policy as a template for the Committee's Model Policy. Mr. Lawrence noted that not many cities adhere to the entirety of the League of Minnesota Cities' model policy, and that some small cities look to the League's model policy for guidance. Mr. Maloney noted that the League's policy is helpful, but that there are opportunities for expansion.

Mr. Smith noted the formatting question – how the document could be formatted to be most usable for cities, counties, and private operators. Mr. Woods suggested that certain terms in the Policy could be highlighted or bolded to indicate different options for counties, cities, and others using the Policy. Mr. Davies noted that while the policy preferences of cities and counties can

vary with changes in city or county administration, it is important that current city councils and counties adopt the Policy. Mr. Smith stated that the introduction to the SONAR document will explain how the Policy is adaptable to different users, and will identify specific places where different users can enter different information.

Mr. Maloney asked whether sentence one discussing city and country streets and public property is too specific. He asked whether the policy should cover parking lots at city parks, sidewalks, and other public spaces, and noted that every city and county is different in what it plows. Mr. Davies suggested describing the property that would be plowed as improved public property. He noted that cities and counties need to show a reasonable effort to reasonably maintain public facilities and entrances. Mr. Davies noted that different policies are in place at the intersection of city and county roadways, and suggested that the policy differentiate between what is maintained by one entity compared to another. Mr. Smith suggested that the language could be changed to city/county streets under the city's/county's jurisdiction. Mr. Davies commented that it is not reasonable or appropriate for a city to plow county or state roads located within that city because the city. Mr. Smith said that he will also bring this issue to the attention of the attorneys who will review the entire draft Policy. Mr. Wickenhauser noted that not every publicly owned property will be plowed.

i. Section A, Paragraphs 1 (Public safety) and 4 (Priority setting to optimize outcomes)

Turning to Section A, paragraph 1, the Committee discussed public safety. Mr. Maloney appreciated that public safety was the first thing mentioned in the list of considerations. Under paragraph 4, Ms. Fortin commented that environment should also be emphasized as a priority, and suggested reversing the order of paragraph 4, priority setting to optimize outcomes, and paragraph 5, environment.

ii. Section A, Paragraph 5 (Environment)

Mr. Smith asked if paragraph 5 was clear and detailed enough about the damage that salt causes to the environment. Mr. Davies suggested adding something more to paragraph 5 about the environment, given the importance of the issue. Mr. Wickenhauser suggested that the language could mention focusing on environmental concerns through extended operator trainings. Ms. Asleson noted that language could be added discussing sand and salt impacts such as toxicity to fish. Mr. Maloney suggested using language about TMDLs and other science-based standards that salt users are affected by in their work. Mr. Maloney mentioned that some people who read about environmental concerns in the Policy will not be aware of chloride effects on the environment. Mr. Woods noted that the MS4 regulatory requirements include some of this environmental language. Ms. Christopher suggested including language that the de-icers are permanent pollutants to the environment. Mr. Maloney suggested using the word impairment in

the paragraph. Ms. Asleson offered to provide the Committee with the MPCA fact sheet that MPCA prepared as part of its chloride management plan.

Ms. Fortin mentioned that the Policy and/or SONAR will offer separate recommendations for private applicators. Mr. Woods noted that paragraph 1 about public safety is only three sentences long, and that there should not be many more sentences than three in the environment paragraph. Mr. Smith said that there would be an effort to preserve an appropriate balance of emphasis in the next draft.

Mr. Maloney commented that once his team better understood BMP maintenance, they stopped using sand because of their MS4 responsibilities. Now communities need to reduce chlorides, and are interested in the impacts of agricultural byproducts on chloride concentrations to determine the extent of road salt responsibility for chloride levels in water. Ms. Fortin mentioned that sand and deicers pose different environmental risks, and have separate impacts. Ms. Asleson commented that alternatives to traditional de-icing materials are being tested in different areas. Mr. Maloney asked what is considered a pollutant, and if sand is considered a pollutant. Ms. Asleson said that a pollutant could even be beet juice from an alternative practice that makes its way into waterways.

iii. Section A, Paragraph 6 (Administrative/technical judgment)

Mr. Woods noted that the need for clearer policy statements about operator discretion based on judgment emerged from the February 2016 road salt conference where presenters noted that weather can be very different over a range of just a few miles. Operators needed to feel protected in using their judgment to flexibly respond to differing weather conditions. Mr. Maloney asked what the term “administrative” means in the Policy. Mr. Smith explained that it means administrative knowledge and general management responsibility for the city or county. Mr. Maloney asked how other cities and counties respond to feedback from the public that operators should have been out on the roads at a time when they were not. Mr. Davies said that his city explains why they pulled equipment and operators off of the road, and that he thinks that is what is described by “administrative” in paragraph 6.

Mr. Smith asked the Committee if they thought it was important to include a more specific statement about professional judgment, such as the priorities and practices—timing of snowfall, starting ice control—paragraphs in the League of Minnesota Cities’ model policy. Mr. Davies commented that his city does not wait for a specific depth of snow to fall, and sometimes begins management activities before any snow, if it is the best decision in the judgment of operators and others managing snow and ice management decisions. Mr. Maloney asked if “administrative” meant decisions made at a higher level than operators. Mr. Eldred asked if “management” would be a better word to use than administrative. Mr. Maloney said that his city purposefully does not use the word “administrative.” Mr. Eldred noted that management may be a better word because those that may often be thought of as occupying an administrative role generally do not

understand the technicalities of snow and ice management, and managers are the individuals using professional judgment to manage snow and ice.

iv. Section A, Paragraph 7 (Need for Adaptability) and Final Paragraph

Mr. Lawrence noted that he liked the sentence that the public has a need to practice due care. Mr. Maloney asked if the statement about public practice should be expanded to include when the public will be ticketed for irresponsible winter activity. Mr. Davies said that his city's equipment has stickers on the back that warn motorists and others to stay back 50-100 feet. Mr. Maloney noted that footage is hard to gauge from a moving vehicle. Mr. Wickenhauser said that on his equipment, it would be difficult to read any warning language because the equipment becomes covered by snow.

b. Section B, Snow and Ice Management Priorities

Mr. Smith noted that in the model policies and city and county policies, there are different options for prioritizing snow and ice management locations. Ms. Fortin provided the MNDOT statement about prioritization. Mr. Smith asked the Committee if it would be useful to include a brief statement detailing how operators will plow streets, and what amount of detail is useful and generally applicable to all types of jurisdictions. Mr. Maloney noted that in cities, downtown areas are the priority. Mr. Davies said that in his city, the central business district gets plowed first, before sidewalks and before streets. Mr. Maloney commented that his city receives more calls and concerns about sidewalks and trails. Mr. Eldred mentioned that his city has two policies, one for sidewalks and trails, and one for roads. Mr. Davies said that sidewalks are also a priority in his city because people want their sidewalks to be open. Ms. Asleson suggested breaking the prioritization table in the draft Policy into more categories. Ms. Fortin suggested including language in Section B stating "insert level of service chart" where cities, counties and private operators may insert their own charts. Mr. Davies and Mr. Eldred commented that each city, county, or private operator will want to modify the priority and level of service information to fit their practices. Mr. Wickenhauser noted that his county's policy states that it does not distinguish between different priority roads and makes safe and open travel conditions on all roads an equal priority. Mr. Davies asked how Carver County defines bare pavement. Mr. Eldred noted that it is challenging to achieve bare pavement with blowing snow. Mr. Wickenhauser suggested that bare pavement is realistically considered about 75% clear roadways.

Mr. Smith asked the Committee if every jurisdiction has their own chart that they want to use in the priorities section of the policy. He asked the Committee if it would be useful to include in the Model Policy a chart listing downtown central business districts and sidewalks as priorities, and high priority route content similar to that in the league of Minnesota Cities' model policy. Mr. Lawrence noted that the League's model policy priorities are not relevant to his city, where bus routes get priority, along with heavily travelled streets and the central business district.

Mr. Lawrence asked about the reference to City/County Engineers under Section B. He suggested changing the sentence to read: “The City/County Administrator or delegated authority directs resources within policies and directives set by the City/County Administrator or delegated authority.” Mr. Lawrence, Mr. Davies, and Mr. Maloney agreed that in their cities, the city engineer does not have a role in snow and ice management decisions. Mr. Maloney commented that it is important that it is clear in the Policy that the point of the Policy is operator discretion. Mr. Smith stated that more variables, including central business districts, will be included in the discussion of priority areas in the first sentences of Section B. Mr. Maloney noted that cities and counties are constrained by equipment, resources, and budget, which is why the policy is needed. Mr. Lawrence noted that it is not possible to simultaneously identify and address all problem areas.

Ms. Fortin noted that operators do not want to be held to the requirements of a table, should priority routes change in any given snow or ice event. Specifically, the Policy should not include regain times or targets, because these can change depending on the snow or ice event. Mr. Smith said that the SONAR document will include examples of what priority information is included in the manuals for reference, but suggested that it seems to be the Committee’s recommendation that priority tables will not be included in the Policy. Mr. Smith stated that the SONAR document will explain the Committee’s thought process and discussion, and go through the Model Policy section by section. The document will also consider the different perspectives in the different snow and ice manuals.

Mr. Maloney asked about other jurisdictions and road authorities operating within city and county limits and how the Model Policy would interact with the policies of those jurisdictions. Mr. Smith responded that the Model Policy will operate alongside those of other jurisdictions. Ms. Asleson suggested that an additional consideration be added as paragraph 8 under Section A stating that business areas and bus routes will be taken into account and affect priorities of city/county snow and ice management. Mr. Smith noted that paragraph 1 under Section A included public safety information that can be referenced elsewhere in the Policy as a significant operational consideration. Mr. Davies said he was reluctant to rely on public demand as part of the Policy for snow and ice management because public requests may be unreasonable, and there is a value in relying on engineers and operators who understand traffic volume and road type.

c. Section C, Training

Mr. Smith introduced Section C, explaining that it discussed the importance of training for more than road maintenance crews. Ms. Fortin suggested that education for the public be added. Mr. Maloney noted that it is the road authority’s responsibility to do education and outreach. Mr. Davies commented that in his experience, the public responds to the city website and its Facebook page information. Ms. Fortin noted that the Policy should be careful not to establish additional responsibilities and duties for cities and counties. Mr. Wickenhauser noted that MNDOT offers education and training on snow and ice management. Ms. Asleson commented

that it is part of cities' MS4 requirement that they provide information to the public. Mr. Smith stated that a legal document is not necessarily the appropriate place to include an education and outreach statement requiring cities and counties to make sure that the road traveling public is aware of city and county Policy to manage snow and ice conditions. The goal of the Policy is not to create a new duty to inform the public of the weather. Ms. Fortin agreed that cities and counties do not want to take on additional risk.

Mr. Maloney commented that he likes the approach of including education and outreach information in the Policy's SONAR background document. Mr. Maloney added that the SONAR document will do a good job of internally informing the city or county organizations about the Policy. Ms. Larson asked that the Policy require that training be documented. Ms. Fortin added that documentation should be done with all aspects of snow and ice management. Mr. Smith suggested that documentation suggestions be included in the SONAR.

d. Section D, Delegation of Authority

Mr. Smith asked if the Policy should include a complaint procedure. Mr. Wickenhauser noted that in his county, the on-call supervisor usually gets the complaint call, and deals with the issue immediately. Mr. Eldred commented that in his city, there is usually a period of time (about 24 hours) before someone responds to a complaint. Mr. Smith asked what the response is when someone reports a hazardous condition. Mr. Eldred said that if the issue is small, someone from the city will take care of the issue. Ms. Asleson noted that it is important to know who is calling, and whether there is actually a hazardous condition.

Mr. Smith stated that the issue of notice is relevant to the liability analysis. Mr. Smith asked the Committee to discuss whether it would make sense to have in the Policy an explanation of the City's or County's response to calls, and how the response is managed in terms of priority of services. Mr. Maloney commented that he would not want such a policy inadvertently to create new duties for cities and counties. His city's approach is to explain to callers that operators are out with equipment, and will get to the issue as soon as possible. A policy that requires operators to log all complaints, and track and process them, creates new expectations for how cities and counties handle complaints. Mr. Davies commented that his city divides the day into the normal working day, when operators consider the complaint situation and determine how to respond, and after hours, when law enforcement decides whether the issue warrants calling out public workers. Mr. Davies said that while the city does follow up on complaints, it may not always document the complaints or follow up. Mr. Smith stated that it is important for the Policy to demonstrate that the operators responsibly considered how best to respond. Mr. Lawrence commented that his city logs all calls and all methods by which it receives information, and documents the city's response.

Ms. Fortin commented that different preferences were being expressed, with cities and counties not wishing to add documentation requirements to the Policy, but wanting the Policy to protect

them for their actions. Mr. Smith noted that in Section D, paragraph 2, the draft Policy states that the administrator will establish procedures for reports. This leaves discretion to the cities, counties, and operators as to how systems will be established. The SONAR document will explain the various considerations.

Mr. Smith asked the Committee if they thought it would be in the interest of the Policy's goals to include language like that in the League of Minnesota Cities' model policy discussing what triggers snow and ice management. Mr. Maloney said that tools are constantly changing and information improving, and cities, counties, and other operators are doing an ever-better job of timing and anticipating their responses to snow and ice conditions. Mr. Maloney suggested that the Policy not be too prescriptive about what triggers commencement of snow and ice management. His city has never had a defined accumulation of snow that triggers start of service because that model has not been helpful in delivering services. Mr. Maloney said that in his community, one of the timing priorities is related to traffic, and it is important that the city plow from 2:00 a.m. to 6:00 a.m. whenever possible to reduce conflicts with traffic. Mr. Maloney noted that it is important that Policy separate technical from operational decision making. Mr. Smith asked the Committee how much of the specific policy information or reference to content in manuals they would like to see in the Model Policy. Mr. Eldred noted that Section D, paragraph 2, part (c), regarding salt storage, is in MS4 requirements for facilities management. Mr. Eldred added that Section D, paragraph 2, parts (b) and (d) are already included in other parts of local policies.

e. Section E, Operational Framework

i. Section E, Paragraph 1 (Training Program)

Mr. Smith asked the Committee if the Policy should include details specific to the training programming. Ms. Fortin suggested that the prescriptive guidance about Smart Salting level 1 training should be included in the supporting SONAR document rather than the policy. Ms. Asleson commented that the supporting document could include Smart Salting level 2 and MS4 permit requirements. Mr. Maloney asked who the target audience for the SONAR document will be. Mr. Smith stated that audiences include city council members so that they understand the thinking behind the Policy, other communities, and perhaps judges so that they are guided and understand the Policy document and its development into a policy by a group of knowledgeable people with diverse expertise.

Mr. Maloney asked if watershed districts offer winter maintenance trainings. Ms. Christopher said that MCWD hosts and provides funding for trainings conducted alongside Ms. Fortin and the MPCA. Ms. Asleson added that the MPCA and others are trying to brand Smart Salting, which is funded through a federal 319 grant. The training is offered through partnerships. Ms. Asleson noted that MNDOT does its own training for MNDOT staff. LTAP is another training program similar to Smart Salting, but does not require those trained to implement BMPs and

does not require trainees to take a test. Ms. Asleson commented that MPCA has a chloride management plan that includes all of its training and educational resources in one document. This document could be referenced in the SONAR and policy. Ms. Larson noted that the snow and ice management association offers training for private operators and works with Smart Salting 1. Mr. Smith commented that Section C of the policy acknowledges that cities and counties determine what training to provide and require.

ii. Section E, Paragraph 4 (Damage to Personal Property)

Mr. Maloney commented that different agencies have different responses to dealing with calls for damage. Every jurisdiction has a different policy for what is replaced or included under the jurisdiction's damage replacement policy. Mr. Smith noted that the city and county attorneys will want to include this provision and will likely already have expected that. The Policy will include a brief version. Mr. Eldred said that the damage to personal property statement needs to be included in the Policy. Mr. Smith suggested that cities and counties cross reference their claims policy, and retain the no landscaping portion of paragraph 4 in the Model Policy.

4. Summary of Next Steps

Mr. Smith will coordinate with other jurisdictions to invite further review and comment. The July 20, 2016 Committee meeting discussion will be incorporated into the second draft of the Policy. Mr. Smith will be in touch with the St. Cloud City Attorney, and several other attorneys, for peer review of the policy. Mr. Smith asked for ideas about who to reach out to at the League of Minnesota Cities, and Mr. Lawrence, Mr. Larson, and Mr. Maloney offered contacts who worked the MPCA's chloride management plan. By August 10, the Committee will make a courtesy call to the League and invite review and comment on the draft Policy. The August 10, 2016 Committee Meeting will include review of the next draft of the Policy, an appendix for private operators, and the draft SONAR document. Mr. Lawrence requested a copy of the Minnesota House and Senate portions of the snow and ice legislation. Ms. Fortin and Ms. Asleson agreed to follow up on this request.

Ms. Fortin thanked everyone for coming and adjourned the meeting at 10:59 a.m. The next Advisory Committee meeting will be held on August 10, 2016.

Respectfully submitted,

Louis Smith
Elizabeth Henley

Snow and Ice Management

Model Policy

A. Introduction

It is among the responsibilities of the [City/County] of _____ to manage snow and ice on [City/County] streets and public property under the [City / County]'s jurisdiction. The purpose of this document is to set policies for how the [City/County] will fulfill this responsibility and to identify those [City/County] officials and employees who are authorized to set subordinate policies and make judgments in the course of carrying out snow and ice management activities.

Setting policies for snow and ice management involves evaluating and weighing a number of considerations, including the following:

1. Public safety. The safety of those traveling by motor vehicle, on foot and by other modes of transportation is of high priority. The goal of the [City/County] is to provide for surface conditions that are safe for travel in consideration of surrounding conditions and circumstances. Also, vehicles and personnel engaged in snow and ice management activity can increase risk to the public by virtue of their presence on public ways during times when travel conditions and vision are impaired.
2. Personnel safety. [City/County] personnel incur risk by their presence on public ways while managing snow and ice. The safety of [City/County] personnel as well is of the utmost importance.
3. Cost. [City/County] funds are limited and taxpayers require that they be spent cost-effectively. It is not possible to address all snow and ice issues simultaneously and completely. It is not practical to maintain equipment and personnel availability at a level that is sufficient for all circumstances.
4. Environment. Materials to maintain or improve surface traction contribute pollutants such as sand and chlorides to surface waters and to [City/County] stormwater basins and other facilities, which in turn can increase the cost of maintaining those facilities. It is important not to use an excess of these materials.

Salt can be harmful to fish and other freshwater aquatic life and can also negatively affect infrastructure, vehicles, plants, soil, pets, wildlife as well as impair groundwater and drinking water supplies. Once in the water, chloride becomes a permanent pollutant and continues to accumulate in the environment over time. The data show that salt concentrations are increasing impairments to both surface waters and groundwater across the state.

5. Priority setting to optimize outcomes. Because consideration must be given to all factors, it is necessary to set priorities for snow and ice management activities. Considerations include, though are not limited to, road classification and vehicle use level, need for emergency vehicle access, areas of known safety risk, reported conditions, costs, and impact on the environment.

6. Management/professional/technical judgment. Policies and practices rest on management, professional, and technical knowledge, on prevailing weather and travel conditions and on other circumstances that operators encounter. As to important policy elements, the **[Council/Board]** cannot state a policy but instead must delegate the authority to establish and adjust the policy to the professional judgment of appropriate **[City/County]** personnel.

7. Need for adaptability. Particularly with respect to effectiveness, cost and environmental consequences, snow and ice management is a realm of innovation. It is important that **[City/County]** policy allow for personnel to maintain awareness of developments and allow for practices to be adjusted as appropriate. The public must practice due care given the continuously changing hazards presented by natural snow and ice concerns

The policies stated in this document, as well as any delegations of authority to set subordinate policies, rest on an assessment and balancing of these considerations. It is not possible or practicable for snow and ice to be fully removed from all surfaces or prevented from accumulating on surfaces. The **[City/County]** encourages and expects that **[City/County]** residents and other members of the traveling public will at all times conduct their activities mindful of conditions, hazards, and what is necessary to remain safe.

B. Snow and Ice Management Priorities

The **[City/County]** differentiates among maintenance areas based on a variety of factors, including traffic volume and location (e.g., business district). The established **[City/County]** priority is as follows:

[Insert City/County “level of service” chart, or use default chart below. modeled on MNDOT’s Bare Lane Indicator Guidelines (Table 2-3.02A).]

Classification	Target Regain Time	Lane Description
Super Commuter Arterials Central Business District/ Downtown	0-3 hours	The goal of the jurisdiction is to achieve driving lanes that are as free of snow and ice as reasonably possible in a northern climate. Drivers should take due care when driving on snow and ice surfaces, including reducing their speed. Jurisdictions will log the date and time when a satisfactory road condition is obtained.
Urban Commuter	2-5 hours	
Rural Commuter Remaining streets, including cul-de-sacs	4-9 hours	
Alleys, parking lots, sidewalks, trails, and other surfaces for non-motorized travel	9-36 hours	

However, the [City/County] will also consider localized safety concerns, reported hazard conditions and other relevant information in adjusting priorities. The [City/County] Administrator, or delegated authority has discretion to direct the resources contained in this Policy, and those directives set by the [City/County] Administrator or delegated authority. [City/County] Administrator delegated authority directs resources and adjusts priorities during an event with due attention to the considerations listed in Section A, above. Within the policies and directives set by the [City/County] Administrator or delegated authority, operations personnel may adjust their activity as well to address safety concerns, improve effectiveness, reduce costs, and limit environmental impacts. Section A, paragraph 1, is a significant operational consideration for [Cities/Counties] when making such adjustments.

The [City/County] is not responsible for managing snow and ice on streets, sidewalks, or other areas not within [City/County] jurisdiction.

C. Training

It is important that personnel involved in snow and ice management receive appropriate training to inform their operational capacities and the judgment that they must exercise in performing their responsibilities. The [City/County] Administrator is delegated the authority to determine and provide for appropriate training and tasked to inform the [Council/Board] of training funding needs during budgeting. The Administrator will consider training for police, emergency response and other [City/County] personnel who may not have specific responsibilities for snow and ice management but whose awareness and coordination is important to the [City/County]'s efforts.

The [City/County] will document, or require documentation of, all training that it requires or conducts.

D. Delegations of Authority

Authority with respect to snow and ice management decisions is delegated as follows:

1. [City/County] Administrator or delegated authority. The [City/County] Administrator or delegated authority will exercise general oversight of snow and ice management activities and will make recommendations to the [Council/Board] on staffing, purchases and funding as a part of annual budgeting. The Administrator or delegated authority will exercise responsibility with respect to personnel training as indicated in Section C, above.

The Administrator or delegated authority will establish procedures for reports on snow and ice conditions from [City/County] personnel or the public to be documented and routed to appropriate [City/County] personnel so that such reports inform snow and ice management activities. Operators will consider how best respond to snow and ice management complaints, pursuant to the following [City/County] policy:

[Insert individual [City/County] complaint documentation and response policy here. Include how the [City/County] response is management in terms of priority of services.]

The Administrator or delegated authority may enter into contracts for snow and ice management services or may recommend such contracts to the [Council/Board], in accordance with [City/County] policy. All contracts will provide the following:

- a. All personnel performing the contract on behalf of the contracting party are trained to the same extent as would be [City/County] personnel performing the same work.
- b. The contracting party will perform the work in accordance with all applicable [City/County] policies and directives, copies of which will be provided to the contracting party.
- c. The contracting party will be insured for general and automotive liability to the same limits and under the same standard conditions as in other [City/County] contracts, or to such other limits and under such other conditions as the [City/County] Attorney may advise.
- d. The contracting party will perform all work with due care, and will indemnify the [City/County] and hold it harmless for its negligent and willful acts and omissions.

2. [City/County] Engineer or delegated authority. The [City/County] Engineer or delegated authority is authorized to establish subordinate policies and directives with respect to the following:

- a. Adjustments to snow and ice management priorities as indicated in Section B, above.
- b. Protocols and directives concerning the initiation and cessation of snow and ice management activities. Cessation protocols and directives will consider conditions that endanger employee or equipment safety, or that cause management activities to be ineffective.
- c. Protocols and practices for snow plowing and other operations, including snow storage. In determining snow storage locations and conditions, the Engineer or delegated authority will consider the debris and pollutant load held within stored snow and the potential water pollution impact of snowmelt within surface runoff.
[Insert more specific [City/County] policy here.]
- d. Protocols for application of sand, salt and other means to preserve/reestablish traction. The Engineer or delegated authority will give particular consideration to safety, environmental, and cost concerns, will maintain **[City/County]** awareness of best practices and innovations, and in his or her judgment will adjust protocols in accordance with such practices and innovations.

In making the judgments underlying these actions, the **[City/County]** Engineer or delegated authority will give due attention to the considerations listed in Section A, above. The **[City/County]** Engineer or delegated authority should consider providing for awareness of best practices, including those contained in the Winter Parking Lot and Sidewalk Maintenance Manual (MPCA, 2015) and the Minnesota Snow and Ice Control Field Handbook for Snowplow Operators (Minnesota Local Road Research Board, 2012), as they may be updated, and to provide for incorporation of best practices as appropriate.

Until such time as applicable policies and directives are established, the **[City/County]** Engineer or delegated authority will direct operations in his or her best judgment and with attention to the considerations listed in Section A, above.

3. Operators. **[City/County]** personnel engaged in snow and ice management operations are authorized to adjust activities in accordance with Section B, above. Such personnel, in their judgment, also may adjust plowing and other operational methods and may implement hazard warnings, consistent with the policies and directives set by the **[City/County]** Engineer or delegated authority.

E. Operational Framework

1. Documentation. *[Insert [City/County] policy for documentation of control practices, decisions, and written or printed records.]*

Model statement:

The [City/County] and its operators will document control practices and decisions and keep written or printed records of application and other decisions in carrying out this Policy. A storm record will be completed by the [City/County] for each storm event and should include operating times, weather conditions, and personnel and equipment resources committed.]

2. Emergency Situations. The [City/County] will dispatch operators and equipment as soon as possible to the routes required by emergency vehicles—fire, medical, police—responding to an emergency situation within the jurisdiction of the [City/County], Fire Department, or Police Department.

The [City/County] will plow private property only if emergency vehicles require access.

3. Damage to Personal Property. *[Insert [City/County] policy for responding to damage to personal or private property. This may cross reference the [City/County] policy for damage replacement.]*

Model statement:

The [City/County] will consider for repair or replacement at [City/County] expense property that is (1) properly installed, (2) permitted by [City/County] ordinance to be located adjacent to the street, and (3) damaged by contact with city equipment. The [City/County] will not repair or replace damaged trees, shrubs, or landscaping.]

4. Deviation from Policy. If a person with delegated authority determines deviation from this Policy to be in the best interest of the [City/County], or that a change is needed, the deviation will be documented. Documentation includes identifying: the cause, why the response was necessary, and how long the deviation will be in effect.

5. Review and Modification of Policy. *[Insert jurisdiction's annual review or other review policy.]*

F. Assuming Responsibility for Private Roadways, Parking Areas, Sidewalks, and Trails

The [City/County] is not responsible for snow and ice management on any roadway or parking area not owned by or dedicated to the [City/County], except as may be provided in a legally

binding, written acceptance of that responsibility in the context of a development approval or otherwise. *[Insert further [City/County] policy statement here.]*

G. Coordination with Other Jurisdictions

The table below lists the jurisdiction responsible for each [City/County] boundary street.

Street Segment	Responsibility	Telephone No.
	[City, County, State]	

The following streets owned by the [City/County] are maintained and managed for snow and ice by the Minnesota Department of Transportation:

[List streets in jurisdiction that are maintained by MNDOT].

The [City/County] will coordinate with neighboring or regional jurisdictions as warranted to realize better management outcomes, cost savings or environmental benefits.

No Rights Created

This policy is for internal use only in order to specify the policies and distribution of authority for snow and ice management. The policy is for the benefit of serving the general public and not for the benefit of any individual or specific group of individuals. It is not intended to and does not create any right or expectation in any third party. The [City Council/Board of Commissioners] may amend this policy or make exceptions to it as it deems appropriate.

Disclaimer

The [City/County] will begin snow and ice management as soon as reasonably possible. Cold, wind, visibility, equipment failure or disability, rapid snow and ice accumulation, and/or other unforeseen conditions or emergencies may prevent safe or effective management and cause delays in management operations.

Distribution

This policy will be distributed to the following:

Snow and Ice Management

Model Policy

A. Introduction

It is among the responsibilities of the [City/-County] of _____ to manage snow and ice on [Ceity/-Ceounty] streets and public property under the [City / County]'s jurisdiction. The purpose of this document is to set policies for how the [City/County] will fulfill this responsibility and to identify those [Ceity/Ceounty] officials and employees who are authorized to set subordinate policies and make judgments in the course of carrying out snow and ice management activities.

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Setting policies for snow and ice management involves evaluating and weighing a number of considerations, including the following:

1. Public safety. The safety of those traveling by motor vehicle, on foot and by other modes of transportation is of ~~the highest~~ priority. The goal of ~~the~~ [City/County] is to provide for surface conditions that are safe for travel in consideration of surrounding conditions and circumstances. Also, vehicles and personnel engaged in snow and ice management activity can increase risk to the public by virtue of their presence on public ways during times when travel conditions and vision are impaired.

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2. Personnel safety. [City/County] personnel incur risk by their presence on public ways while managing snow and ice. The safety of [City/County] personnel as well is of the utmost importance.

3. Cost. [City/County] funds are limited and taxpayers require that they be spent cost-effectively. It is not possible to address all snow and ice issues simultaneously and completely. It is not practical to maintain equipment and personnel availability at a level that is sufficient for all circumstances.

Comment [EH1]: Connie finds this sentence hard to understand. She asks if what we mean by this sentence is :
"There is a risk to the driving public when winter operations are taking place and if a person chooses to be driving in that situation then they need to understand they are at greater risk than if they stayed at home."
and if we might substitute something similar to her language for that currently in the policy.

~~4. Priority setting to optimize outcomes. Because consideration must be given to costs, it is necessary to set priorities for snow and ice management activities. Considerations include, though are not limited to, road classification and vehicle use level, need for emergency vehicle access, areas of known safety risk, and reported conditions.~~

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~~45. Environment. Materials to maintain or improve surface traction contribute pollutants such as sand and chlorides to surface waters and to [Ceity/Ceounty] stormwater basins and other facilities, which in turn can increase the cost of maintaining those facilities. It is important not to use an excess of these materials.~~

Comment [I2]: Mr. Woods cautioned against including more sentences under the "Environment" section than under "Public safety." We many want to take away some content from within the "Environment" section, or include additional content in the "Public Safety" section.

~~High levels of salt can be harmful to fish and other freshwater aquatic life and can also negatively affect infrastructure, vehicles, plants, soil, pets, wildlife as well as impair~~

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groundwater and drinking water supplies. Once in the water, chloride becomes a permanent pollutant and continues to accumulate in the environment over time. The data show that salt concentrations are continuing to increase in impairments to both surface waters and groundwater across the state.

Comment [I4]: Sentence from Brooke Asleson suggested for inclusion in 7-20-16 post-meeting email. Mr. Maloney suggested inclusion of the word "impairment" in the Policy at the 7-20-16 meeting.

5. Priority setting to optimize outcomes. Because consideration must be given to all factors ~~costs~~, it is necessary to set priorities for snow and ice management activities. Considerations include, though are not limited to, road classification and vehicle use level, need for emergency vehicle access, areas of known safety risk, reported conditions, costs, and impact on the environment.

6. Administrative Management/professional/technical judgment. Policies and practices rest on management, professional, administrative and technical knowledge, on prevailing weather and travel conditions and on other circumstances that operators encounter. As to important policy elements, the **[Council/Board]** cannot state a policy but instead must delegate the authority to establish and adjust the policy to the professional judgment of appropriate **[Ceity/Ceounty]** personnel.

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7. Need for adaptability. Particularly with respect to effectiveness, cost and environmental consequences, snow and ice management is a realm of innovation. It is important that **[City/County]** policy allow/provide for personnel to maintain awareness of developments and allow for practices to be adjusted as appropriate. The public must practice due care given the continuously changing hazards presented by natural snow and ice concerns

Comment [I5]: Ms. Fortin's edit.

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8. Management Priorities. ~~Business areas, bus routes, sidewalks, and any others that individual City/County prioritizes~~ will be prioritized first, and will affect the priorities of **[City/County]** snow and ice management.

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The policies stated in this document, as well as any the delegations of authority to set subordinate policies, rest on an assessment and balancing of these considerations. It is not possible or practicable for snow and ice to be fully removed from all surfaces or prevented from accumulating on surfaces. The **[City/-County]** encourages and expects that **[Ceity/Ceounty]** residents and other members of the traveling public will at all times conduct their activities mindful of conditions, hazards, and what is necessary to remain safe.

B. Snow and Ice Management Priorities

The **[City/-County]** differentiates among maintenance areas/streets based on a variety of factors, including traffic volume, and street function, and location (e.g., business district). The **[City/County]** normally will prioritize attention to more heavily traveled streets, streets with higher posted speed limits, and streets of primary importance for emergency vehicles. The established **[City/-County]** priority is as follows:

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Insert City/County "level of service" chart, or use default chart below, modeled on MNDOT's Bare Lane Indicator Guidelines (Table 2-3.02A).

<u>Classification</u>	<u>Target Regain Time</u>	<u>Lane Description</u>
<u>Super Commuter Arterials Central Business District/ Downtown</u>	<u>0-3 hours</u>	<u>The goal of the jurisdiction is to achieve driving lanes that are as free of snow and ice as reasonably possible in a northern climate. Drivers should take due care when driving on snow and ice surfaces, including reducing their speed. Jurisdictions will log the date and time when a satisfactory road condition is obtained.</u>
<u>Urban Commuter</u>	<u>2-5 hours</u>	
<u>Rural Commuter</u>	<u>4-9 hours</u>	
<u>Remaining streets, including cul-de-sacs</u>		
<u>Alleys, parking lots, sidewalks, trails, and other surfaces for non-motorized travel</u>	<u>9-36 hours</u>	

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<u>Arterials Central Business District or Downtown</u>	<u>First Priority</u>
<u>Remaining streets, including cul-de-sacs</u>	<u>Second Priority</u>
<u>Alleys, parking lots, sidewalks, trails, and other surfaces for non-motorized travel</u>	<u>Third priority</u>

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Comment [I6]: Based on the 7-20-16 meeting, most cities and counties will likely insert their own priorities table here.

However, the [City/County] will also consider localized safety concerns, reported hazard conditions and other relevant information in adjusting priorities. The [City/County] Administrator, or delegated authority has discretion to direct the resources contained in this Policy, and those directives set by the [City/County] Administrator or delegated authority. [City/County] The [City/County] Engineer is- Administrator delegated the authority to directs resources and adjusts priorities during an event with due attention to the considerations listed in Section A, above. Within the policies and directives set by the [City/County] AdministratorEngineer or delegated authority, operations personnel may adjust their activity as well to address safety concerns, improve effectiveness, reduce costs, and limit environmental impacts. Section A, paragraph 1, is a significant operational consideration for [Cities/Counties] when making such adjustments.

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Comment [I7]: Steve Lawrence insertion suggested at 7-20-16 meeting.

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The [City/County] is not responsible for managing snow and ice on streets, sidewalks, or other areas not within [City/County] jurisdiction. In the event that the [City/County] manages snow and ice in an area outside of [City/County] jurisdiction, the [City/County] is not responsible for the snow and ice condition of that area.

C. Training

Comment [I8]: Some discussion during the 7-20-16 meeting suggested concern that C. Training creates new responsibilities for cities and counties. I think that, as drafted, this section may or may not be pursued at the discretion of

b. The contracting party will perform the work in accordance with all applicable **[City/County]** policies and directives, copies of which will be provided to the contracting party.

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c. The contracting party will be insured for general and automotive liability to the same limits and under the same standard conditions as in other **[City/County]** contracts, or to such other limits and under such other conditions as the **[City/County]** Attorney may advise.

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d. The contracting party will perform all work with due care, and will indemnify the **[City/County]** and hold it harmless for its negligent and willful acts and omissions.

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2. **[City/County]** Engineer **or delegated authority**. The **[City/County]** Engineer **or delegated authority** is authorized to establish subordinate policies and directives with respect to the following:

a. Adjustments to snow and ice management priorities as indicated in Section B, above.

b. Protocols and directives concerning the initiation and cessation of snow and ice management activities. ~~These protocols will consider factors including the expected timing, nature, scale and duration of precipitation; wind conditions; temperature trends; and expected severity of ice conditions.~~ Cessation protocols and directives will consider conditions that endanger employee or equipment safety, or that cause management activities to be ineffective.

Comment [I14]: Cities and Counties at the 7-20-16 meeting stated that they prefer to apply their own criteria to starting or ending snow and ice operations, which is why I removed this language.

c. Protocols and practices for snow plowing and other operations, including snow ~~and salt~~ storage. In determining snow ~~and salt~~ storage locations and conditions, the Engineer **or delegated authority** will consider the ~~debris and~~ pollutant load held within stored snow and the potential water pollution impact of snowmelt ~~and of salt dissolved~~ within surface runoff. **[Insert more specific [City/County] policy here.]**

Comment [I15]: Delete? Mr. Eldred noted that this information is already included in other sections of city and county policies.

Comment [EH16]: Connie noted that cessation usually happens when snow and ice managers reach the appropriate level of service. She also suggested including conditions that endanger the environment or exceed budget constraints.

d. Protocols for application of sand, salt and other means to preserve/reestablish traction. The Engineer **or delegated authority** will give particular consideration to safety, environmental, and cost concerns, will maintain **[City/County]** awareness of best practices and innovations, and in his or her judgment will adjust protocols in accordance with such practices and innovations.

Comment [I17]: Mr. Eldred noted at the 7-20-16 meeting that salt storage is covered in the MS4 requirements for facilities management.

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In making the judgments underlying these actions, the **[City/County]** Engineer **or delegated authority** will give due attention to the considerations listed in Section A, above. The **[City/County]** Engineer ~~or delegated authority is tasked to~~ **should consider**

Comment [I18]: Delete? Mr. Eldred noted that this information is included in other parts of local policies.

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provide for awareness of best practices, including those contained in the Winter Parking Lot and Sidewalk Maintenance Manual (MPCA, 2015) and the Minnesota Snow and Ice Control Field Handbook for Snowplow Operators (Minnesota Local Road Research Board, 2012), as they may be updated, and to provide for incorporation of best practices as appropriate.

Until such time as applicable policies and directives are established, the [City/County] Engineer or delegated authority will direct operations in his or her best judgment and with attention to the considerations listed in Section A, above.

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3. Operators. [City/County] personnel engaged in snow and ice management operations are authorized to adjust activities in accordance with Section B, above. Such personnel, in their judgment, also may adjust plowing and other operational methods and may implement hazard warnings, consistent with the policies and directives set by the [City/County] Engineer or delegated authority.

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E. Operational Framework

NOTE: this Section includes operational issues to be considered; some of these issues may not be appropriate for the Policy document, but would instead be attached as part of the explanation in the Statement of Need and Reasonableness that will accompany the Policy.

1. Training Program. The [City/County] training program will include MPCA's Smart Salting level 1 training.

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Comment [19]: The Committee did not want to include a prescriptive training requirement in the Policy document.

12. Documentation. *Insert [City/County] policy for documentation of control practices, decisions, and written or printed records.*

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Model statement:

The [City/County] and its operators will document control practices and decisions and keep written or printed records of application and other decisions in carrying out this Snow and Ice Management Policy.

A storm record will be completed by the [City-/County] for each storm event and should include operating times, weather conditions, and personnel and equipment resources committed.]

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23. Emergency Situations. The [City/County] will dispatch operators and equipment as soon as possible to the routes required by emergency vehicles—fire, medical, police—responding to an emergency situation within the jurisdiction of the [City/County], Fire Department, or Police Department.

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The [City/County] will plow private property only if emergency vehicles require access.

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34. Damage to Personal Property. ~~Insert [City/County] policy for responding to damage to personal or private property. This may cross reference the [City/County] policy for damage replacement.~~

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Model statement:

The [City-/County] will consider for repair or replacement at [City-/County] expense property that is (1) properly installed, (2) permitted by [City-/County] ordinance to be located adjacent to the street, and (3) damaged by contact with city equipment. The [City-/County] will not repair or replace damaged trees, shrubs, or landscaping.]

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45. Deviation from Policy. If a ~~supervisor or operator~~ person with delegated authority determines deviation from this Policy to be in the best interest of the [City/County]—[city, etc], or that a change is needed, the deviation will be documented. Documentation includes identifying: the cause, why the response was necessary, and how long the deviation will be in effect.

56. Review and Modification of Policy. ~~Insert jurisdiction’s annual review or other review policy. [e.g. annual review]~~

F. Assuming Responsibility for Private Roadways, ~~or~~ Parking Areas, Sidewalks, and Trails

The [City/County] is not responsible for snow and ice management on any roadway or parking area not owned by or dedicated to the [City/County], except as may be provided in a legally binding, written acceptance of that responsibility in the context of a development approval or otherwise. ~~Insert further [City/County] policy statement here.~~

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G. Snow and Ice Management on [City/County] Property

~~The delegations of authority under Section D, above, apply as well to snow and ice management on [City/County] property other than roadways.~~

Comment [I20]: This section is not necessary because of the change in the introductory paragraph of Part A stating that this Policy applies to property under the City/County’s jurisdiction.

HC. Coordination with Other Jurisdictions

The table below lists the jurisdiction responsible for each **[City/County]** boundary street.

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Street Segment	Responsibility [City, County, State]	Telephone No.

The following streets owned by the **[City/County]** are maintained and managed for snow and ice by the Minnesota Department of Transportation:

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[List streets in jurisdiction that are maintained by MNDOT].

~~*[List streets].*~~

The **[City/County]** will coordinate with neighboring or regional jurisdictions as warranted to realize better management outcomes, cost savings or environmental benefits.

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No Rights Created

This policy is for internal use only in order to specify the policies and distribution of authority for snow and ice management. The policy is for the benefit of serving the general public and not for the benefit of any individual or specific group of individuals. It is not intended to and does not create any right or expectation in any third party. The **[City Council/Board of Commissioners]** may amend this policy or make exceptions to it as it deems appropriate.

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Disclaimer

The **[City/County]** will begin snow and ice management as soon as reasonably possible. Cold, wind, visibility, equipment failure or disability, rapid snow and ice accumulation, and/or other unforeseen conditions or emergencies may prevent safe or effective management and cause delays in management operations.

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Distribution

This policy will be distributed to the following:

MODEL SNOW AND ICE POLICY ADVISORY COMMITTEE**GUIDANCE DOCUMENT****accompanying the****Model Snow and Ice Management Policy****August 10, 2016**

This Guidance Document presents background on and explains the structure of the Model Policy finalized August 10, 2016 by the Model Snow and Ice Management Policy Advisory Committee. The Model Policy is the product of coordination among diverse snow and ice management professionals from different areas of Minnesota. It is intended to serve as the foundation for city and county snow and ice management policies and follows the following structure:

- Section A: Introduction
- Section B: Snow and Ice Management Priorities
- Section C: Training
- Section D: Delegations of Authority
- Section E: Operational Framework
- Section F: Assuming Responsibility for Private Roadways or Parking Areas
- Section G: Coordination with Other Jurisdictions

The Model Policy is a framework that: (a) identifies the competing public considerations that are weighed in setting specific policy and (b) allocates roles in setting and carrying out these policies as between the policymaking body (city council or county board of commissioners) and the administrative and field employees of the local government unit. The administrative and technical details of snow and ice management as developed by the city or county are intended to integrate into this framework.

The purpose of this framework is both to offer a tool for cities and counties to prepare clear and complete snow and ice management policies and to help them limit the

potential liability risk from these activities. Snow and ice management requires balancing public interests including, as paramount, public safety but also equipment and material cost, environmental impact, and other concerns. Judgments must be made based on weather and ground circumstances as they develop. The law governing public agency operations such as this largely protects cities and counties from liability, in recognition of the fact that in order to perform this important public function, these local units must exercise judgment based on expertise, experience, and the circumstances of the occasion. The law says, however, that to merit this protection, a city or county must be able to show that competing public concerns are in play, that these concerns have been weighed, and that judgment was used in making both policy and operational decisions. The Model Policy is a tool for cities and counties to establish this foundation for their snow and ice management policies and practices.

The Policy was developed specifically to allow for cities and counties to incorporate environmental considerations into their policies and operations and thereby better manage liability risk. Private operators serving private clients do not benefit from the above-referenced legal doctrines that afford liability immunity to local units of government. However, where a private client would like to reduce the environmental impact of ice and snow management on its property, private contract language can reduce the operator's liability risk from instituting more environmentally friendly practices. The accompanying private operator Model Contract Language is offered for this purpose.

The MPCA's Green Leases template includes a sample provision, "Storm water," that the Committee considered as one resource available for private operators.

(see <https://www.pca.state.mn.us/living-green/green-leases>)

Landlord shall use its best efforts to prevent run-off of snow and ice removal products to the extent possible by having all contractors or workers applying de-icer attend MPCA Smart Salting level 1 training, receive certification, and keep certification current. Landlord, or its building managers and operators must be MPCA Smart Salting level 2 certified and develop and follow a Snow and Ice Policy.

Planning Background

In February 2016, Freshwater Society and Fortin Consulting joined with Smith Partners in a presentation at the 15th Annual Road Salt Symposium titled “Is Salt Your Only Defense?” The presentation responded to requests from cities, counties, and private operators, increasingly interested in reducing application of salt, sand, and other deicers as part of their winter maintenance operations, for legal guidance on how to manage risk and liability for their snow and ice management practices. Fortin Consulting and Freshwater Society pursued the strong interest of symposium attendees to understand and limit legal liability risk for snow and ice management by organizing an Advisory Committee comprising snow and ice management professionals from around Minnesota. This Advisory Committee was to meet and develop a Model Snow and Ice Management Policy. Smith Partners provided legal background, framework, and guidance on snow and ice management risks and liability to the Advisory Committee, and helped to draft the Model Policy.

The Advisory Committee, comprising city, county, and watershed district management professionals, representation from the Minnesota Pollution Control Agency (MPCA), and private operator representatives (Minnesota Nursery and Landscape Association), met three times during Summer 2016 to draft the Model Policy.

Authority

The comments on the drafts of the Model Policy focused on the substantive policies proposed. State law authorizes cities and counties to manage snow and ice within their jurisdictions. Private snow and ice management operators are required under Minnesota law to manage their risks and adhere to a duty of care.

Development of the Model Policy*City, County, and Private Snow and Ice Management Professional Engagement and Draft Policy*

The development of the Model Policy relied on Fortin Consulting’s strong relationships with snow and ice professionals throughout Minnesota and history of working with state and local agencies to develop snow and ice management handbooks, manuals,

trainings, and other resources. To best ensure that the Model Policy integrates most effectively and productively with existing city, county, and private operator policies, the Model Snow and Ice Management Policy Advisory Committee framed the Model Policy drafting through three key meetings:

The Advisory Committee first met on June 29, 2016 at the Freshwater Society office. The Committee reviewed a summary of legal decisions in snow and ice management cases; sample snow and ice management policies; and examples of different city, county, and private operator snow and ice management policies and contracts. By the end of the June 29 meeting, the Advisory Committee determined the priority content for the Model Policy.

At its second meeting on July 20, 2016, the Advisory Committee reviewed the first draft Snow and Ice Management Model Policy. The first draft Model Policy was developed using the comments, discussion, and feedback from the June 29 Advisory Committee meeting. Based on its review of the first draft, the Committee agreed on a policy framework that would express the discretionary elements of snow and ice management decisionmaking, while also anticipating opportunity for cities and counties to insert actual substantive and technical details.

Smith Partners incorporated the comments, discussion, and feedback from the July 20 Advisory Committee meeting into a second draft Model Snow and Ice Management Policy for Advisory Committee review. In addition, the Advisory Committee incorporated other reviewers in the process to offer feedback. The second draft was circulated among several Minnesota local government attorneys for legal peer review and feedback. The Committee invited review of the second draft Model Policy by the League of Minnesota Cities.

Smith Partners incorporated feedback on the second draft from city and county attorneys, the League of Minnesota Cities, the Advisory Committee, and other reviewers into a third draft Model Policy.

At its final meeting on August 10, the Advisory Committee approved the third draft Model Policy, contingent on the incorporation of changes decided upon at the meeting.

The Model Policy – Guidance and Explanations

The remainder of this Guidance Document summarizes comments and discussion on the Model Policy, and explains how the Advisory Committee structured the Model Policy in response. This Guidance Document then provides background and insights into the operation of each section of the Model Policy.

Overarching Discussion and the Advisory Committee's Responses

MODEL POLICY INCORPORATION OF TECHNICAL GUIDANCE

Members of the Advisory Committee considered numerous times the question of whether, and how much, the Model Policy should include snow and ice management technical practices and guidance. Snow and ice management professionals from cities and counties expressed concern that the Model Policy would duplicate the technical guidance content already contained in other resources, including city and county technical manuals and snow and ice guidance manuals published by the MPCA. Among other discussion, city and county snow and ice management professionals expressed concern about attempting to recreate the level of detail in existing guidance documents developed based on years of snow and ice management experience.

After much discussion about inclusion of detailed operational and technical guidance sections, the Committee elected to eliminate specific technical guidance from the Model Policy. The framework of the Model Policy instead structures the discretion of authorized individuals to make administrative and operational decisions about snow and ice management. The Model Policy includes a reference to the best practices and other technical resources contained in the snow and ice manuals published by the MPCA (*see* section D-2) and assumes that individual cities and counties will develop and insert appropriate substantive and technical policies and practices as appropriate.

DETERMINING SNOW AND ICE MANAGEMENT PRIORITIES

Several Committee members observed that snow and ice management priorities established by the Committee in the Model Policy (*see* section B) would not be consistent in all particulars with other city and county management priorities. The cities and counties agreed that the Model Policy would provide a structure to help

secure for cities and counties the strongest possible liability protection for judgments made in forming the specifics of their snow and ice policies. Cities and counties should insert their management priorities into this policy structure.

COORDINATION AND REASONABLE EXPECTATIONS

The Committee identified coordination among operators from different jurisdictions, and reasonable expectations about different roads and public responsibility to practice due care, as two main policy needs for the Model Policy to address.

Section-by-Section Review – Substantive Rules

The balance of this Guidance Document explains the rationale supporting the framework of each Model Policy section. While this document attempts to be fully explanatory, it is important for all interested parties to analyze the actual text of the sections to gain a complete understanding of the Model Policy.

The Model Policy has been drafted and refined first and foremost to implement the snow and ice management responsibilities and support the discretion of cities and counties in allocating authority and making snow and ice management decisions.

SECTION A – INTRODUCTION

The Introduction paragraphs (1–7) express the elements to be considered and weighed by cities and counties engaged in snow and ice management.

Importantly, this section provides a framework for judgments made by authorized individuals in making snow and ice management decisions. Some of the information in these paragraphs is articulated in other manuals and policies relied on by snow and ice management professionals in Minnesota. Specifically, the Committee agreed that a foundation for liability protection is of critical importance if cities and counties are to be comfortable in considering the environmental impact of snow and ice management practices, where incorporating such considerations may result, for example, in moderating the use of salt or sand in appropriate instances.

As explained elsewhere in this Guidance Document, individual city councils and county boards will make the decision to use this Model Policy. Sections B, D, E, and F of the Model Policy provide strong backing for the exercise of discretion by such bodies in snow and ice management policy making.

SECTION B – SNOW AND ICE MANAGEMENT PRIORITIES

The purpose of this section is to clearly state that authority is delegated to the decision maker to balance numerous considerations (*see* Section A-1-8).

The Committee discussed how distinct local service priorities are based on local roads, temporary and permanent conditions, and public expectations. Committee members agreed that level of service policies as decided and maintained by individual cities and counties are a better foundation for best management practices than a uniform level of service policy for all cities and counties. The Committee agreed that, like other actual substantive and technical details, level of service details will be inserted into the Policy by cities and counties. The Committee discussed the substantial experience of cities and counties to effectively and efficiently manage snow and ice conditions.

Additional considerations

The Committee considered the additional technical element of re-directing snow and ice management in response to snow and ice conditions. Committee members agreed that cities and counties may at their discretion develop or rely on existing policies for modifying normal level of service.

SECTION C – TRAINING

Section C defers authority to cities and counties to determine training requirements and programs for snow and ice management professionals and other personnel. This training section provides a structure for cities and counties to use and delegate judgment to determine appropriate training.

The Committee references training best practices, included in the MPCA-published manuals and existing policies, in the Model Policy. The Committee did not create new responsibilities for cities and counties in this section. The Committee agreed that more cities and counties would adopt the model policy and consider appropriate training

opportunities for operators, and education for the public, without a requirement in this section that training be conducted. However, liability protection of a city or county will be strengthened when administrative or operational personnel exercising delegated discretion under the policy have received training and the training is documented. The Committee agreed that documentation of training is already practiced among snow and ice management entities, and included this requirement in the policy.

The Committee agreed that requiring specific training in the Model Policy would make it difficult for private operators that would need to navigate different city-by-city training requirements, and opted to instead encourage non-mandatory training. The Committee agreed that training such as Smart Salting level 1 and level 2, should be considered by jurisdictions and private operators for inclusion in a training program.

Other useful snow and ice management tools that the Committee discussed as beneficial resources are the MPCA web-based report card reflecting compliance with snow and ice management best practices, and the MPCA's Twin Cities Metropolitan Area Chloride Management Plan (2016), which includes training and educational resources.

Finally, Committee discussions noted that other city or county departments, in particular those with emergency response authorities, have a role in ice and snow management. This section includes an important reminder that training may be important not only for public works personnel or other city or county personnel within the department specifically responsible for ice and snow management, but also, and in some respects, even more so, for personnel in other departments with a coordinative or supportive role.

SECTION D – DELEGATIONS OF AUTHORITY

It is not practical for the city council or county board of commissioners to craft the details of ice and snow management policies. More so, these details and the judgments necessary to determine them require expertise that these policymaking bodies do not have. Policies must leave room for judgment to be exercised under the immediate circumstances of a weather event.

The law governing liability protection recognizes this and therefore extends protection for discretionary decisionmaking beyond the policymaking body to city and county employees who must exercise judgment in carrying out their responsibilities. It is important, however, for the delegation of such discretionary decisionmaking authority from the city council or county board to be clearly evident. This section creates a framework for the city or county policymaking body to delegate authority to establish and implement local snow and ice management policies.

The section includes space to insert an individualized city or county complaint documentation and response policy to accommodate individual city and county complaint handling practices, which reflect different abilities to manage timing and response to complaints. The Committee discussed how some jurisdictions have the resources to respond to complaints immediately, others have a different policy for complaints received during the day and those received at night, and others have a 24-hour response policy. Committee members agreed that allowing the flexibility for jurisdictions to incorporate these specific policies in the Model Policy is the most workable approach.

Authority to enter into contracts for services

Paragraph 1 of this section concerns contracting for snow and ice management services. It does not state the policy of the city or county personnel as to whether it will enter into such contracts and, if so, whether the city council or county board must approve a particular contract; each city or county should incorporate its policy in this regard. What the section does do, however, is mandate a specific set of terms that any such contract must include to provide a basic framework of contract-based liability protection for the city or county.

Operational and technical policy authority

Paragraph 2 of this section delegates to a specific administrative employee (which may be a city/county engineer, a director of public works, or similar) the authority to establish and modify operational and technical snow and ice management policies. As noted above, this delegation recognizes that while certain judgments such as overall safety risk level and program funding lie at the level of the policymaking body, other

judgments critical to setting management policies rely on expertise and experience held at the administrative level.

The Committee agreed to leave to cities and counties the discretion to determine protocols for snow and ice management, but to require balancing of considerations listed in Section A, as well as specific environmental considerations (see Section D–2–c). The criteria in this section reference the two MPCA–published manuals (Parking Lot Sidewalk and Maintenance Manual (MPCA, 2015), and Minnesota Snow and Ice Control Field Handbook for Snowplow Operators (Minnesota Local Road Research Board, 2012)) on which cities, counties, and private operators rely. It is advised that city and county personnel maintain awareness of best practices and conform to them as appropriate. That a particular policy or practice conforms to best practices tends to be evidence that the policy or practice reflects a sound balancing of relevant public concerns and tends to show that personnel are operating with due care.

Exercise of judgment by field personnel

Paragraph 3 of this section authorizes snow and ice management personnel to adjust snow and ice management operations consistent with city or county policy. The Committee agreed that trained and experienced operators are constantly balancing numerous considerations when managing snow and ice operations. A common, agreed upon thread in the Committee’s discussion is that each snow and ice event is different, and that operator discretion and professional judgment always is in play in managing snow and ice operations. Because operational activity that does not involve judgment and discretion does not fall within the liability protections afforded by law, it is important to document that during snow and ice operations, even field personnel are engaged in discretionary activity that rests on their experience and training.

SECTION E – OPERATIONAL FRAMEWORK

This section establishes a framework for operational considerations in snow and ice management, and delegates authority to cities and counties to insert the substantive and technical details of these provisions.

Snow and ice management entities have extensive experience in managing operations. The Advisory Committee agreed that, rather than prescribing new policies duplicating existing, locally created and functional operational frameworks, this Model Policy section should have as its purpose to not duplicate what exists and works. This section provides spaces for snow and ice management entities to insert current policies, and also offers model language for jurisdictions without these policies, or that are interested in revising their policies. This section reflects the Committee's agreement that snow and ice managers and operators with extensive discretion under this Model Policy to manage snow and ice must document a deviation from the Model Policy. Some paragraphs, such as E-4, Damage to Personal Property, may be cross-referenced with the existing jurisdictional claims policy for each city and county.

SECTION F – ASSUMING RESPONSIBILITY FOR PRIVATE ROADWAYS OR PARKING AREAS

Section F generally applies to snow and ice management by a city or county with respect to roadways or other surfaces that are not owned by or otherwise under the operational responsibility of that public entity. The Committee noted that different jurisdictions may have policies in place regarding snow and ice management on private property, and agreed that a space should be included for existing city or county policies. The purpose of this statement in the Policy, however, is to establish explicitly that the public body does not have a responsibility unless there is an affirmative, documented agreement to the contrary.

RULE G – COORDINATION WITH OTHER JURISDICTIONS

Section G aims to minimize conflict and ensure mutual understanding with other jurisdictions by clarifying snow and ice management responsibilities on boundary roads, parking lots, sidewalks, and other areas. The section includes a space for cities and counties to list those streets managed by the state. In response to discussion among Committee members, the Advisory Committee agreed that the section should require cities and counties to coordinate with nearby jurisdictions to better be able to balance the considerations in Section A, and facilitate the operation of the Model Policy alongside the policies of other jurisdictions.

Table 1 – Technical Advisory Committee participants

Name	Affiliation
Jeff Davies	City of Grand Rapids
Mark Maloney	City of Shoreview
Dan Plizga	City of Rochester
Steven Lawrence	City of St. Cloud
John Wickenhauser	Carver County
Matt Morreim	City of Saint Paul
Craig Eldred	City of Waconia
Becky Christopher	Minnehaha Creek Watershed District
Erica Sniegowski	Nine Mile Creek Watershed District
Claire Bleser	Riley Purgatory Bluff Creek Watershed District
Leslie Larson	Minnesota Nursery and Landscape Association
Brooke Asleson	Minnesota Pollution Control Agency
Steve Woods	Freshwater Society
Connie Fortin	Fortin Consulting

MODEL LANGUAGE for PRIVATE SNOW & ICE SERVICE CONTRACT

1. The following terms apply to CONTRACTOR's use of anti-icing, de-icing and traction-enhancing materials and methods (together, "ice management materials and methods").
2. Under this Contract, CONTRACTOR exercises judgment as to ice management materials and methods, including when application of material is appropriate, choice of material, method of application and application rates. In making these decisions, CONTRACTOR in its judgment considers, among other things, weather conditions, traction needs, cost and damage from materials to paved surfaces and vegetation. The Contract states OWNER's recognition that snow removal and ice management services will not necessarily result in bare pavement or sidewalks.
3. Further, ice management materials contribute pollutants including sand and chlorides to the environment. Chloride accumulates in the environment, and high chloride levels: (a) are harmful to fish and other freshwater aquatic life; (b) may impair groundwater and drinking water supplies; and (c) may cause injury to infrastructure and vehicles, plants, soil, pets and wildlife. Sand may affect surface water habitat and may increase public cost by accumulating in downstream conveyances and basins.
4. In recognition of these concerns, the approach to ice management and reliance on ice management materials presently is subject to innovation and evolution of best practices. CONTRACTOR provides training to its employees so that they are knowledgeable as to best practices, including those contained in the Winter Parking Lot and Sidewalk Maintenance Manual (Minnesota Pollution Control Agency, 2015) and the Minnesota Snow and Ice Control Field Handbook for Snowplow Operators (Minnesota Local Road Research Board, 2012), as they may be updated.
5. CONTRACTOR and OWNER agree that consideration of these impacts is appropriate and should be taken into account in CONTRACTOR's judgment as to ice management materials and methods along with the other conditions described above.
6. Accordingly, OWNER agrees as follows:
 - a. OWNER will not claim that CONTRACTOR has violated or breached this Contract by giving consideration to pollutant impacts in its ice management materials and methods, unless CONTRACTOR has deviated substantially from best practices.

b. In any claim, dispute or proceeding concerning damage or injury to OWNER or any third party, OWNER will not claim that CONTRACTOR has violated a duty of care or any other applicable legal standard by giving consideration to pollutant impacts in its ice management materials and methods, unless CONTRACTOR has deviated substantially from best practices.

