

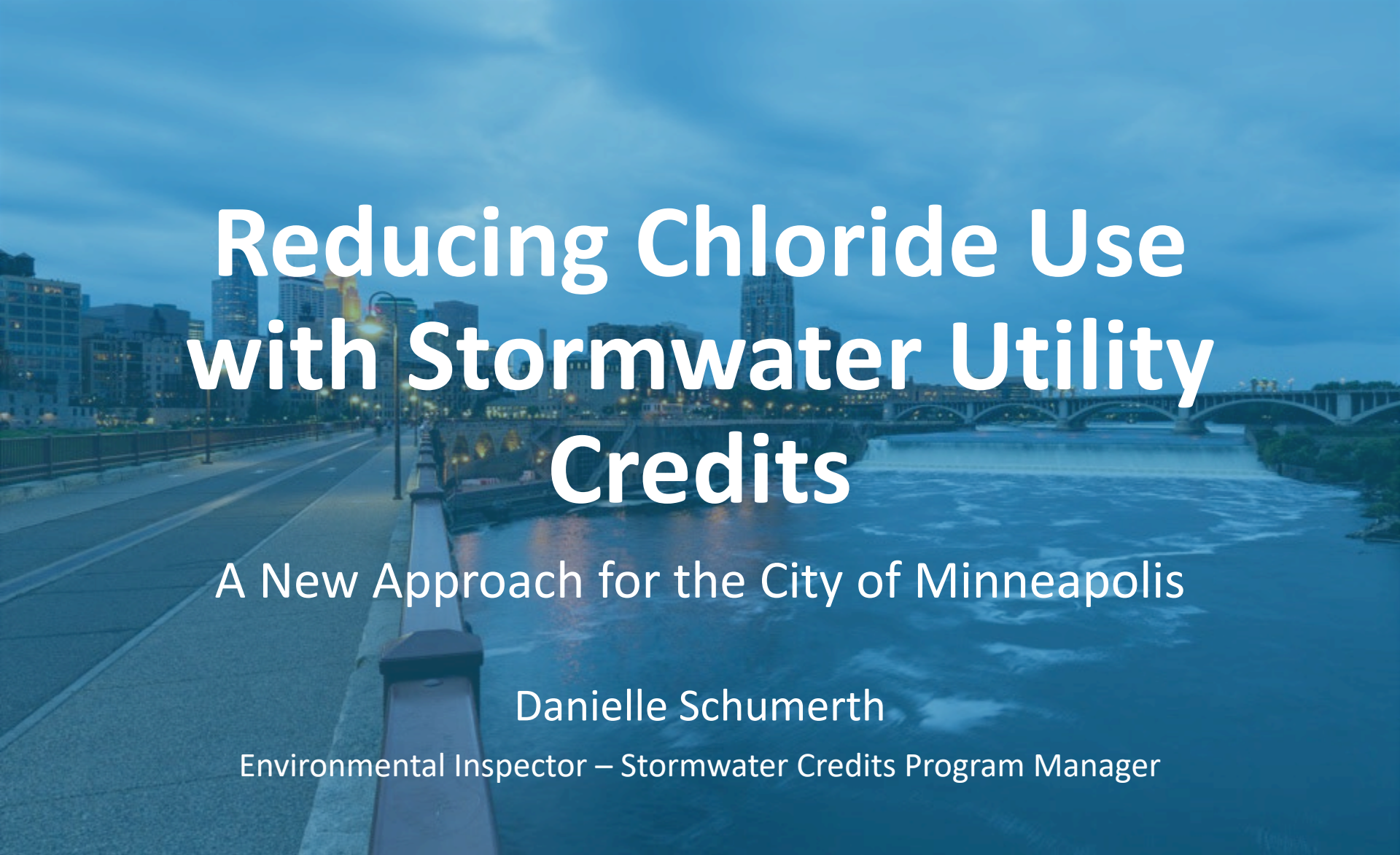
# Danielle Schumerth

## City of Minneapolis

### Afternoon Speaker

*Reducing Chloride Use with  
Stormwater Utility Credits*





# Reducing Chloride Use with Stormwater Utility Credits

A New Approach for the City of Minneapolis

Danielle Schumerth

Environmental Inspector – Stormwater Credits Program Manager



# Background: Minneapolis Credits Program

- 2005
- Requirements originally matched City Ordinance standards
- 2021 proposal designed to better match Program requirements with Divisional goals for stormwater treatment
- Target Chloride use



# 2 Levels of Chloride Management for Credits Program

Basic  
Chloride  
Management  
Plan  
(CMP)

Advanced  
Chloride  
Management  
Plan  
(CMP)

Each plan type includes a sample and a fillable PDF  
link on the application page



# Basic CMP

- Required as part of Stormwater Development Ordinance O & M plans
- Required to be included in commercial credit application
- Includes educational component

# Advanced CMP

- Meets City Storm Water Management Plan (SWMP) requirements
- Eligible for a 30% credit on areas of property that are part of the Advanced CMP treatment plan
- Additional work compared to Basic CMP



## Basic Plan Criteria

### Required information:

- ☐ Individual responsible for the winter maintenance at this site
  - Name
  - Relation to property
  - Phone number
  - Email
  
- ☐ Fill out Salt Stewardship Pledge – [Minneapolis Salt Mini-Course](#)
  - Go through the Salt Mini-Course and fill out the pledge
  - Proof of pledge from at least one person involved in winter maintenance operations at this site
  
- ☐ MPCA Smart salting certificate of at least one person involved in winter maintenance operations at this site
  - Name
  - Company
  - Phone number
  - Email
  - Proof of Certificate

\*[MPCA list of certified applicators](#)

\*[MPCA-approved salt training calendar](#)

### Recommended:

Other low-salt practices (as described in Advanced Plan)

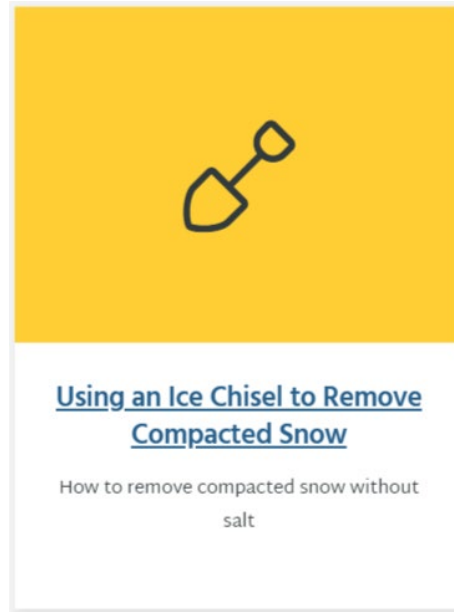
\*[Parking lot manual](#) (includes recommended practices for lowering salt use).



# Salt Mini Course

<https://www2.minneapolismn.gov/government/programs-initiatives/environmental-programs/salt/#d.en.173968>

- Course Instructions
- Introduction
- Impacts
- Actions & Best Practices
- Key Takeaways
- Pledge
- Photos with captions
- Videos





## Salt Stewardship Pledge

Fill out the pledge after going through the Salt Mini-Course below.

### Salt Stewardship Pledge

I pledge to:

#### Use Less Salt

**Shovel** and scrape promptly and often. Clear walkways before snow turns to ice and avoid using salt.

**Scatter** salt lightly only where needed. Aim for 3 inches of space between salt grains.

**Reduce** applying. Salt only goes on icy spots. Do not put salt on bare pavement that has no ice.

**Sweep** up and reuse leftover salt after ice melts. Leftover salt is a sign of over salting.

**Safety** first. Walk slowly and carefully on icy ground.

\*This is not a Smart Salting Certification. If you would like to become certified see the MPCA link in Resources.

#### Name

#### Email

#### Affiliation

What organization are you a part of? Are you a resident, business, student, water professional, etc.

#### Best practices

What changes will you make to your de-icing salt use?

#### Amount of salt reduction

How much less de-icing salt will you use this winter? (ie pounds)

#### Today's Date

#### Questions or comments

Check if you would like to receive a salt decal to display your commitment

☐

#### Address

Please share your address if you would like to receive a salt decal to display your commitment

☐ Send me a copy of my responses

Submit

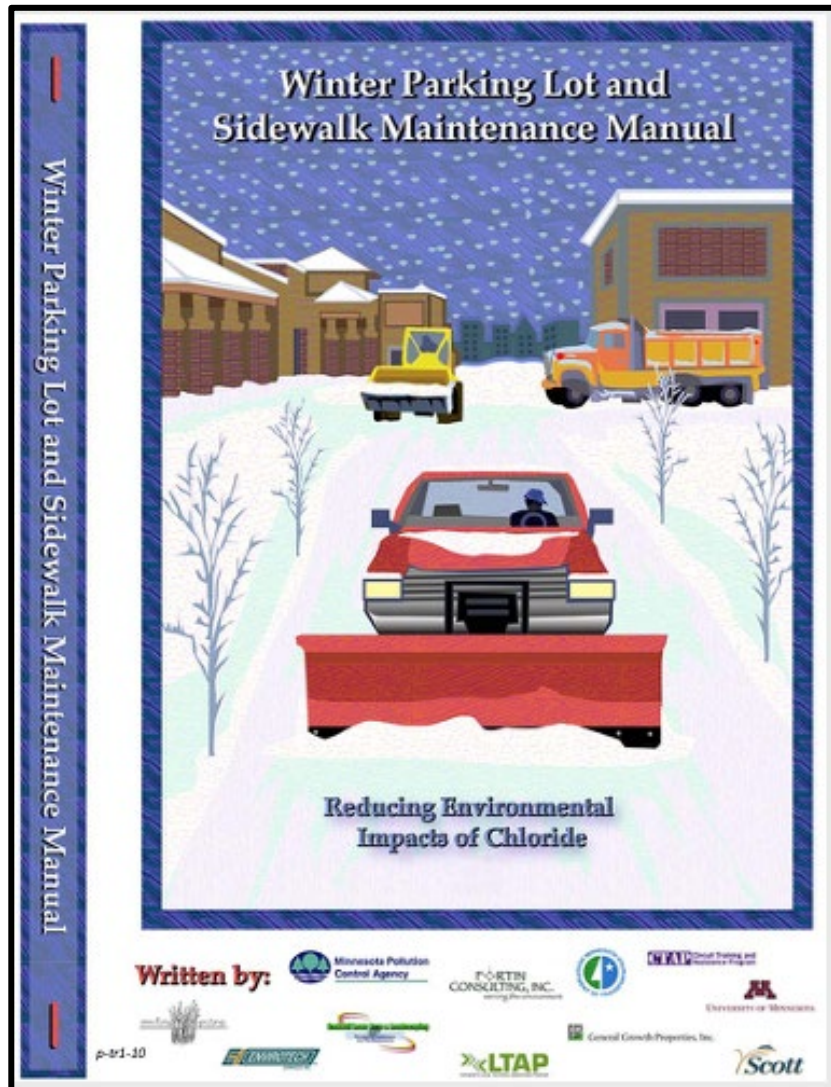
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# MPCA

## Winter Parking Lot & Sidewalk Maintenance Manual



- Provides further information for responsible salt management
- Includes helpful pictures, graphs, & diagrams
- Helpful environmental and cost-saving tips shown with easy-to-notice symbols



## Advanced Plan Criteria

*Includes all components of the Basic Plan*

Choose from recommended fields:

Easy to verify:

- ☐ X% of winter maintenance crew are MPCA Smart Salting certified  
[https://stormwater.pca.state.mn.us/index.php/Smart Salting \(S2\) training information](https://stormwater.pca.state.mn.us/index.php/Smart_Salting_(S2)_training_information)
- ☐ Subcontractors' organizations are Level 2 MPCA Smart Salting certified  
[https://stormwater.pca.state.mn.us/index.php/Smart Salting \(S2\) training information](https://stormwater.pca.state.mn.us/index.php/Smart_Salting_(S2)_training_information)

Easy to observe:

- ☐ No granular salt on surfaces after the event
- ☐ Proper storage of granular deicers
- ☐ Proper storage of liquid deicers
- ☐ Proper storage of snow (not in waters of the state)
- ☐ Educational signs on property

\*Proper liquid storage requirements

\*Smart salting resources for applicators

Choose from the recommended list:

- ☐ Documentation
  - ☐ Map or spreadsheet
    - ☐ Size of entire maintenance area
    - ☐ Estimated amount of deicer per pass\*
    - ☐ Size of each maintenance area (i.e. main parking lot, front sidewalk...)
    - ☐ Level of service for each area
    - ☐ Estimated amount of deicer needed per pass for each area
  - ☐ Annual report
    - ☐ Total deicer use (in lb./gal)
    - ☐ Challenges in reducing salt use
    - ☐ Successes in reducing salt use
    - ☐ Plans for smart salting next year





**Choose from the list of best practices:**

- ☐ Remove snow before applying deicer
  - ☐ Snow removal early and often to prevent compaction
  - ☐ Better and or more snow removal tools (brooms, segmented blades, blowers, underbody blades, shovels by salt bucket...)
- ☐ Measure pavement temperature and trend. Use this information to guide deicer selection and application rates
- ☐ Have available a variety of deicer/abrasive materials so you can select the product that will work best in the lowest commodity depending on the conditions
  - ☐ If deicers are being use, they should include liquid deicers
- ☐ Improve salt bucket situation (educate users, provide alternatives like shovels and brooms, provide application rate guidance, restrict use, provide small scoops)
- ☐ Calibrate spreaders, put calibration card on spreaders.
  - ☐ Use equipment capable of spreading at low rates suggested in MPCA parking lot manual or work towards this goal as you acquire new equipment.
  - ☐ Create application rate charts so applicators can see calibration card, and application rate guidance and be able to choose most appropriate setting on
  - ☐ If your application rate charts are more than twice the rate of the MPCA Smart Salting application rate charts explain why this is necessary
- ☐ Sweep up extra salt after events
- ☐ Hold post storm meetings or debrief with maintenance crew on what went well and how to continue to work toward smart salting goals.
- ☐ Educate building and grounds users on smart salting and the role they play with safe driving and walking practices.
- ☐ Close areas not needed in winter so there is less surface area to salt
- ☐ Consider areas where you might change level of service from bare pavement to not bare pavement (l.e. Salted walking path to salt-free eco-path for dog walkers)
- ☐ Other





	Location	Area	Lbs. per Pass	Target	How Fast
<span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> Full Salt	Full Salt	20,480 sq. ft.	12	Bare pavement	24 hrs. after snow
<span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Half Salt	Half Salt	22,270 sq. ft.	6	Patches of snow	48 hrs. after snow
<span style="display:inline-block; width:15px; height:15px; background-color:white; border:1px solid black;"></span> No Salt	No Salt	8,460 sq. ft.	0	Compacted snow	24 hrs. after snow
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Public Sidewalk	Parking Stalls	1,240 sq. ft.	12	Bare pavement	24 hrs. after snow

\*Public Right-of-Way (ROW) not eligible for credits.

\*Use abrasive if needed for traction on the compacted snow.



# Challenges & Ideas for the Future

- New program requirement
  - Current small sample size makes it difficult to define issues & improvements
- Difficult to verify
  - Ideal to have an inspector check properties regularly in winter
  - For now, an inspector could check when passing to perform other inspection duties
- Unable to grant credits for Right-of-Way (ROW)
  - Create a program for working with properties on public sidewalk
  - Potential partnership opportunities: City Transportation Maintenance & Repair Sidewalk Inspectors, City Neighborhood & Community Relations, & Improvement Districts

A wide-angle photograph of the Minneapolis skyline under a clear blue sky. The image shows several prominent skyscrapers, including the Wells Fargo Center and the US Bank Tower. In the foreground, there is a highway with traffic and some greenery.

# Thank You!

Danielle Schumerth

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