

**INSTRUCTIONS ONLY FOR
MS4/CSO/POTW/INDUSTRIAL/IDOT/TOLLWAY TLWQS ANNUAL
REPORT**

Before submitting to IEPA: Save the Annual Report Spreadsheets as PDFs. Save the Annual Report Document as a PDF. Combine all PDFs together and use the following file name

YourOrganizationName_TLWQS_AnnualReport_2022-2023.pdf

Anything highlighted Green should be updated by your staff and not highlighted before submitting to IEPA and the Workgroup.

Annual Report for Year 1 (2022-2023) of the Time Limited Water Quality Standard for Chloride

[DATE]

Prepared by [ORGANIZATION NAME]



[ORGANIZATION NAME] is a member of the Chicago Area Waterways Chloride Workgroup/Lower Des Plaines Watershed Group

Add your Organization's Logo Here

Keep the watershed group your organization is a member of and include that workgroup's logo (delete the other workgroup if you only participate in one group)

1.0 Introduction to Chloride Issue in CAWS/LDPR

This Pollutant Minimization Plan (PMP) has been prepared by [ORGANIZATION NAME or FACILITY NAME] to reduce the environmental impacts from the organization's chloride related operations. [ORGANIZATION or FACILITY NAME] is a discharger covered under the Time Limited Water Quality Standard for Chloride for the Chicago Area Waterways System and Lower Des Plaines River watersheds. This PMP has been prepared to meet the requirements laid out in the Time Limited Water Quality Standard (TLWQS) for Chloride. The term of this PMP covers the first 5-years of the TLWQS period and will be updated following the re-evaluations at Years 4 ½, 9 ½, and 14 ½.

Chloride is a permanent pollutant. It does not degrade over time and continues to accumulate in the environment. Proactive measures to reduce the amount of chloride discharged can help reduce the impacts from chloride on receiving waterways and the environment. Chloride impacts aquatic life, vegetation, and infrastructure. As the chloride concentrations increase and our waters become saltier, aquatic and plant biodiversity decreases and native species are overtaken by salt tolerant invasive species.

Chlorides are commonly found in road salt, fertilizers, water softeners, dust suppressants, and certain industrial processes. Chloride-based deicers, like rock salt, are used on parking lots, sidewalks, and roads to provide safe surfaces to the public during the winter months. These deicers are one of most common sources of chloride in the Chicago region.

The water quality standard for chloride for the Chicago Area Waterway System (CAWS) was updated as part of the rulemaking process related to changing the designated use of the CAWS. The chloride standard was updated from 1,500 mg/L during the winter and 500 mg/L during the summer to 500 mg/L all year round. The change in the chloride water quality standard took effect in 2018. Because portions of the CAWS were not going to meet this new standard due to the need to maintain public safety on roads, highways, sidewalks and parking lots during the winter months, a joint submittal and supporting individual petitions were submitted between 2015 and 2018 to the Illinois Pollution Control Board for a variance from the chloride standard. The joint petition laid out best management practices that can be achieved by the petitioners to reduce their chloride use while maintaining public safety during winter storms. In addition to the CAWS, portions of the Lower Des Plaines River watershed were included as it receives water from the CAWS.

On November 4, 2021, the IPCB issued an Opinion and Order for a Time Limited Water Quality Standard (TLWQS) for Chloride for portions of the CAWS and Lower Des Plaines River watersheds. The TLWQS for Chloride watersheds are defined in the Opinion and Order as the Des Plaines River watershed from the Kankakee River to the Will County Line (except for the DuPage River watershed) and the CAWS watershed (except the North Branch Chicago River watershed upstream of the North Shore Channel and those portions of the watershed located in Indiana). This is a watershed-based approach to reduce the chloride concentrations in the CAWS and Lower Des Plaines River. The TLWQS for Chloride requires all dischargers covered under the TLWQS for Chloride to create PMPs and implement specific best management practices based on their operations to reduce their chloride discharges.

2.0 Organization, Facility Information

Copy and paste the information for this section from your PMP (it should be Section 2 if you used the PMP template from the workgroups) and update to reflect any changes. If you did not use the workgroup's PMP template, complete the table and provide the following information:

Agency Name:		
Facility Name:		Permit Number:
Facility Address:		
City:	State:	Zip Code:

Provide a brief narrative description of your facility (or facilities) and/or community. Relevant information that should be included in your description:

-MS4/CSO/IDOT/TOLLWAY – Be sure to include the number of actual lane miles maintained within your jurisdiction as part of your description. Include any salt storage facilities and capacities.

-Industrial/POTW – briefly describe your facilities, activities

2.1 Level of Service for Winter Maintenance Activities

Copy and paste from your PMP and update to reflect any changes.

3.0 Best Management Practices

Details regarding [Organization Name]'s implementation of the best management practices (BMPs) identified as part of the TLWQS for Chloride are included below.

If your organization is currently implementing the BMP – copy and paste your description from your PMP and update to reflect any changes since you completed your PMP.

If your organization used a different format for your PMP and are currently implementing the BMP – provide a brief description of your current implementation and update to reflect any changes each year.

If your organization is NOT currently implementing the BMP and you have a plan from your PMP – provide a status update on that plan. What step are you at in the process to implement the BMP? What steps have you completed thus far to implement the BMP? What is your next step to implement the BMP?

Workgroup BMP

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
The permittee must participate in a Chlorides workgroup for the CAWS or LDPR, depending on the watershed within which the facility's discharge is located.	

Salt Storage and Handling BMPs

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
<p>Store all salt on an impermeable pad that must be constructed to ensure that minimal stormwater is coming into contact with salt unless the salt is stored in a container that ensures stormwater does not come into contact with the salt.</p>	
<p>Cover salt piles at all times except when in active use, unless stored indoors.</p>	
<p>For working areas, provide berms and or sufficient slope to allow snow melt and stormwater to drain away from the area. If snow melt and stormwater cannot be drained away from the working area, channeling water to a collection point such as a sump, holding tank or lined basin for collection, discharge at a later time, use for prewetting, and use for make-up water for brine must be considered.</p>	
<p>MS4/CSO Only - Use deicing material storage structures for all communities covered under General Permit ILR40 for MS4 communities.</p>	
<p>Good housekeeping practices must be implemented at the site, including:</p> <ul style="list-style-type: none"> • cleanup of salt at the end of each day or conclusion of a storm event; • tarping of trucks for transportation of bulk chloride; • maintaining the pad and equipment; • good practices during loading and unloading; 	

<ul style="list-style-type: none"> • cleanup of loading and spreading equipment after each snow/ice event; • a written inspection program for storage facility, structures and work area; • removing surplus materials from the site when winter activity finished where applicable; • annual inspection and repairs completed when practical; • evaluate the opportunity to reduce or reuse the wash water. 	
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Winter Maintenance Operations BMPs

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
Calibrate all salt spreading equipment at least annually before November 30th. Records of the calibration results must be maintained for each piece of spreading equipment.	
Pre-wet road salt before use, either by applying liquids to the salt stockpile, or by applying liquids by way of the spreading equipment as the salt is deposited on the road.	
Use equipment to measure the pavement temperature unless such equipment has already been installed on road salt spreading vehicles.	
Develop and implement a protocol to vary the salt application rate based on pavement temperature, existing weather conditions, and forecasted weather conditions.	
Track and record salt quantity used and storm conditions from each call-out.	

<p>Develop a written plan for implementation of anti-icing, with milestones. The plan should consider increased use of liquids (e.g., carbohydrate products) beginning with critical locations such as bridges over streams.</p>	
<p>Provide employees involved in winter maintenance operations with annual training before November 30th on best management practices in the use of road salt in operations, including the practice of plowing first and applying salt only after snow has been cleared.</p>	
<p>Be responsible for complying with all applicable BMPs even when deicing practices are contracted out and ensure that contractors are properly trained and comply with all applicable BMPs.</p>	
<p>Complete an annual report, as required by paragraph 3(B) of this order, which is standardized in an electronic format and submitted to the IEPA's website and to the watershed group.</p>	
<p>Obtain and put into place equipment necessary to implement all salt spreading/deicing measure specified in this BMP, such as any new or retrofitted salt spreading equipment necessary to allow for pre-wetting and proper rates of application.</p>	
<p>MS4/CSO/IDOT/TOLLWAY Only - Install equipment to measure the pavement temperature on the winter maintenance fleet for a sufficient number of vehicles to provide sufficient information to adjust application rates for the most efficient levels.</p>	

Develop and complete a plan to equip the winter maintenance fleet before the first re-evaluation.	
MS4/CSO/IDOT/TOLLWAY Only - Before the first re-evaluation, develop a method for conducting a post-winter review to identify areas of success and areas in need of improvement. Items to be completed as part of the review must include, but are not limited to, an evaluation of each salt spreader's application rate, variations in application rates, and discussion of the variation compared to the recommended rates. Once developed, the review should occur annually in the spring/early summer following each winter season.	

Additional BMPs Identified for Agency/Facility

If your agency currently does any other BMPs for chlorides specific to your operations (for industrial members – this may include any BMPs related to chlorides in your processes), list them out in the table below and provide details about how you are currently implementing those BMPs.

These should include the same additional BMPs from your PMP – please copy and paste the BMPs from your PMP. If you've added any BMPs to your operations that aren't listed above since completing your PMP, also add them to this table.

If you don't use any additional BMPs, delete this table/section.

BMP	Agency Description of Current Implementation

3.1 Analysis of BMPs Implemented

Analyze your organization's implementation of the BMPs.

Describe any benefits, struggles, unexpected achievements, or setbacks your organization experienced during the last year using the BMPs included in the TLWQS.

3.2 Analysis of Alternative Treatments or New Technology

Are there any alternative treatments or new technology that your organization could use and benefit from in the future? Describe and list any alternative treatments or new technologies your organization could realistically add to your operations and benefit from in the future.

4.0 Deicing/Anti-Icing Agents Used

Materials used by [Organization Name] for the 2022-2023 winter season are included as Appendix 1.

Complete the Materials tab of the annual report spreadsheet for all materials used during the 2022-2023 winter season. The tables below are for your reference of what info is in the spreadsheet. Be sure to scroll down on the spreadsheet to complete the second table and include how many lane miles and/or parking lot and sidewalk area was maintained for the 2022-2023 winter. If you don't maintain roads or if you don't maintain parking lots sidewalks, enter N/A for that item in the spreadsheet.

Material or Product	Dry, Pre-Wet/Pretreated, or Liquid	Lane Miles Treated with the Product	Parking Lot and Sidewalk Area Treated with the Product	Total Amount Used 2022-2023 (Year 1)	Total Amount Used Over First 5 Year Term
	Drop Down Box – choose what fits best with your material				Automatically Calculates for you

Estimates of Relative Material Amounts Applied and Coverage Achieved

Year	Total Lane Miles Maintained	Total Parking Lot and Sidewalk Area (Sq. Ft.) Maintained	Percent of Total Lane Miles Treated with Dry Materials	Percent of Total Lane Miles Treated with Pre-Wet or Pretreated Materials	Percent of Total Lane Miles Treated with Liquids	Percent of Total Parking Lot and Sidewalk Area Treated with Dry	Percent of Total Parking Lot and Sidewalk Area Treated with Pre-wet or Pretreated Materials	Percent of Total Parking Lot and Sidewalk Area Treated with Liquids
2022-2023			Automatically Calculates for you	Automatically Calculates for you	Automatically Calculates for you	Automatically Calculates for you	Automatically Calculates for you	Automatically Calculates for you

4.1 Application Rates

The application rates used by [Organization Name] for the 2022-2023 winter season are included as Appendix 2.

Attach your application rate table or guidance as an appendix and reference accordingly – update this each year.

4.1.1 Application Rate Analysis

Provide a brief description of how application rates have changed over the term of the TLWQS. Here are some guiding questions that may help you create your description:

How well did your application rates work during this most recent winter vs the previous winter?

Did you reduce your rates from previous non-TLWQS years or did you keep the rates the same? If you reduced the rates how well did the reduced rates work?

Do you have plans to try reducing the application rates in future years?

4.2 Application Practices

[Organization Name] uses the following practices to apply deicing and anti-icing materials:

- List all practices used - anti-icing with brine/other liquid product (specify the product), deicing with pretreated salt loaded onto trucks, deicing with on board pre-wetting, deicing with dry salt, deicing with salt brine/other liquid product (specify the product), etc.

Per the TLWQS order and permit, you are being asked to report what application practices were used and they specify this as “cleared using pre-wetted salt, cleared using anti-icing”.

Update this section each year as needed and make sure to include a couple sentences describing if dry salt application was decreased and if there were any improvements/changes to your application practices.

4.3 Call Outs

A total of [number of inches] inches of snow was reported in [your organization’s location] for the 2022-2023 winter. There were [number] freezing rain event(s) and [number] snow event(s) for the 2022-2023 winter. [Organization Name] had [number] of call outs during the 2022-2023 winter. A log of all call outs completed by [Organization Name] are included as Appendix 3.

Attach your organization’s call out log for this last winter. The information that MUST be included in the call out log:

- a. Summary of snowfall data.
- b. List of all callouts.
- c. Quantity and type of precipitation during the callout.
- d. Application rate for each type of material used during the callout.
- e. Quantity of each material used for each callout.

4.4 Use of Liquids

Provide a brief description of whether the use of liquids was increased from the previous year, and if dry chloride salt applications and rates were reduced from the previous year.

5.0 Training

[Organization Name] completed annual training for [number] of employees out of [total number] of employees who are part of the winter maintenance operations on [date(s) of training]. A list of annual training topics by type of employee is included as Appendix 4.

If your organization was unable to complete annual training, say as such and describe why.

Complete the Training tab of the annual report spreadsheet with the type of employee (plow driver, maintenance worker, supervisor, snow command, director, etc) and what training topics were covered for that type of employee (we know different types of staff may need different kinds of training to do their job when it comes to winter operations and every organization is set up differently). Update this spreadsheet as needed each year. The table below is for informational purposes only.

Role in Winter Operations	Training Topics Covered
Plow driver, maintenance worker, supervisor, snow command, director, etc.	List out training topics covered. Examples might include how to use the equipment, environmental impacts from salt, anti-icing, application rates, routes, good housekeeping around the salt shed, loading/unloading procedures, your organization's snow and ice policies, etc.

6.0 Deicing and Snow Removal Equipment and Maintenance

[Organization name] uses equipment listed in Appendix 5 during winter maintenance activities.

Complete the equipment tab in the annual report spreadsheet with the winter operations equipment your organization uses. Update the spreadsheet as needed each year.

Type of Equipment	Equipment/Vehicle Number	Type of Spreader (mechanically controlled, computer controlled, etc.)	Type of Material Used with Equipment (Dry, Pre-Wet, Pretreated, Liquid)	Other Important Equipment Information

6.1 Description of Equipment Washing and Wash Water Collection

Describe equipment washing procedures and any wash water collection/disposal/reuse in brine. If you reuse the wash water for brine production, include details about it. Be sure to include in your description: location of washing, when trucks are washed, and what is done with the wash water.

7.0 Material Storage

[Organization name] maintains [number of] storage area(s). Information regarding the storage area(s) is included in Appendix 6.

Complete the storage tab of the annual report spreadsheet with information about your winter material storage areas (salt sheds, storage tanks, etc). Update this spreadsheet as needed each year. The table below is for informational purposes.

Location of Storage Area	Material Stored (Rock Salt, Salt Brine, etc)	Amount of Material Stored	Material stored under permanent cover?	Material stored in a fully enclosed structure?	Material stored on an impervious pad?	Good housekeeping practices followed at storage area?

8.0 Capital Purchases

Identified capital purchases from [Organization Name]'s PMP to implement the BMPs and reduce chlorides in our operations over the first 5-year term of the Chloride TLWQS are included as Appendix 7.

Complete the Capital Purchases tab in the annual report spreadsheet - List any capital purchases needed to meet the TLWQS BMPs, be sure to include any from your plans to implement a specific BMP from your PMP. Provide some details about the capital purchase and what is your plan/schedule for making that capital purchase. Update this table as needed each year. The table below is for informational purposes.

Capital Purchase Description	Plan/Schedule for Purchase

8.1 Explanation of Capital Purchases Unable to Be Made According to the Reported Plan

If any of your needed purchases are not able to be made according to your plan/schedule, please provide details as to why. Examples of reasons might include “we ordered the

equipment, but due to supply shortages we have not received it yet” or “we requested funding, but it wasn’t approved for this year”.

Delete this section if all planned capital purchases were able to be made according to your reported schedule.

9.0 Environmental Monitoring Data

Chloride monitoring data is collected for the CAWS and Lower Des Plaines River watersheds per the IPCB order. The data is maintained by the workgroups. Chloride data for the CAWS is collected by MWRD for the CAWS watershed and provided to the workgroups as part of the annual reporting as required by the IPCB order. The Lower Des Plaines Watershed Group also maintains a USGS monitoring station in the Des Plaines River at Channahon, IL that collects continuous conductivity data to estimate chloride concentrations.

Chloride monitoring data reports are posted to <https://www.cawswatershed.org/reports/> and <https://ldpwatersheds.org/about-us/lower-des-plaines-watershed-group/our-work/chloride-tlwqs/>.

For the following two sections (9.1 and 9.2) – Delete these sections if they DO NOT apply to your organization.

9.1 Organization Specific Chloride Monitoring Data

[Organization Name] collects chloride monitoring data as part of its NPDES effluent data and the data is included as Appendix 8. If your organization collects chloride monitoring data as part of your operations, attach it to the annual report.

9.2 Changes to the Facility’s NPDES Treatment Technologies for Chloride

If any changes during 2022-2023 were made to your organization’s treatment technologies, specifically targeting chlorides, provide details in this section. If no changes, just state no changes were made.

10.0 Program Evaluation

Description of how you will implement an adaptive, iterative management approach based on reviewing your call out information to adjust salt application practices to achieve further chloride reductions in the coming year (2023-2024). This is asking you to describe how you will evaluate your program/operations and make changes to your program based on your evaluation for the next year to reduce chlorides in your operations.

For MS4/CSO/IDOT/Tollway this will include the plan you create as part of the BMPs to develop a plan to identify areas of improvement/success. For those of you already meeting that BMP – describe that plan and any identified changes/areas of improvement for next year. For those you NOT already meeting that

BMP – no need to add anything extra than what is in the above paragraph until you have your plan together.

10.1 Proposed Steps for the Coming Year

Describe any proposed actions/changes to your operations from the results of your program evaluation.

11.0 Workgroup Participation

Describe your organization's participation in the workgroup for the last year.

Encouraged ways to participate in the workgroup from CAWCW's Membership Renewal Letter:

- Attend and participate in quarterly membership meetings via Microsoft Teams
- Participate in Chloride TLWQS Mentoring Sessions
- Send key staff to Winter Deicing Workshops (Annual Training is required for Chloride TLWQS)
- Connect with staff of other member organizations to share ideas on chloride reduction
- Utilize Seasonal Outreach Materials available on the Chlorides in Our Watershed tab of the website and provide input on other outreach needs or formats
- Provide input to workgroup activities
- Submit Annual Report to the workgroup
- Submit completed Pollutant Minimization Plan to the workgroup
- Participate in any CAWCW sponsored surveys related to workgroup activities or projects

Encouraged ways to participate from LDWG's Membership Renewal Letter:

- Attend bi-monthly membership meetings via Zoom
- Share your draft NPDES permits with our staff – LDWG specific language should be included and we can assist with discussions with Illinois EPA or EAGs
- Participate in Chloride TLWQS Mentoring Sessions
- Send key staff to Winter Deicing Workshops (required for Chloride TLWQS)
- Utilize Seasonal Outreach Materials available on the Member tab of the website and provide input on other outreach needs or formats