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

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1. **Introduction to Chloride Issue in CAWS/LDPR**

This Pollutant Minimization Plan (PMP) has been prepared by [AGENCY or FACILITY NAME] to reduce the environmental impacts from the organization’s chloride related operations. [AGENCY 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 Plains 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.

1. **Organization, Facility Information**

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

**2.1 Level of Service for Winter Maintenance Activities**

1. **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.

**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** |
| All salt will be stored on an impermeable pad constructed to ensure that minimal stormwater comes into contact with salt. |  |
| Pads will be constructed to direct stormwater away from the salt pile. The permittee must consider directing any drainage that enters the pad to a collection point where feasible. |  |
| Outdoor salt piles not stored under permanent cover must be covered by well-secured tarps at all times except when in active use. While working on the pile, fixed or mobile berms must be incorporated around non- working face to minimize stormwater contact. The permittee must stage tarp when starting final lift and tarp over the edge of the berm/pad where possible. |  |
| Good housekeeping practices must be implemented at the site, including:   * 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; * 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. |  |
| Annual training must be conducted for employees responsible for loading/unloading/handling at docks and trucks at the facility. |  |
| An Annual Report must be completed as required by paragraph 3(B) of this order. The report must be standardized in excel, and must be submitted to the IEPA and to the watershed group. |  |
| 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. |  |
| The Permittee must make use of fixed and mobile berms where appropriate to redirect flow and tarp over the edge of the pad where possible to minimize stormwater contact. |  |
| The Permittee must consider retaining stormwater which contacts the salt from a 25- year/24- hour storm event where feasible. Such retention could be either within the berm or in a separate basin, or the impacted stormwater could be stored and used as pre-wetting brine. |  |

**Additional BMPs Identified for Agency/Facility**

|  |  |
| --- | --- |
| **BMP** | **Agency Description of Current Implementation** |
|  |  |
|  |  |
|  |  |

**3.1 Analysis of BMPs Implemented**

**3.2 Analysis of Alternative Treatments or New Technology**

1. **Deicing/Anti-Icing Agents Used**

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

**4.1 Application Rates**

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

* + 1. **Application Rate Analysis**

**4.2 Application Practices**

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

**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] call outs during the 2022-2023 winter. A log of all call outs completed by [Organization Name] are included as Appendix X.

**4.4 Use of Liquids**

1. **Training**

[Organization Name] completed annual training for [number] of employees out of [total number] of employees who are part of the materials storage, loading, unloading, and/or handling operations on [date(s) of training]. A list of annual training topics by type of employee is attached as Appendix 1.

1. **Deicing and Snow Removal Equipment**

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

1. **Equipment Washing and Wash Water Collection**
2. **Material Storage**

[Organization name] maintains [number of] storage area(s). Information regarding the storage area(s) is included in Appendix 2.

1. **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 attached as Appendix 3.

* 1. **Explanation of Capital Purchases Unable to Be Made According to the Reported Plan**

1. **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/>.

* 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 X.

* 1. **Changes to the Facility’s NPDES Treatment Technologies for Chloride**

1. **Program Evaluation**
   1. **Proposed Steps for the Coming Year**
2. **Workgroup Participation**