

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

July 1, 2023

Prepared by the Village of Mokena

The Village of Mokena is a member of  
the Lower Des Plaines Watershed  
Group



## **1.0 Introduction to Chloride Issue in CAWS/LDPR**

This Pollutant Minimization Plan (PMP) has been prepared by the Village of Mokena, IL (Mokena) to reduce the environmental impacts from the organization's chloride related operations. Mokena 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.

## 2.0 Organization, Facility Information

Agency Name: The Village of Mokena		
Facility Name: STP & Village Hall		Permit Number: ILG103046 & ILG103047
Facility Address: 11400 191 <sup>st</sup> Street (STP) 11004 Carpenter Street (Village Hall)		
City: Mokena	State: Illinois	Zip Code: 60448

### 2.1 Level of Service for Winter Maintenance Activities

The Village of Mokena Public Works Department is responsible for providing snow and ice control for 110 miles (approximately 300 lane-miles) of streets and eleven Village owned parking lots. Parking lots consist of a Village Hall, Police Station, two Public Works facilities, six total commuter lots for two Metra Train Stations, and diagonal parking along Front Street.

## 3.0 Best Management Practices

Details regarding Mokena’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.	Mokena has been a member of the Lower Des Plaines Watershed Group since 2017. Staff attends all meetings for this group and the Chlorides Subcommittee.

### Salt Storage and Handling BMPs

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
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.	Mokena stores salt in two storage domes that can hold a combined 6,400 tons of rock salt.
Cover salt piles at all times except when in active use, unless stored indoors.	All salt used by Mokena is stored in salt domes. See previous BMP.

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
<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><b>Plan to Implement BMP:</b> Mokena will budget for an evaluation of the salt work area. Staff will select an option that is cost-effective and feasible for implementation and budget for construction in future fiscal years.</p> <p><b>Schedule for Implementation:</b> Mokena will budget the evaluation in FY 2025 and implement the chosen option by the end of FY 2028.</p>
<p><b>MS4/CSO Only</b> - Use deicing material storage structures for all communities covered under General Permit ILR40 for MS4 communities.</p>	<p>Mokena stores salt in two storage domes that can hold a combined 6,400 tons of rock salt.</p>
<p>Good housekeeping practices must be implemented at the site, including:</p> <ul style="list-style-type: none"> <li>• cleanup of salt at the end of each day or conclusion of a storm event;</li> <li>• tarping of trucks for transportation of bulk chloride;</li> <li>• maintaining the pad and equipment;</li> <li>• good practices during loading and unloading;</li> <li>• cleanup of loading and spreading equipment after each snow/ice event;</li> <li>• a written inspection program for storage facility, structures and work area;</li> <li>• removing surplus materials from the site when winter activity finished where applicable;</li> <li>• annual inspection and repairs completed when practical;</li> </ul>	<p>Mokena uses good housekeeping practices for winter road salt related work including loading, salt deliveries, and facility inspections.</p>

<b>BMP</b>	<b>Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP</b>
<ul style="list-style-type: none"> <li>evaluate the opportunity to reduce or reuse the wash water.</li> </ul>	

**Winter Maintenance Operations BMPs**

<b>BMP</b>	<b>Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP</b>
<p>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.</p>	<p>Calibration is completed by staff of Mokena each year.</p>
<p>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.</p>	<p>Mokena uses pre-wet road salt on 3 trucks and all future trucks purchased will have this system installed.</p>
<p>Use equipment to measure the pavement temperature unless such equipment has already been installed on road salt spreading vehicles.</p>	<p>Mokena monitors pavement temperatures using portable sensors mounted on Supervisors’ and administrators’ vehicles. Future trucks purchased will have this system installed.</p>
<p>Develop and implement a protocol to vary the salt application rate based on pavement temperature, existing weather conditions, and forecasted weather conditions.</p>	<p>Mokena varies application rates and materials based on pavement temperatures and weather conditions. Information regarding application rates and materials is included in Section VI of Mokena’s Snow and Ice Plan.</p>
<p>Track and record salt quantity used and storm conditions from each call-out.</p>	<p>Mokena maintains records of each winter storm call-out. Information regarding recordkeeping is included in Section XII of Mokena’s Snow and Ice Plan.</p>
<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>Mokena uses Anti-Icing as part of its winter operations. Information about the Anti-Icing program is outlined in Section V of Mokena’s Snow and Ice Plan.</p>

<b>BMP</b>	<b>Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP</b>
<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><b>Plan to Implement BMP:</b> Mokena will explore options for training in FY 2023 and choose a program to implement for FY 2024.  <b>Schedule for Implementation:</b> Mokena will budget annually beginning in FY 2024 for a training course for all staff that operate snow plows and salting equipment.</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>Mokena follows this BMP.</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>Mokena will complete and submit an annual report each year to IEPA and the workgroup by July 1.</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>Mokena evaluates all equipment and upgrades as needed. All new equipment purchased will meet the requirements of this PMP.</p>
<p><b>MS4/CSO/IDOT/TOLLWAY Only</b>  - 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.  Develop and complete a plan to equip the winter maintenance fleet before the first re-evaluation.</p>	<p><b>Plan to Implement BMP:</b> Mokena will budget for and plan to purchase up to four mirror mounted pavement temperature sensors for the winter maintenance fleet each fiscal year until all vehicles are equipped. Due to the expense of equipping the entire fleet at once, up to four vehicles will be outfitted at a given time to buffer the additional expense across several years, but will still provide for pavement temperature information to make decisions regarding application rates of deicer during winter storms. Replacement trucks will be spec’d to include mirror mounted temperature sensors.  <b>Schedule for Implementation:</b> Start budgeting for the sensors in FY 2024. Anticipate all fleet will be equipped by end of FY 2028.</p>

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
<p><b>MS4/CSO/IDOT/TOLLWAY Only</b>  - 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.</p>	<p><b>Plan to Implement BMP:</b> Mokena’s Streets/Buildings &amp; Grounds Superintendent prepares a report after each snow event. These will be compiled and evaluated to meet this BMP.  <b>Schedule for Implementation:</b> Mokena plans to implement this by end of FY 2024.</p>

**3.1 Analysis of BMPs Implemented**

**3.1.1 Workgroup BMPs**

Mokena participated in all LDPWG meetings and Chlorides Subcommittee meetings, stored all salt within our salt domes, and continued practicing good housekeeping during winter road salt events during Year 1.

**3.1.2 Winter Maintenance BMPs**

Mokena completed calibration of salt spreading equipment, continued use of pre-wetting on the existing 3 trucks so equipped, monitored pavement temperatures with portable sensors to inform salt usage rates, varied application rates depending on the conditions, tracked and recorded event information, continued use of anti-icing depending on conditions, completed training, completed an annual report, and budgeted as needed for FY24 equipment during Year 1.

**3.1.3 Overall Analysis**

Mokena strives to meet and exceed the BMPs to improve water quality of our stormwater discharges but also save taxpayer money. Staff believes we have exceeded the minimum standards for Year 1.

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

Mokena reviews alternative/new technology on a regular basis and decides which to implement during the budgeting cycle annually. For Year 1, there were no alternatives/new technologies that Mokena chose to include in the 2024 budgeting cycle.

## **4.0 Deicing/Anti-Icing Agents Used**

Materials used by Mokena for the 2022-2023 winter season are included as Appendix 1.

### **4.1 Application Rates**

The application rates used by Mokena for the 2022-2023 winter season are included as Appendix 2.

#### **4.1.1 Application Rate Analysis**

Year 1 creates the baseline for application rates moving forward, however the snow fall during the winter season of 2022/2023 was substantially lower than typically seen in Mokena. Rates varied from 75 to 200 lbs/lane mile depending on truck, route, and conditions.

### **4.2 Application Practices**

Mokena uses the following practices to apply deicing and anti-icing materials:

- Anti-icing with brine (calcium chloride)
- Deicing with on board pre-wetting (3 trucks currently equipped)
- Deicing with dry salt
- Anti-icing was used as pretreatment for 3 events in Year 1. Mokena has 3 trucks fitted with pre-wetting, which were used for all events in Year 1. All other trucks use dry salt and were used for all 8 events. Total salt usage decreased from previous years, however Mokena had substantially lower snowfall in Year 1 compared to historical norms.

### **4.3 Call Outs**

A total of 7-8 inches of snow was reported in Mokena for the 2022-2023 winter. There were one freezing rain events and seven snow events for the 2022-2023 winter. Mokena had eight call outs completed during the 2022-2023 winter. A log of all call outs completed by Mokena are included as Appendix 3.

### **4.4 Use of Liquids**

Total amount of liquids and rock salt were lower than previous years due to the mild winter conditions during Year 1. Changes will be noted in next year's report for Year 2.

## **5.0 Training**

Mokena completed annual training for all employees who are part of the winter maintenance operations in November 2022 (winter maintenance operations) and May 2023 (MS4). A list of annual training topics by type of employee is included as Appendix 4.



## **6.0 Deicing and Snow Removal Equipment and Maintenance**

Mokena uses equipment listed in Appendix 5 during winter maintenance activities.

### **6.1 Description of Equipment Washing and Wash Water Collection**

All trucks are washed within the Public Works Garage where all water is collected and discharged to the sanitary system.

## **7.0 Material Storage**

Mokena maintains one storage area with two salt domes. Information regarding the storage area is included in Appendix 6.

## **8.0 Capital Purchases**

Identified capital purchases from Mokena'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.

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

All capital purchases are budgeted annually on an as needed basis for projects and equipment replacement. Mokena has seen significant delays in obtaining new vehicles for the past 3 years. Replacement vehicles were ordered during Year 1 and are hoped to arrive prior to the winter season during Year 2.

## **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/>.

### **9.1 Organization Specific Chloride Monitoring Data**

Mokena collects chloride monitoring data as part of its NPDES effluent data and the data is included as Appendix 8.

### **9.2 Changes to the Facility's NPDES Treatment Technologies for Chloride**

None in current year.

## **10.0 Program Evaluation**

Mokena will develop a program during FY 24 to be implemented for evaluation of Year 2 using lessons learned during Year 1's implementation of the overall program. Mokena intends to review the data

collected, identify strengths and weaknesses of the existing system, perform gap analysis, and research how to reduce salt usage while still providing excellent service to residents.

#### **10.1 Proposed Steps for the Coming Year**

Per the submitted PMP, Mokena is planning to develop a method for conducting a post-winter review to identify areas of success and areas in need of improvement by the end of the 2024 Fiscal Year.

#### **11.0 Workgroup Participation**

Mokena participated in the following ways with the LDWG:

- Submit Annual Report to the workgroup
- Submit completed Pollutant Minimization Plan to the workgroup
- Attend bi-monthly membership meetings via Zoom
- 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

# Appendices

Appendix 1 – Deicing/Anti-Icing Agents Used

Appendix 2 – Application Rates

Appendix 3 – Callout Log

Appendix 4 – Annual Training

Appendix 5 – Equipment

Appendix 6 – Material Storage

Appendix 7 – Capital Purchases

Appendix 8 – WWTP Chloride Data

**Chloride TLWQS Annual Report  
Appendix 1 - Deicing/Anti-Icing Agents Used**

Material or Product	Dry, Pre-Wet, Pretreated, or Liquid	Lane Miles Treated with the Product for 2022-2023	Parking Lot and Sidewalk Area (Sq. Ft.) Treated with the Product for 2022-2023	Total Amount used for 2022-2023 (Year 1) in Tons or Gallons	Total Amount used for 2023-2024 (Year 2) in Tons or Gallons	Total Amount used for 2023-2024 (Year 3) in Tons or Gallons	Total Amount used for 2023-2024 (Year 4) in Tons or Gallons	Total Amount used for 2023-2024 (Year 5) in Tons or Gallons	Total Amount Used Over First 5-Year Term
Salt	Dry	225	317,552	650					650
Salt	Pre-Wet	75	105,851	320					320
CaCl2 Brine	Liquids	90	0	1,900					1,900
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0

**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	300	423,403	75%	25%	30%	75%	25%	0%

Note: split between dry and pre-wet is estimated based on dry vs. pre-wet truck counts and size

<b>Call Out Date</b>	<b>Dry Solid Application Rate (lbs/lane mile)</b>	<b>Liquid Application Rate (gallons/lane mile)</b>
11/17/2022	< 100	n/a
12/22/2022	100-200	20-30
1/5/2023	100-200	n/a
1/22/2023	100-200	20-30
1/25/2023	100-200	23-35
1/27/2023	100-200	n/a
1/28/2023	100-200	n/a
1/30/2023	75-200	n/a

**Agency Name: Village of Mokena**

Call Out Information				Weather					Materials Use		
Call Out Date	Call Out Time	Completion Date	Completion Time	Precipitation Type	Precipitation Amount	Pavement Conditions	Pavement Temperatures	Other Weather Observations	Types of Deicing Agent Used (example: rock salt, calcium chloride, etc)	Dry Solids, Pre-wetted or pretreated solids, Liquids?	Dry Solid Amount Used (tons)
11/17/2022	7:00 AM	11/17/2022	11:00 AM	Snow	less than 1"	n/a	n/a	light slick coating, no accumulation	Rock Salt	Dry solids, pre-wetted	20
12/22/2022	11:00 AM	12/25/2022	2:00 PM	snow	3 inches	n/a	n/a	blowing and drifting snow, 3" total	Rock Salt	Dry solids, pre-wetted, liquids	170
1/5/2023	7:00 AM	1/5/2023	12:00 PM	snow	less than 1"	n/a	n/a	light snow, little to no accumulation, off and on for a few hours	Rock Salt	Dry solids, pre-wetted	45
1/22/2023	9:00 AM	1/22/2023	3:00 PM	snow	less than 1"	n/a	n/a	Light snow, 4-6 hrs duration, no accumulation	Rock Salt	Dry solids, pre-wetted, liquids	70
1/25/2023	4:00 AM	1/26/2023	2:00 PM	snow	2-3 inches	n/a	n/a	moderate to heavy snow at times, 2-3 inches accumulation (snow & ice)	Rock Salt	Dry solids, pre-wetted, liquids	115
1/27/2023	1:30 PM	1/27/2023	3:30 PM	snow	up to 1 inch	n/a	n/a	heavy snow started at 1 PM, 2-hr duration	Rock Salt	Dry solids, pre-wetted	85
1/28/2023	11:00 PM	1/29/2023	4:00 AM	freezing & drizzle	less than 1 inch	n/a	n/a	freezing drizzle, 4 to 6 hrs duration (snow and ice)	Rock Salt	Dry solids, pre-wetted	100
1/30/2023	7:00 AM	1/30/2023	11:00 AM	snow	less than 1 inch	n/a	n/a	light accumulation on roadways	Rock Salt	Dry solids, pre-wetted	45

**Ager**

Location		Application Rates and Methods (list all used)							Other Information	
Call Out Date	Pretreated Solid Amount Used (tons)	Liquid Amount Used (gallons)	Dry Solid Application Rate (lbs/lane mile)	Pretreated Solid Application Rate (lbs/lane mile)	Liquid Application Rate (gallons/lane mile)	Type of Application	Lane Miles Treated	Sq Ft Lots/Sidewalks Treated	Number of Deicing/Anti-Icing Passes	Notes
11/17/2022	0	0	< 100	< 100		Deicing	~300 salt	minimal	0	
12/22/2022	80	600	100-200	100-200	20-30	Anti-icing	~300 salt, 20 to 30 liquid	~610,000	1	
1/5/2023	30	0	100-200	100-200		Deicing	~300 salt	~610,000	0	
1/22/2023	30	600	100-200	100-200	20-30	Anti-icing	~300 salt, 20 to 30 liquid	~610,000	1	
1/25/2023	60	700	100-200	100-200	23-35	Anti-icing	~300 salt, 20 to 30 liquid	~610,000	1	
1/27/2023	40	0	100-200	100-200		Deicing	~300 salt	~610,000	0	
1/28/2023	50	0	100-200	100-200		Deicing	~300 salt	~610,000	0	
1/30/2023	30	0	75-200	75-200		Deicing	~300 salt	~610,000	0	

Role in Winter Operations	Training Topics Covered
Plow drivers	Application rates, anti-icing
Maintenance workers	Application rates, anti-icing
Operators	MS4 training, salting, containment, stormwater



Type of Equipment	Equipment/Vehicle Number	Type of Spreader (mechanically controlled, computer controlled, etc.)	Type of Material Used with Equipment (Dry, Pre-Wet, Pretreated, Liquids)	Other Important Equipment Information
2.5 Ton Truck	ST-17	CC	Dry	
2.5 Ton Truck	ST-20	CC	Dry	
2.5 Ton Truck	ST-21	CC	Dry/Pre-Wet	
2.5 Ton Truck	ST-8	CC	Dry/Pre-Wet	
2.5 Ton Truck	ST-6	CC	Dry/Pre-Wet	
2.5 Ton Truck	ST-7	CC	Dry	
2.5 Ton Truck	ST-2	CC	Dry	
2.5 Ton Truck	ST-19	CC	Dry	
2.5 Ton Truck	ST-4	CC	Dry	
1 Ton Truck	WS-5	CC	Dry	
1 Ton Truck	ST-10	CC	Dry	
1 Ton Truck	ST-16	CC	Dry	
0.5 Ton Truck	ST-15	MC	Pre-Wet	

Location of Storage Area	Material Stored (Rock Salt, Salt Brine, etc.)	Amount of Material Stored 2022-2023	Material stored under permanent cover? (yes/describe other)	Material stored in a fully enclosed structure? (yes/describe other)	Material stored on an impervious pad? (yes/describe other)	Good housekeeping practices followed at storage area? (yes/describe other)
Public Works Garage	Liquid Brine	500 gallons	No	Yes	Yes	Yes
Public Works Garage	Salt	4,200 tons	Yes	Yes	Yes	Yes
Public Works Garage	Salt	2,200 tons	Yes	Yes	Yes	Yes

Capital Purchase Description	Plan/Schedule for Purchase
Temperature Sensors for Trucks	FY24 and beyond
Vehicles	FY24 and beyond as needed for replacement

Date	Chloride
7/6/2022	153
7/25/2022	111
7/27/2022	162
8/1/2022	152
8/5/2022	154
8/11/2022	146.2
8/14/2022	138.3
8/22/2022	147.9
8/26/2022	124.5
8/29/2022	124.3
9/6/2022	126.9
9/12/2022	106.6
9/14/2022	123.8
9/19/2022	211
9/21/2022	226
9/26/2022	215
9/28/2022	218
10/3/2022	247
10/10/2022	259
10/12/2022	249
10/17/2022	325
10/24/2022	262
11/1/2022	227
11/7/2022	241
11/11/2022	224
11/14/2022	230
11/17/2022	220
11/21/2022	221
11/28/2022	249
12/5/2022	245.8
12/13/2022	262
12/19/2022	390
12/27/2022	345.3
1/3/2023	873.1
1/9/2023	568
1/16/2023	462.3
1/23/2023	529
1/31/2023	998.2
2/6/2023	783
2/8/2023	892
2/13/2023	676
2/16/2023	542
2/20/2023	669
2/22/2023	649

Date	Chloride
2/28/2023	702
3/1/2023	559
3/6/2023	694
3/8/2023	680
3/13/2023	680
3/16/2023	423
3/17/2023	680
3/20/2023	632.8
3/24/2023	519.3
3/27/2023	526.7
3/30/2023	531.2
4/4/2023	281.1
4/5/2023	377.2
4/11/2023	426
4/12/2023	430.8
4/17/2023	461.5
4/19/2023	488.1
4/24/2023	510.8
4/26/2023	499.6
5/3/2023	722.4
5/11/2023	626.2
5/15/2023	734.8
5/17/2023	652.6
5/25/2023	604.7
5/31/2023	453
6/7/2023	544.2
6/15/2023	601.1
6/21/2023	430