

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

July 1, 2023

Prepared by the City of Evanston



Chicago Area Waterways
CHLORIDE WORKGROUP

1.0 Introduction to Chloride Issue in CAWS/LDPR

This Pollutant Minimization Plan (PMP) has been prepared by the City of Evanston to reduce the environmental impacts from the organization's chloride related operations. The City of Evanston 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 of 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 the 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

Agency Name: City of Evanston		
Facility Name: Public Works Agency - Service Center		Permit Number: ILG103010
Facility Address: 2020 Asbury Ave.		
City: Evanston	State: Illinois	Zip Code: 60201

The City of Evanston is located just north of Chicago and has a population of 78,110 (2020 U.S. Census). Bordering Lake Michigan to the east and home to Northwestern University and Rotary International.

The City of Evanston Public Works Agency is responsible for providing snow and ice control for 147 center lane miles, 190 total miles of road, 9 miles of bike lanes (5 miles protected), 5.7 miles of off-street paths, 14 building lots, 23 public surface lots, 77 parks, and all walkways adjacent to City property. Both rock and bagged salt are delivered by semi-trucks to the City facility. Rock salt is stored in the salt dome at the Public Works Agency Service Center facility. The salt dome has a capacity of 4,000 tons and is built on the highest point of the yard. The bagged salt is delivered and stored in the City facility that is temperature controlled.

2.1 Level of Service for Winter Maintenance Activities

The purpose and mission is to combat winter precipitation events in order to maintain public safety, minimize disruption to traffic and prevent damage to life and property. The safety of the public, community members, visitors, and our Public Work Agency employees are our number one priorities. The Agency’s objectives are as follows:

- Maintain or re-establish safe conditions on all streets, sidewalks, and lots managed by the City.
- Establish and maintain a well-organized and effective program that focuses on safety while considering the budget.
- Minimize chloride usage while maintaining safe pavement conditions.
- Maintain accessibility to public buildings and spaces to ensure a safe working environment for all staff, community members, and businesses.

3.0 Best Management Practices

Details regarding the City of Evanston’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 City of Evanston Public Works Agency has been a member of the Chicago Area Waterways Chloride Workgroup since 2021. Evanston is also a member of the North Branch Chicago River Watershed Work Group. Evanston joined this workgroup in 2021.

the watershed within which the facility's discharge is located.	
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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.	The salt dome has a capacity of 4,000 tons and is built on the highest point of the yard, and is on a solid piece of reinforced, impervious concrete slab over 3 ft in height that prevents salt from leaching into the ground. The walls are also built from the same reinforced concrete material.
Cover salt piles at all times except when in active use, unless stored indoors.	Salt pile is stored in a covered dome with a door.
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 dome has doors at the entrance to prevent the elements from breaking down the salt so that it does not enter the sewer system and contaminate the waterways. The doors also protect the salt from contamination. Any salt spillover that occurs during loading and delivery is collected and returned to stock. As stated earlier the salt storage area is at the highest point in the yard. The loading and work area has a proper slope to channel snowmelt and stormwater away from the stockpile and work area.
MS4/CSO Only - Use de-icing material storage structures for all communities covered under General Permit ILR40 for MS4 communities.	The storage system is configured to blend from three source tanks: containing distinct products. The liquid deicing total storage capacity is 30,000 gallons.
Good housekeeping practices must be implemented at the site, including: <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; 	Public Works Agency's timely and proper preventative maintenance and repairs are paramount to successful snow and ice control operations. The City regularly schedules vehicle preventative maintenance (PM) and safety lane inspections (safety stickers), and any subsequent repairs. Bi-annual inspection and cleaning of snow and ice control equipment is performed pre and post-snow season. Equipment is also routinely inspected during winter events to ensure proper working conditions. Operators visually inspect equipment during loading, unloading, and

<ul style="list-style-type: none"> ● 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. 	<p>refueling. Recalibrating salt spreaders and liquid deicing equipment is performed annually, and is one of the most important maintenance tasks. Each salt spreader and liquid deicing dispenser is recalibrated before the winter season in order to maintain an accurate salt application rate on the pavement. After every storm, rock salt is mechanically or manually removed from truck beds, loaders, as well as any spillover from the loading areas. All grounds are cleaned of salt during and after the winter precipitation event, and any other surface where it may have accumulated. This removal prevents excess chlorides from entering storm sewers during the rinsing process. Crew members clean their equipment indoors to ensure their safety and limit their exposure to harsh winter weather. The City’s equipment storage facilities are equipped with a triple trap basin to capture any granular material and prevent it from entering the sewer system. In addition, a grit separator basin separates any remaining solids from the entire yard so they do not exit into the main sewer line. The City of Evanston performs annual MS4 inspections and good housekeeping practices. All salt deliveries are tarped.</p>
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Winter Maintenance Operations BMPs

BMP	Agency Description of Current Implementation or Status Update to the Plan to Implement the BMP
<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>Recalibrating salt spreaders and liquid deicing equipment is performed annually and is one of the most important maintenance tasks. Each salt spreader and liquid deicing dispenser is recalibrated before the winter season or after performing maintenance in order to maintain an accurate salt application rate on the pavement. Records of calibration are maintained for each piece of equipment.</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>The Public Works Agency uses pre-wet road salt on all of the trucks, and all future trucks purchased will have this system installed. All salt applied to roads, or parking lots will be pre-wetted at the spinner with salt brine or a blended mix to enhance cold weather effectiveness. Application rates are 10-20 gallons per ton of salt.</p>
<p>Use equipment to measure the pavement temperature unless such equipment has already been installed on road salt-spreading vehicles.</p>	<p>The Public Works Agency uses a RoadWatch sensor on all of our snow vehicles that monitors pavement temperatures. This data assists with deicing operations. In addition, The City uses the aid of 5 RWIS stations placed strategically throughout the City to capture pavement temperatures and real-time conditions. The City also has access to over 50 RWIS stations with visual and weather information posted in various surrounding communities.</p>
<p>Develop and implement a protocol to vary the salt</p>	<p>The City of Evanston Public Works Agency application rates vary based on storm type and road conditions; monitoring forecasts and</p>

<p>application rate based on pavement temperature, existing weather conditions, and forecasted weather conditions.</p>	<p>pavement temperatures assists in determining the appropriate rate for a storm event. Since a storm event is dynamic, so should our response be as we adjust spread rates to meet safety guidelines and weather needs. This information is given to every operator during training and during the active snow event.</p>
<p>Track and record salt quantity used and storm conditions from each call-out.</p>	<p>The Public Works Agency GIS data is loaded into the CMMS to accurately track assets, including materials and plows, according to the geographic distribution of operations throughout the City. Winter event data is collected and can be analyzed or reported on a per-event basis or snow season. This includes all aspects of the response, which includes materials used, vehicles, staff time, and weather conditions. Materials are tracked by operators throughout the weather event as well as by the use of front-end loader scales. All load-outs are tracked, which provides data on each operator's usage. The remaining material is also weighed to give an accurate total for the entire event.</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>The City of Evanston's anti-icing program is set up to provide the safest roads and the highest level of service, the City engages in proactively anti-icing roadways prior to appropriate storm events. Condition-dependent, Public Works treats all designated snow routes, bridge decks, hills, slopes, and other difficult areas to navigate first, with either simple salt brine or a combination of salt brine and liquid deicers. The City currently has an all-liquid route (when conditions allow and are appropriate).</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>The City of Evanston completes annual training for winter maintenance staff each year through various training programs with American Public Works Association (APWA), Northeastern Illinois Public Safety Training Academy (NIPSTA), Chicago Area Waterways System (CAWS), Cargill Brine Maker Pre-Season Operation and Maintenance Training, and Salt Smart. Training also includes policies, proper procedures, BMPs, chloride reductions, proper winter event response, and an overview of new winter equipment and technology that assist with operations.</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>Not applicable as the City of Evanston does not use contractors for snow and ice control.</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>The City of Evanston will complete and submit an annual report each year to the IEPA and the workgroup by July 1.</p>

<p>Obtain and put into place equipment necessary to implement all salt spreading/deicing measures 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>The City of Evanston equipment has been purchased new and/or retrofitted to allow for pre-wetting and correct salt spreading and deicing measures. Also calibrated by our current Street Supervisor.</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. Develop and complete a plan to equip the winter maintenance fleet before the first re-evaluation.</p>	<p>Equipment measuring the pavement temperature has been installed in all of our fleet vehicles. We also installed Road Weather Information Systems (RWIS) at key points of the city to give weather readings, including pavement temperatures, dew points, wind speed, and direction.</p>
<p>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.</p>	<p>Supervision conducts post-event reviews of each weather event to identify areas of success and areas of improvement. Through these recaps, we are able to pinpoint additional training and refreshers for our operators. Material usage is evaluated, and opportunities to enhance our approach for the next storm are developed. An end-of-year evaluation is also conducted to identify opportunities to upgrade equipment, enhance training techniques and develop our operator's skills, and understand our goals of reducing the use of chlorides.</p>

3.1 Analysis of BMPs Implemented

The city continues to see progress in operator understanding of chloride reductions through consistent training and the effectiveness of our practices. During certain conditions, the downtown area becomes a liquid-only route, and the effectiveness of brine becomes more apparent and

provides results that staff can observe. As we continue to move towards more liquids or liquid-only routes, we are faced with purchasing higher-capacity tanks or retrofitting current equipment.

3.2 Analysis of Alternative Treatments or New Technology

The City is looking into a capital improvement that includes a truck wash system that would capture and reuse wash water and runoff as brine if all other contaminants and particulates can be removed.

4.0 Deicing/Anti-Icing Agents Used

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

4.1 Application Rates

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

4.1.1 Application Rate Analysis

Our standard application worked well. Some adjustments were made due to changing conditions. Precipitation rates increased during the event, that could lead to safety concerns on roadways. Supervisors working with roadcrews changed application rates to increase the application rate to keep roads safe.

Evanston standards application rates used to start at 300lbs. Using BPM's and increasing the use of liquids has improved the efficiency of crews on the street. Additional technology such as RWIS, has also contributed to decreased rates as the Snow Commander is able to take in road conditions and temperatures to address the conditions effectively and efficiently.

4.2 Application Practices

The City of Evanston uses the following practices to apply deicing and anti-icing materials:

- The City of Evanston's anti-icing practices are complex for our area, due to the lake effect and the difference in surface temps throughout the city. The Public Works Agency applies anti-icing (Brine or Brine mixture) methods to all City streets in preparation for a snow or ice event. As the event unfolds, our practice is to continue to push snow and only apply deicing material (Bulk or prewet Bulk salt) as needed.

4.3 Call Outs

A total of 16 inches of snow was reported in the City of Evanston for the 2022-2023 winter. There were two freezing rain events and 13 snow events for the 2022-2023 winter. The City of Evanston had 15 call-outs completed during the 2022-2023 winter. A log of all call-outs completed by the City of Evanston is included as Appendix 3.

4.4 Use of Liquids

With the combination of RWIS technology available, education on liquid usage, and BMP of salt usage. The City of Evanston has reduced its bulk salt usage in the last three winter seasons and increased liquid usage. The education for our Snow and Ice Program has also been effective in reducing the overall amount of material released into the environment while maintaining safe road conditions throughout our City limits.

5.0 Training

As part of ongoing training for the City of Evanston winter maintenance and operations, on November 11, 2022, the City of Evanston held its main annual training session. New hires, current employees, and outside municipality attendees totaled 56 participants. Additional training events took place to capture all other front-line staff members. The training and refresher topics covered:

- Intensive pre/post trip truck inspections
- Pre-wet material use
- Snow removal equipment training
- Best Management Practices
- Operating in-house brine maker
- Liquid make-up (Geo- Melt, Beet Heat, 90/20 mix)
- Operations and maintenance of liquid sprayers for pre-wet set up and brine trucks.
- Liquid applications and storage tank usage
- Calibration of salt spreaders on City vehicles
- Proper spreading techniques
- Route effectiveness and efficiency (eg. lake effect versus further inland)
- Weather forecast (RWIS units and weather reporting for management team)

Members of the City of Evanston Management team attended and acquired the APWA Winter Maintenance Supervisor Certificate, which covered a broad range of topics from forecasting to new approaches in liquid applications. Staff also participated in MPCA Smart Salting training sessions that provided additional insight into the impacts of chlorides on the environment and suggestions on policy changes that could help reduce salt pollution. Listed in Appendix 4.

6.0 Deicing and Snow Removal Equipment and Maintenance

The City of Evanston uses equipment listed in Appendix 5 during winter maintenance activities.

6.1 Description of Equipment Washing and Wash Water Collection

After every storm, rock salt is manually removed from truck beds and any other surface where it may have accumulated. This removal prevents excess chlorides from entering storm sewers during the rinsing process. Equipment and vehicles are washed inside the facilities. The City's equipment storage facilities are equipped with a triple trap basin to capture any granular material and prevent it from entering the sewer system. In addition, a grit separator basin separates any remaining solids from the entire yard so they do not exit into the main sewer line. The City of Evanston performs annual MS4 inspections and good housekeeping practices.

7.0 Material Storage

The City of Evanston maintains all of its materials at the Service Center. Information regarding the storage areas is included in Appendix 6.

8.0 Capital Purchases

Identified capital purchases from the City of Evanston'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

Not Applicable.

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

The City of Evanston does not collect or test samples.

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

Not applicable.

10.0 Program Evaluation

The City of Evanston will use data gathered from each storm to compare similar events and the materials used. Through the comparisons, areas of improvement or areas of success can be identified and used to make enhancements to the program. Data will also be used to develop strategic response approaches to unique areas in the city where chlorides can be further reduced or possibly eliminated. Application rates from each staff member will also be used to identify equipment issues or training opportunities for operators.

During favorable conditions, the City of Evanston implements an all-liquid route in the downtown area. This snow route will continue to be evaluated to possibly expand all-liquid routes to other areas in the city.

10.1 Proposed Steps for the Coming Year

The City of Evanston will review results in the upcoming year.

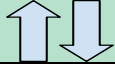







11.0 Workgroup Participation




The City of Evanston has been a participant in the Chloride Workgroup since the beginning stages of 2021. Our Public Works Agency Director, Mr. Edgar Cano, volunteered his services as a board member and continues as a person of service to the workgroup and community.

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
Rock Salt	Pre-Wet	190	309,407	2127					2127
Brine	Liquids	190		46720					46720
Beet Heet	Liquids	190		400					400
Biomelt	Liquids	190		400					400
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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		309,407	0%	0%	0%	0%	100%	0%

Pounds per two-lane mile						
Pavement Temp. (F) and Trend 	Weather Condition	Maintenance Actions	Salt Prewetted / Pretreated with Salt Brine	Salt Prewetted / Pretreated with Other Blends	Dry Salt *	Winter Sand (Abrasives)
Greater than 30 degrees 	Snow	Plow, Treat intersections only	80 pds	70 pds	100*	Not Recommended
	Freezing Rain	Apply Chemical	80-160	70-140	100-200*	Not Recommended
Less than 30 degrees 	Snow	Plow and Apply Chemical	80-160	70-140	100-200*	Not Recommended
	Freezing Rain	Apply Chemical	150-200	130-180	180-240*	Not Recommended
25-30 Degrees 	Snow	Plow and Apply Chemical	120-160	100-140	150-200*	Not Recommended
	Freezing Rain	Apply Chemical	150-200	130-180	180-240*	Not Recommended
25-30 Degrees 	Snow	Plow and Apply Chemical	120-160	100-140	150-200*	Not Recommended
	Freezing Rain	Apply Chemical	160-240	140-210	200-300*	Not Recommended
20-25 Degrees 	Snow or Freezing Rain	Plow and Apply Chemical	160-240	140-210	200-300*	Not Recommended
20-25 Degrees 	Snow	Plow and Apply Chemical	200-280	175-250	250-350*	Not Recommended
	Freezing Rain	Apply Chemical	240-320	210-280	200-300*	Not Recommended
15-20 Degrees 	Snow	Plow and Apply Chemical	200-280	175-250	250-350	Not Recommended
	Freezing Rain	Apply Chemical	240-320	210-280	300-400	Not

	Freezing Rain	Apply Chemical	240-320	210-280	300-400	Recommended
15-20 Degrees 	Snow	Plow and Apply Chemical	240-320	210-280	300-400*	Not Recommended
0-15 Degrees 	Snow	Plow,treat with blends	Not Recommended	300-400	Not Recommended	Not Recommended
Less than 0 degrees 	Snow	Plow,treat with blends	Not Recommended	400-600	Not Recommended	Not Recommended
	* Dry salt is not recommended. Likely to blow off the road before it melts ice. Evanston Pre Wets all Salt					
Note	Not all trucks are capable of reaching pounds per lane mile lower than 150 lbs.					
Note	Evanston does not use sand as this material is harmful to the gravity feed sewer system.					

	Role in Winter Operations	Training Topics Covered
	Plow Operator	Pre/Post-Trip Trucks, Smart Salting, Liquids, Weather Forecast, Routes
	Snow Command	APWA Winter Maintenance Supervisor Certificate Workshop
	Snow Command	APWA Winter Maintenance Supervisor Certificate Workshop
	Supervisor	APWA Winter Maintenance Supervisor Certificate Workshop
	Night Shift Supervisor	APWA Winter Maintenance Supervisor Certificate Workshop
	Bureau Chief	APWA Winter Maintenance Supervisor Certificate Workshop
	Bureau Chief	MPCA Smart Salting for Roads Certification Training

<u>Type of Equipment</u>	Equipment/Vehicle Number	Type of Spreader (mechanically controlled, computer controlled, etc.)	Type of Material Used with Equipment (Dry, Pre-Wet, Liquid)
ATV	504 Ventrac	Mechanically	Pre-treated
ATV	706 Toolcat	Mechanically	Pre-treated
ATV	508 Toolcat	Mechanically	Pre-treated
ATV	510 Toolcat	Mechanically	Pre-treated
ATV	513 Kubota	Mechanically	Pre-treated
ATV	543 Trackless	Mechanically	Pre-treated
ATV	509 Kubota	Mechanically	Pre-treated
ATV	507 Kubota	Mechanically	Pre-treated
Mower	536 Toro	N/A	N/A
Mower	537 Toro	N/A	N/A
Mower	538 Toro	N/A	N/A
One Ton Truck	524	Manual controller	Dry
One Ton Truck	514	Manual controller	Dry
Pick up Truck	502	Manual controller	Direct Liquid (Salt Brine)
One Ton Truck	572	Manual controller	Dry, Pre-Wet Load
One Ton Truck	526	Manual controller	Dry, Pre-Wet Load
Pick up Truck	601	Manual controller	Direct Liquid (Salt Brine)
Single Axle Truck	612	Computer controlled	Dry, Pre-Wet Liquid
Tandem Axle Truck	613	Computer controlled	Dry, Pre-Wet Liquid
Single Axle Truck	614	Computer controlled	Dry, Pre-Wet Liquid, Direct Liquid
Single Axle Truck	615	Computer controlled	Dry, Pre-Wet Liquid
Single Axle Truck	616	Computer controlled	Dry, Pre-Wet Liquid, Direct Liquid
Pick up Truck	617	Computer controlled	Dry, Pre-Wet Liquid
One Ton Truck	618	Computer controlled	Dry, Pre-Wet Load
Tandem Axle Truck	622	Computer controlled	Dry, Pre-Wet Liquid
Single Axle Truck	624	Computer controlled	Dry, Pre-Wet Liquid
Single Axle Truck	625	Computer controlled	Dry, Pre-Wet Liquid
One Ton Truck	626	Computer controlled	Dry, Pre-Wet Load

Single Axle Truck	627	Computer controlled	Dry, Pre-Wet Liquid
Tandem Axle Truck	628	Computer controlled	Dry, Pre-Wet Liquid
One Ton Truck	634	Computer controlled	Dry, Pre-Wet Load
One Ton Truck	635	Computer controlled	Dry, Pre-Wet Load
Tandem Axle Truck	636	Computer controlled	Dry, Pre-Wet Liquid
One Ton Truck	637	Computer controlled	Dry, Pre-Wet Load
One Ton Truck	638	Computer controlled	Dry, Pre-Wet Liquid
Pick up Truck	800	Manual controller	Direct Liquid (Salt Brine)
Pick up Truck	801	Manual controller	Direct Liquid (Salt Brine)
F-350 Service body	809	N/A	N/A
One Ton Truck	812	Computer controlled	N/A
Tandem Axle Truck	814	Computer controlled	Dry, Pre-Wet Liquid
Pick up Truck	815	N/A	N/A
Tandem Axle Truck	820	Computer controlled	Dry, Pre-Wet Liquid
One Ton Truck	823	Computer controlled	Dry, Pre-Wet Load
Pick up Truck	701	Manual controller	Dry
Pick up Truck	906	N/A	N/A
Pick up Truck	917	Manual controller	Direct Liquid (Salt Brine)
Tandem Axle Truck	923	Manual controller	Dry, Pre-Wet Load
Tandem Axle Truck	926	N/A	N/A
Front Loader	680	N/A	N/A
Front Loader	683	N/A	N/A
Front Loader	688	N/A	N/A
Front Loader	807	N/A	N/A
Front Loader	938	N/A	N/A
Combo Tractor	609	N/A	N/A
Combo Tractor	550	N/A	N/A
Combo Tractor	953	N/A	N/A
Combo Tractor	955	N/A	N/A
Skid Steer	607	N/A	N/A
Skid Steer	608	N/A	N/A

Skid Steer	642	N/A	N/A
Skid Steer	542	N/A	N/A
Skid Steer	928	N/A	N/A

Other Important Equipment Information
Salt spreader, plow, blower, broom
Salt spreader, plow, blower, broom
Salt spreader, plow, blower, broom
Salt spreader, plow, blower, broom
Salt spreader, plow, blower
Salt spreader, plow, blower
Salt spreader, plow
Snow broom only
Snow broom only
Snow broom only
2.5 Ton Capacity
2.5 Ton Capacity
300 Gallons
2.5 Ton Capacity tailgate salt spreader
2.5 Ton Capacity tailgate salt spreader
300 Gallons
7 Ton Capacity
8.5 Ton Capacity
Liquid Tank (1000 Gallon) , Can use Salt when needed
7 Ton Capacity
Liquid Tank (1000 Gallon) , Can use Salt when needed
2 Ton Capacity
2.5 Ton Capacity
8.5 Ton Capacity
7 Ton Capacity
7 Ton Capacity
2 Ton Capacity

7 Ton Capacity
8.5 Ton Capacity
2.5 Ton Capacity
2.5 Ton Capacity
8.5 Ton Capacity
2.5 Ton Capacity
2.5 Ton Capacity
300 Gallons
300 Gallons
No Salt Spreader
No Salt Spreader
8.5 Ton Capacity
No Salt Spreader
8.5 Ton Capacity
2.5 Ton Capacity
2 Ton Capacity
No Salt Spreader
300 Gallons
8.5 Ton Capacity
No Salt Spreader
Bucket
Plow for Loader
Bucket
Snow Push Box
Bucket
Bucket
Bucket
Bucket
Bucket
Bucket
Bucket
Bucket

Bucket
Snow Push Box
Bucket

	Location of Storage Area	Material Stored	Amount of Material Stored	Material stored under permanent cover?	Material stored in a fully enclosed structure?	Material stored on an impervious pad?
	Service Center grounds	Rock Salt	3500 tons	Yes	Yes	Yes
	Service Center grounds	Brine	18,000 gals	Yes	Yes	Yes
	Service Center grounds	Beet Heat	6,000 gals	Yes	Yes	Yes
	Service Center grounds	Geo Melt	6,000 gals	Yes	Yes	Yes

Good housekeeping practices followed at storage area?
Yes
Yes
Yes
Yes

	Capital Purchase Description	Plan/Schedule for Purchase
	Tandem axle with wing plow	scheduled for 2024
	One Ton Dump with Plow and Slater with Pre-wet	scheduled for 2024

Hourly Snow Observation									
11/16/2022	Day / Night Shift							Snow Event # 1	
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #1		HOURS	
						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
0:00	200	1	33.4	light	wet				
1:00	200	1	33.4	none	wet	Robert Pompey	Streets	8	
2:00	200	1	33.6	none	wet	Chappell Arnold	Forestry	8	
3:00	200	1	33.4	l.snow	wet	Edgar Mancera	Streets	8	
4:00	200	1	33.3	l.snow	wet	Lucio Jimenez	Streets	8	
5:00	200	1	33.3	l.snow	wet	Dwayne Morris	Greenways	8	
6:00	200	1	33.6	l.snow	wet	OMAR SEGURA	Forestry	8	
7:00	200	1	33.3	l.snow	wet	Pablo Sarinana	Water	8	

Hourly Snow Observation									
11/22/2022	Day & Night Shift					Snow Event # 2			
Time:	Spread Rate	Brine Product #	Air Temp	Surface Temp	Surface Conditions	SNOW EVENT #2		HOURS	
						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
4:00	0	1	30.2	26.1	dry				
5:00	0	1	27.1	27.3	dry	Lucio Jimenez	Streets	8	3
6:00	0	1	26.4	27.1	dry	Christopher Defer	Water	8	3
7:00	200	1	27.1	26.6	moist	Omar Segura	Forestry	8	3
8:00	200	1	30.9	30	wet	Pablo Sarinana	Water	8	3
9:00	200	1	31.5	30.9	wet	Edgar Vazquez	Forestry	8	3
10:00	200	1	31.8	32.9	wet				
11:00	200	1	32.2	34.2	wet				
12:00	200	1	32.4	34.5	wet				
13:00	200	1	32.6	34.3	wet				
14:00	200	1	32	27.1	dry				

Hourly Snow Observation									
12/22/2022	Night Shift					Snow Event # 3			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #3		HOURS	
						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
0:00	200	1	-6.2	l.snow	snowy				
1:00	200	1	-8	none	snowy	Wenneth Ogunremi	Forestry	4	
2:00	200	1	-8.9	l.snow	snowy	Juan Octaviano	Forestry	4	
3:00	200	1	-9.2	none	snowy	Robert Pompey	Streets		5
4:00	200	1	-9.2	none	snowy	Michael Davis	Streets	4	
5:00	200	1	-9	none	slushy	Michael Davis	Streets		5
6:00	200	1	-9	none	slushy	Andre Roberts	Streets		5
7:00	200	1	-8.5	none	slushy	Andre Roberts	Streets	4	
8:00	200	1	-7.8	none	slushy	Alvin Veasley	Streets	4	
9:00	200	1	3.1	none	wet	Lamar Hall	Streets	4	
10:00	200	1	10.6	none	wet	Anthony Cordero	Streets	4	
11:00	200	1	12.4	none	wet	Rachid Asemgar	Streets		5
12:00	200	1	14.6	l.snow	wet	Rachid Asemgar	Streets	4	
13:00	200	1	18.4	l.snow	wet				
14:00	200	1	19	l.snow	slushy				
15:00	200	1	13.6	l.snow	snowy	SNOW EVENT #3		HOURS	
16:00	200	1	9.5	l.snow	snowy	<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
17:00	200	1	7	m.snow	snowy	Robert Pompey	Streets	8	
18:00	200	1	4.3	l.snow	snowy	Michael Davis	Streets	8	
19:00	200	1	2.1	l.snow	snowy	Anthony Cordero	Streets	8	
20:00	200	1	0.7	l.snow	snowy	Anthony Cordero	Streets		5
21:00	200	1	-0.9	l.snow	snowy	Patrick Kennedy	Streets		5
22:00	200	1	-2.2	none	snowy	James Kraatz	Streets		5
23:00	200	1	-4.2	none	slushy	Alvin Veasley	Streets		5

						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
						Wenneth Ogunremi	Forestry	5	5
						Wenneth Ogunremi	Forestry	4	
						Andre Roberts	Streets	8	
						Andre Roberts	Streets		5
						Antonio Galati	Forestry		5
						Antonio Galati	Forestry	4	
						Alvin Veasley	Streets	8	
						Alvin Veasley	Streets		5
						Lamar Hall	Streets	5	
						Lamar Hall	Streets	8	
						Robert Pompey	Streets	8	
						Robert Pompey	Streets		5
						Shantray Martin	Streets		5
						Shantray Martin	Streets	8	
						John Jaminski	Streets	8	
						John Jaminski	Streets		5
						Michael Davis	Streets		5
						Michael Davis	Streets	8	
						James Todd	Forestry	4	
						James Todd	Forestry		5
						Donald Blackwood	Traffic		5
						Donald Blackwood	Traffic	4	
						James Kraatz	Streets	4	
						James Kraatz	Streets		5
						Anthony Cordero	Streets		5
						Anthony Cordero	Streets	8	
						Juan Octaviano	Forestry		5
						Juan Octaviano	Forestry	4	
						Patrick Kennedy	Streets	8	
						Rachid Asemgar	Streets	8	
						Rachid Asemgar	Streets		5
						Patrick Kennedy	Streets		5

Hourly Snow Observation									
1/24/2023	Night Shift					Snow Event # 5			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #5		HOURS	
						EMPLOYEE	DIVISION	REG	OT
0:00	200	1	28.9	l.snow	moist				
1:00	200	1	28.8	none	wet	Chappell Arnold	Forestry		9
2:00	200	1	28	l.snow	wet	William Turner	Streets		9
3:00	200	1	27.9	none	wet	Edgar Mancera	Streets		9
4:00	200	1	27.7	none	wet	Lucio Jimenez	Streets		9
5:00	200	1	27.7	l.snow	wet	Dwayne Morris	Greenways		9
6:00	200	1	27.7	l.snow	wet	Rick Brower	REM		9
7:00	200	1	27.9	l.snow	wet				
8:00	200	1	28	none	wet				

Hourly Snow Observation										
1/24/2023-	Day & Night Shift								Snow Event # 6	
1/25/2023										
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #6		HOURS		
2:00	200	1	28	l.snow	wet	EMPLOYEE	DIVISION	REG	OT	
3:00	200	1	27.9	none	wet	Dwayne Morris	Greenways		6.5	
4:00	200	1	27.7	l.snow	wet	Chappell Arnold	Forestry		6.5	
5:00	200	1	27.7	none	wet	Antonio Galati	Forestry		2.5	
6:00	200	1	27.7	none	wet	Antonio Galati	Forestry		4	
7:00	200	1	27.9	l.snow	wet					
8:00	0	1	28	none	wet	SNOW EVENT #6		HOURS		
						EMPLOYEE	DIVISION	REG	OT	
						Alvin Veasley	Streets		4.5	
						John Jaminski	Streets		4.5	
						Michael Davis	Streets		4.5	
						Shantray Martin	Streets		4.5	
						James Kraatz	Streets		4.5	
						Patrick Kennedy	Streets		4.5	

						Joe Conrad	Water	8	
						Steve Gore	Water	8	
						Edgar Vazquez	Forestry	8	

						Edgar Mancera	Streets	8	3
						Lucio Jimenez	Streets	8	3
						Dwayne Morris	Greenways	8	3
						Rick Brower	REM	8	3
						Tony Galatia	Forestry	8	
						Joe Conrad	Water	8	
						Steve Gore	Water	8	
						Edgar Vazquez	Forestry	8	

						Dwayne Morris	Greenways		12
						Rick Brower	REM		12
						Tony Galatia	Forestry		12
						Christopher Defer	Water		12
						Steve Gore	Water		12
						Edgar Vazquez	Forestry		12
						Mark McIntosh	Water		12

Hourly Snow Observation									
1/30/2023	Day / Night Shift					Snow Event # 10			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #10		HOURS	
						EMPLOYEE	DIVISION	REG	OT
0:00	200	1	17.6	light snow	snowy				
1:00	200	1	16.7	light snow	snowy	Juan Octaviano	Forestry	8	
2:00	200	1	16	light snow	slushy	Edgar Vazquez	Forestry	8	
3:00	200	1	14.9	light snow	wet	Michael Deleskiewicz	Forestry	8	
4:00	200	1	13.1	light snow	wet	Rachid Asemgar	Streets	8	
5:00	200	1	13.1	none	wet	Patrick Kennedy	Streets	8	
6:00	0	1	11.7	none	wet	Andre Roberts	Streets	8	
7:00	0	1	11.1	none	wet	Alvin Veasley	Streets	8	
8:00	200	1	10.8	none	wet	Michael Davis	Streets	8	
9:00	200	1	10.2	light snow	wet	Shantray Martin	Streets	8	
10:00	200	1	10.1	light snow	wet	John Jaminski	Streets	8	
11:00	200	1	10.8	light snow	wet	Anthony Cordero	Streets	8	
12:00	200	1	11.4	light snow	wet	SNOW EVENT #10		HOURS	
13:00	200	1	10.1	none	wet	EMPLOYEE	DIVISION	REG	OT
14:00	200	1	9.8	light snow	wet	Chappell Arnold	Forestry	8	
15:00	200	1	9.4	none	wet	William Turner	Streets	8	
						Edgar Mancera	Streets	8	
						Lucio Jimenez	Streets	8	
						Dwayne Morris	Greenways	8	
						Rick Brower	REM	8	

Hourly Snow Observation									
Date: 2/16/2023-	Day / Night Shift					Snow Event #11			
2/17/2023									
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #11		HOURS	
						EMPLOYEE	DIVISION	REG	OT
0:00	200	1	24.4	light snow	slushy				
1:00	200	1	24.4	light snow	wet	Patrick Kennedy	Streets	8	
2:00	200	1	24.3	none	wet	Esgar Flores	Forestry		2
3:00	200	1	23.5	none	wet	Wenneth Ogunremi	Forestry		2
4:00	200	1	21.9	light snow	wet	Andre Roberts	Streets		2
5:00	200	1	20.8	none	wet	John Jaminski	Streets		2
6:00	200	1	19.4	none	wet	Patrick Kennedy	Streets		2
7:00	200	1	34.3	none	dry	Robert Pompey	Streets		2
8:00	200	1	35.1	none	dry	Lamar Hall	Streets		2
9:00	200	1	33.4	light snow	wet	Shantray Martin	Streets		2
10:00	200	1	33.1	light snow	wet	Michael Davis	Streets		2
11:00	200	1	32.4	light snow	icy	Donald Blackwood	Traffic		2
12:00	200	1	32	light snow	wet	James Kraatz	Streets		2
13:00	200	1	31.6	light snow	slushy	Anthony Cordero	Streets		2
14:00	200	1	31.5	light snow	slushy	Rachid Asemgar	Streets		2
15:00	200	1	31.1	light snow	slushy	Wenneth Ogunremi	Forestry		3
16:00	300	1	30.9	light snow	slushy	Esgar Flores	Forestry		3
17:00	300	1	30.4	light snow	slushy	John Jaminski	Streets		3
18:00	300	1	30.2	light snow	slushy	Andre Roberts	Streets		3
19:00	300	1	29.5	light snow	slushy	Robert Pompey	Streets		3
20:00	200	1	29.3	light snow	slushy	Shantray Martin	Streets		3
21:00	300	1	25.5	light snow	snowy	Lamar Hall	Streets		3
19:00	300	1	29.5	light snow	slushy	Michael Davis	Streets		3
20:00	300	1	29.3	light snow	slushy	Donald Blackwood	Traffic		3
21:00	200	1	25.5	light snow	snowy	James Kraatz	Streets		3
						Patrick Kennedy	Streets		3
						Rachid Asemgar	Streets		3
						Anthony Cordero	Streets		3
						Wenneth Ogunremi	Forestry	8	
						Esgar Flores	Forestry	8	
						Andre Roberts	Streets	8	
						John Jaminski	Streets	8	
						Robert Pompey	Streets	8	

Hourly Snow Observation									
Date: 02/24 /2023	Day & Night Shift						Snow Event # 12		
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #12		HOURS	
						EMPLOYEE	DIVISION	REG	OT
0:00	300	1	27.1	none	snowy				
1:00	300	1	27.9	none	snowy	Edgar Vazquez	Forestry		5.5
2:00	300	1	28.6	none	snowy	Antonio Galati	Forestry		5.5
3:00	300	1	28.9	none	slushy	Rachid Asemgar	Streets		6.5
4:00	300	1	29.1	none	wet	Joe Conrad	Water		5
5:00	200	1	28.6	none	wet	Rachid Asemgar	Forestry		5
6:00	200	1	28.2	none	wet	Edgar Vazquez	Forestry		5
7:00	0	1	28.2	none	wet	Steve Gore	Water		5

Hourly Snow Observation									
Date:3/9-10/2023	Day & Night Shift					Snow Event # 13			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #13		HOURS	
						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
0:00	200	1	33.1	l.snow	slushy				
1:00	200	1	32.4	l.snow	slushy	Chris Brown	Streets	8	
2:00	200	1	32.7	l.snow	wet	Patrick Kennedy	Streets	8	
3:00	200	1	32.7	l.snow	slushy	Michael Davis	Streets	8	3
4:00	200	1	32.5	l.snow	wet	Rachid Asemgar	Streets	8	2
5:00	200	1	32.4	l.snow	wet	Shantray Martin	Streets	8	
6:00	200	1	32.2	light	wet	John Jaminski	Streets	8	2
7:00	200	1	32.2	l.snow	wet	James Kraatz	Streets	8	3
8:00	200	1	32.7	none	wet	Andre Roberts	Streets	8	3
9:00	0	1	36.9	none	dry	Anthony Cordero	Streets	8	2
10:00	0	1	37.2	none	dry	James Kraatz	Streets	8	
11:00	0	1	36.3	none	dry				
12:00	0	1	37.2	none	dry	SNOW EVENT #13		HOURS	
13:00	0	1	37.2	none	dry	<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
14:00	0	1	37.4	none	dry	Chappell Arnold	Forestry	8	4
15:00	0	1	37.6	none	dry	William Turner	Streets	8	4
16:00	0	1	37	light	dry	Edgar Mancera	Streets	8	4
17:00	200	1	35.1	light	wet	Lucio Jimenez	Streets	8	4
18:00	200	1	34.9	l.snow	wet	Dwayne Morris	Greenways	8	4
19:00	200	1	34.9	l.snow	wet	JOE CONRAD	Water	8	4
20:00	200	1	34.5	light	wet	Edgar Vasquez	Forestry	8	4
21:00	200	1	33.4	l.snow	wet	Pablo Sarinana	Water	8	4
22:00	200	1	34	l.snow	wet	Christopher Defer	Water	8	4
23:00	200	1	33.4	l.snow	wet	Darryl Clark	Water	8	4
						Omar Segura	Forestry	8	4
						Steve Gore	Water	8	4
						Tony Galati	Forestry	8	4

Hourly Snow Observation									
Date 3/11-12/2023	Night Shift					Snow Event # 14			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #14		HOURS	
						<u>EMPLOYEE</u>	<u>DIVISION</u>	<u>REG</u>	<u>OT</u>
0:00	200	1	33.3	l.snow	wet				
1:00	200	1	33.4	l.snow	wet	Chappell Arnold	Forestry		9
2:00	200	1	33.3	l.snow	wet	William Turner	Streets		9
3:00	200	1	33.3	l.snow	wet	Edgar Mancera	Streets		9
4:00	200	1	33.3	l.snow	wet	Lucio Jimenez	Streets		9
5:00	200	1	33.3	light	wet	Dwayne Morris	Greenways		9
6:00	200	1	31.7	none	wet	Rick Brower	REM		9
7:00	200	1	31.1	none	wet	Joe Conrad	Water		9
8:00	0	1	30.8	none	wet	Edgar Vasquez	Forestry		9
9:00	0	1	30.9	none	wet	Pablo Sarinana	Water		9
10:00	0	1	30.8	none	wet	Christopher Defer	Water		9
						Darryl Clark	Water		9
						Omar Segura	Forestry		9
						Steve Gore	Water		9
						Tony Galati	Forestry		9

Hourly Snow Observation									
Date: 3/13/2023	Day Shift & Night Shift					Snow Event # 15			
Time:	Spread Rate	Brine Product #	Air Temp	Weather Conditions	Surface Conditions	SNOW EVENT #15		HOURS	
						EMPLOYEE	DIVISION	REG	OT
3:00	200	1	28.6	l.snow	snowy				
4:00	200	1	27.9	none	snowy	Juan Octaviano	Forestry	8	
5:00	200	1	28.2	none	wet	Robert Pompey	Streets	8	
6:00	200	1	28.2	none	wet	Rodrigo Martinez	Streets	8	
7:00	200	1	28.4	l.snow	wet	Anthony Cordero	Streets	8	
8:00	200	1	28	l.snow	wet	Rachid Asemgar	Streets	8	
9:00	200	1	29.1	none	wet	Lamar Hall	Streets	8	
10:00	200	1	30.9	none	wet	Shantray Martin	Streets	8	
11:00	200	1	30.6	l.snow	wet	Patrick Kennedy	Streets	8	
						John Jaminski	Streets	8	
						Chappell Arnold	Forestry	8	
						William Turner	Streets	8	
						Edgar Mancera	Streets	8	
						Lucio Jimenez	Streets	8	