

**CITY OF LINO LAKES
ENVIRONMENTAL BOARD MEETING**

Wednesday, October 26th, 2022
6:30 p.m.
Council Chambers

AGENDA

1. CALL TO ORDER AND ROLL CALL
2. PLEDGE OF ALLEGIANCE
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES: NONE
5. OPEN MIKE
6. ACTION ITEMS
 - A. City Code Chapter 1011. Stormwater, Erosion and Sediment Control Update, Michael Grochala
 - B. Draft Chloride Reduction Ordinance, Michael Grochala
7. ADJOURN

**ENVIRONMENTAL BOARD
AGENDA ITEM 6A**

STAFF ORIGINATOR: Michael Grochala, Community Development Director

MEETING DATE: October 26, 2022

REQUEST: Consider Amendment to City Code Section 1011, Storm Water Management, Erosion and Sediment Control

APPLICANT City of Lino Lakes

BACKGROUND:

City Code section 1011 regulates development activities that disturbs land and generates the need for storm water management. The City is required to adopt ordinance consistent with the requirements of the State’s General Permit to operate a municipal separate storm sewer system (MS4). The City was issued a new permit in October of 2021. Additionally, the City is required to be in conformance with the rules and requirements of the local water management organizations (WMO’s) – the Rice Creek Watershed District (RCWD) and Vadnais Lakes Water Management Organization.

The proposed ordinance amendment is to bring our code requirements into conformance with the permit and WMO’S standards and simplify administration of the code

The RCWD covers the majority of the city with VLAWMO jurisdiction limited to a few hundred acres in the southeast portion of the City. For purpose of applying requirements uniformly the ordinance adopts the stormwater management requirements of the RCWD.

New language is shown as underlined text and deleted text is shown with a ~~strikethrough~~.

ANALYSIS

Sections 1011.001 through 1011.005:

These sections were modified to remove superfluous language and recognize the adoption of certain code amendments by reference to RCWD or VLAWMO rules

Section 1011.006 Definitions:

The definition section was amended to update definitions for consistency with WMP’s and the MS4 permit, and delete unnecessary terminology.

Section 1011.007 through 1011.009:

These sections were modified to remove superfluous language and correct references.

Section 1011.010. Erosion and Sediment Control Requirements

These sections were modified to remove superfluous language and conform to similar requirements of RCWD.

Section 1011.011 Stormwater Management Requirements.

Permit applicability was amended to generally match RCWD permit requirements and meets the requirements for the MS4 permit as well.

The Comprehensive Stormwater Management Plan (CSMP's) section was added, as provided for by RCWD. The City has two CSMP's currently in effect – one for Legacy at Woods Edge (City Hall and surrounding complex) and the NE Drainage Area (from Peltier Lake to City of Hugo). Stormwater Management in those areas are governed by these requirements.

Subparts 5 through 9 adopts the RCWD requirements by reference as amended. This keeps our ordinance consistent with the RCWD. The RCWD Rules cover the same items shown as deleted in our ordinance.

Subpart 11 was added to establish wetland buffers consistent with the RCWD and VLAWMO requirements.

Sections 1011.012 through 016

No changes are proposed other than minor clerical references.

ENVIRONMENTAL DIRECTION:

Recommend approval of proposed Stormwater, Erosion and Sediment Control code amendments.

ATTACHMENTS:

1. Draft Storm Water Erosion and Sediment Control Ordinance

1 st Reading:	Publication:
2 nd Reading:	Effective:

DRAFT

**CITY OF LINO LAKES
ORDINANCE NO. __ -22**

**AN ORDINANCE AMENDING SECTION 1011 RELATING TO THE REGULATION
OF STORMWATER, EROSION AND SEDIMENT CONTROL**

The City Council of Lino Lakes ordains:

Section 1. The Lino Lakes Code of Ordinance, Chapter 1001 Stormwater, Erosion and Sediment Control is hereby amended as follows:

CHAPTER 1011: STORMWATER, EROSION AND SEDIMENT CONTROL

Section

- 1011.001 Title
- 1011.002 ~~Purpose~~Findings
- 1011.003 Jurisdiction
- 1011.004 Statutory authority
- 1011.005 ~~_____ Findings~~Adoption by reference
- 1011.006 Definitions
- 1011.007 Applicability
- 1011.008 Exemptions
- 1011.009 ~~_____ Technical reference~~Reserved
- 1011.010 Grading, erosion and sediment control requirements
- 1011.011 Stormwater management requirements
- 1011.012 Inspections and maintenance
- 1011.013 Plan review procedure
- 1011.014 Financial securities
- 1011.015 Enforcement
- 1011.016 Abrogation and greater restrictions

§ 1011.001 TITLE.

This chapter shall be known as the Lino Lakes Stormwater, Erosion and Sediment Control Chapter and will be referred to herein as this chapter.

(Ord. 09-15, passed 10-26-2015)

§ 1011.002 PURPOSE.

~~The general purpose of this chapter is to set forth regulatory requirements for land development and land disturbing activities aimed at minimizing threats to public health, safety, public and private property, and natural resources within the city from construction site erosion and post-construction stormwater runoff. Specific purposes are to establish performance standards that will:~~

- ~~—(1) Protect life and property from dangers associated with flooding;~~
- ~~—(2) Protect public and private property and the natural resources from damage resulting from runoff and construction site erosion;~~
- ~~—(3) Ensure land development that minimizes the generation of stormwater runoff volumes and peak rates and maximizes pervious areas for stormwater treatment;~~
- ~~—(4) Promote regional stormwater management by subwatershed;~~
- ~~—(5) Provide a single, consistent set of performance standards that apply to all developments;~~
- ~~—(6) Protect water quality from nutrients, heavy metals, bacteria, pathogens, debris, thermal stress, and other urban pollutants;~~
- ~~—(7) Promote infiltration and groundwater recharge;~~
- ~~—(8) Protect functional values of all types of natural water bodies (e.g., rivers, streams, wetlands, lakes, seasonal ponds); and~~
- ~~—(9) Sustain or enhance biodiversity (native plant and animal habitat) and support riparian ecosystems.~~

~~(Ord. 09-15, passed 10-26-2015)~~

The city finds that uncontrolled stormwater runoff and construction site erosion from land development and land disturbing activity can have significant adverse impacts upon local and regional water resources diminishing the quality of public health, safety, public and private property, and natural resources of the city. Specifically, uncontrolled construction site erosion and stormwater runoff can:

- (1) Threaten public health, safety, property, and general welfare by increasing runoff volumes, peak flood flows, and overburdening storm sewers, drainage ways, and other storm drainage systems;
- (2) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loadings of total sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens, and other urban pollutants;

—(3) Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows, and increasing stream temperatures;

—(4) Undermine floodplain management efforts by increasing the incidence and levels of flooding;

—(5) Alter wetland communities by changing wetland hydrology and increasing pollutant loading; and

—(6) Generate airborne particulate concentrations that are health threatening or may cause other damage to property or the environment.

(Ord. 09-15, passed 10-26-2015)

§ 1011.003 JURISDICTION.

The provisions of this chapter shall apply to all lands within the incorporated boundaries of Lino Lakes.

(Ord. 09-15, passed 10-26-2015)

§ 1011.004 STATUTORY AUTHORITY.

This chapter is adopted pursuant to the authorization and policies contained in M.S. Chs. 103B, 103F, and 462 and Minn. Rules Chs. 7050, 7090, and 8410. This chapter is intended to meet the current construction site erosion and sediment control and post-construction stormwater management regulatory requirements for construction activity and small construction activity as defined in the standards of the NPDES construction general permit, as amended.

(Ord. 09-15, passed 10-26-2015)

§ 1011.005 FINDINGS ADOPTION BY REFERENCE.

~~—The city finds that uncontrolled stormwater runoff and construction site erosion from land development and land disturbing activity can have significant adverse impacts upon local and regional water resources diminishing the quality of public health, safety, public and private property, and natural resources of the city. Specifically, uncontrolled construction site erosion and stormwater runoff can:~~

~~—(1) Threaten public health, safety, property, and general welfare by increasing runoff volumes, peak flood flows, and overburdening storm sewers, drainage ways, and other storm drainage systems;~~

~~—(2) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loadings of total sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens, and other urban pollutants;~~

~~—(3) Degrade physical stream habitat by increasing stream bank erosion, increasing stream bed scour, diminishing groundwater recharge, diminishing stream base flows, and increasing stream temperatures;~~

~~—(4) Undermine floodplain management efforts by increasing the incidence and levels of flooding;~~

~~—(5) Alter wetland communities by changing wetland hydrology and increasing pollutant loading; and~~

~~—(6) Generate airborne particulate concentrations that are health threatening or may cause other damage to property or the environment.~~

~~(Ord. 09-15, passed 10-26-2015)~~

Certain rules of the Rice Creek Watershed District (the “Rules”) and Standards of the Vadnais Lake Area Water Management Organization (the “Standards”) and any amendments or revisions thereto referenced herein are adopted as ordinances of the City. Where the Rules refer to the “District” they shall be deemed as referring to the City. Where the Standards refer to the “VLAWMO” they shall be deemed as referring to the City. Where conflicts exist between this Ordinance and the Rules or Standards, the greater requirement shall apply.

§ 1011.006 DEFINITIONS.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the same meaning as they have in common usage and to give this chapter its most reasonable application. For the purpose of this chapter, the words **MUST** and **SHALL** are mandatory and not permissive. All distances, unless otherwise specified, shall be measured horizontally. As used in this chapter, the following words and terms shall have the meanings ascribed to them in this section.

100-YEAR FLOOD ELEVATION. The elevation of water resulting from the Critical Duration Flood Event. [See definition of Critical Duration Flood event.](#)

BEST MANAGEMENT PRACTICES (BMP's). Measures taken to minimize negative effects on water resources and systems as documented in the Minnesota Construction Site Erosion and Sediment Control Planning Handbook (MBWSR, 1988), Protecting Water Quality in Urban Areas (MPCA, 2000) and the Minnesota Stormwater Manual (MPCA, 2014) as amended.

BETTER SITE DESIGN (BSD). An approach to managing runoff that seeks to attain post development hydrology which mimics the undeveloped condition in terms of volume, rate and timing of runoff. The goals of **BETTER SITE DESIGN** include reducing the amount of impervious cover, increasing the amount of natural lands set aside for conservation, using pervious areas for more effective stormwater treatment, innovative grading and drainage techniques and through the review of every aspect of the project site planning process. **BETTER SITE DESIGN** involves techniques applied early in the design process to reduce impervious cover, conserve natural areas and use pervious

areas to more effectively treat stormwater runoff and promote a treatment train approach to runoff management.

BIOFILTRATION. ~~A stormwater quality and quantity BMP that utilizes vegetation and soil to filter and absorb pollutants including nutrients, hydrocarbons and metals and remove water volume through evapotranspiration.~~ A bioretention practice in which an underdrain is used. Typically, most of the water entering the biofiltration practice enters the underdrain and is returned to the stormwater system, but some water infiltrates (unless the BMP has an impermeable liner) or evapotranspires. The underdrain may be at or elevated above the bottom of the practice (i.e. at the media-soil interface).

BIORETENTION. A soil and plant-based stormwater management best management practice (BMP used to filter runoff).

BRIDGE. A road, path, railroad or utility crossing over a waterbody, wetland, ditch, ravine, road, railroad or other obstacle.

BRIDGE SPAN. The clear span between the inside surfaces of a bridge's terminal supports.

CHANNEL. A perceptible natural or artificial depression, with a defined bed and banks that confine and conduct water flowing either continuously or periodically.

CONSTRUCTION ACTIVITY. Activities including clearing, grading, and excavating, that result in land disturbance of equal to or greater than one acre, including the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre. This includes a disturbance to the land that results in a change in the topography, existing soil cover, both vegetative and nonvegetative, or the existing soil topography that may result in accelerated stormwater runoff that may lead to soil erosion and movement of sediment. Construction activity does not include a disturbance to the land of less than five acres for the purpose of routine maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Routine maintenance does not include activities such as repairs, replacement and other types of non-routine maintenance. Pavement rehabilitation that does not disturb the underlying soils (e.g., mill and overlay projects) is not construction activity.

~~Includes construction activity as defined in 40 C.F.R. pt. 122.26(b)(14)(x) and small construction activity as defined in 40 C.F.R. pt. 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated stormwater runoff, leading to soil erosion and movement of sediment into surface waters or drainage systems. Examples of CONSTRUCTION ACTIVITY may include clearing, grading, filling, and excavating. CONSTRUCTION ACTIVITY includes the disturbance of less than one acre of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb one acre or more.~~

CONVEYANCE SYSTEM. Open channel, pipe or tile that is not a Public Drainage System. A portion of a conveyance system is defined as "regional" if it carries flows from a drainage area of greater than 200 acres.

CRITICAL DURATION FLOOD EVENT. The 100-year precipitation or snow melt event with a duration resulting in the maximum 100-year return period water surface elevation. The **CRITICAL DURATION FLOOD EVENT** is generally either the 100-year, 24 hour rainfall event as found in NOAA Atlas 14 or the ten-day snow melt event assumed to be 7.2 inches of runoff occurring on frozen ground (CN=100); however, other durations (e.g., 6-hour) may result in the maximum 100-year return period water surface elevation.

DETENTION BASIN. Any natural or man-made depression that stores stormwater runoff temporarily.

DEVELOPMENT. Any land-disturbing activity resulting in creation or reconstruction of impervious surface including, but not limited to, municipal road construction. Normal farming practices part of an ongoing farming operation shall not be considered a **DEVELOPMENT**.

DRAINAGE SYSTEM. A system of open channel, pipe or tile, to drain property, including laterals, improvements, and improvements of outlets, which may or may not be a public system under the jurisdiction of a watershed district under M.S. Chs. 103B, 103D, or 103E.

EMERGENCY OVERFLOW (EOF). A primary overflow to pass flows above the design capacity around the principal outlet safely downstream without causing flooding.

~~EROSION AND SEDIMENT CONTROL PLAN. A plan of BMPs or equivalent measures designed to control runoff and erosion and to retain or control sediment on land during the period of land disturbance in accordance with the standards set forth in this chapter.~~

~~EROSION PREVENTION. Measures employed to prevent erosion including, but not limited to, soil stabilization practices, limited grading, mulch, temporary or permanent cover, and construction phasing.~~

EXCAVATION. The displacement or removal of soil, sediment or other material.

FILTRATION. A stormwater quality BMP that uses either natural media such as soil or vegetation or manufactured media to trap pollutants such as nutrients and particles in surface water.

~~FINAL STABILIZATION. All soil disturbing activities at the site have been completed and all soils have to be stabilized by a uniform perennial vegetative cover with a density of 70% over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.~~

FLOODPLAIN. The beds proper and areas adjoining a waterbody wetland, lake or watercourse that are inundated which have been or hereafter may be covered by the during the 100-year regional flood.

FLOODWAY FRINGE. That portion of the floodplain outside of the floodway. Flood fringe is synonymous with the term FLOODWAY FRINGE used in the Flood Insurance

~~study for Anoka County. The area between the floodway and the boundary of the 100-year flood.~~

~~**FLOODWAY.** The channel of a watercourse, the bed of water basins and those portions of adjoining floodplains that must be kept free of encroachment to accommodate the 100-year flood. The bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining floodplain which are reasonably required to carry or store the regional flood discharge.~~

~~**FLOODWAY FRINGE.** The area between the floodway and the boundary of the 100-year flood. The portion of the one-percent annual chance floodplain located outside of the floodway. This district also includes any additional area encompassed by the horizontal extension of the Regulatory Flood Protection Elevation.~~

FREEBOARD. Vertical distance between the 100-year flood elevation or emergency overflow elevation of a water basin or watercourse and the elevation of the regulatory elevation of a structure.

IMPERVIOUS SURFACE. A compacted surface or a surface covered with material (i.e., gravel, asphalt, concrete, Class 5, etc.) that increases the depth of runoff compared to natural soils and land cover. Including but not limited to roads, driveways, parking areas, sidewalks and trails, patios, tennis courts, basketball courts, swimming pools, building roofs, covered decks, and other structures.

INFILTRATION. Water entering the ground through the soil.

LAND-DISTURBING ACTIVITY. Any disturbance to the ground surface that, through the action of wind or water, may result in soil erosion or the movement of sediment into waters, wetlands or storm sewers or onto adjacent property. **LAND-DISTURBING ACTIVITY** includes but is not limited to the demolition of a structure or surface, soil stripping, clearing, grubbing, grading, excavating, filling and the storage of soil or earth materials. The term does not include normal farming practices as part of an ongoing farming operation.

LANDLOCKED BASIN. A water basin lacking an outlet at an elevation at or below the water level produced by the critical duration flood event, generally the ten-day snowmelt event.

LOW ENTRY ELEVATION. The elevation of the lowest opening in a structure.

LOW FLOOR ELEVATION. The elevation of the lowest floor of a habitable or uninhabitable structure, which is often the elevation of the basement floor or walk-out level.

MILL, RECLAMATION AND OVERLAY. Removal of the top layer(s) of an impervious surface (e.g. roadway, parking lot, sport court) by mechanical means, followed by the placement of a new layer of impervious surface, without exposure of the underlying native soil.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT. A permit issued by the Minnesota Pollution Control Agency that authorizes the discharge of pollutants to the waters of the state.

NATIONWIDE URBAN RUNOFF PROGRAM (NURP). Urban Runoff Program developed by the Environmental Protection Agency to study stormwater runoff from urban development.

ORDINARY HIGH WATER LEVEL (OHW). The highest water level elevation that has been maintained for a sufficiently long period of time to leave evidence upon the landscape. The OHW is commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. If an OHW has been established for a waterbody by the Minnesota Department of Natural Resources, it will constitute the OHW under this definition.

OWNER. The person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement, or mineral rights license holder; or the contracting government agency responsible for the construction activity.

[POLLUTANT. A substance that pollutes something, especially water or the atmosphere.](#)

PUBLIC LINEAR PROJECT. A project involving a roadway, sidewalk, trail or utility not part of an industrial, commercial, institutional or residential development.

RECONSTRUCTION. Removal of an impervious surface such that the underlying structural aggregate base is effectively removed and the underlying native soil exposed.

SEASONAL HIGH WATER TABLE. The highest known seasonal elevation of groundwater as indicated by redoximorphic features such as mottling within the soil.

~~SATURATED SOIL. The highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. Saturated soil is evidenced by the presence of mottled features or other information.~~

SEDIMENT CONTROL. Methods employed to prevent sediment from leaving the site. **SEDIMENT CONTROL** practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent sedimentation basins.

SHORELAND. Land located within the following distances from the ordinary high water elevation of public waters:

(a) Land within 1,000 feet from the normal high watermark of a lake, pond or flowage; and

(b) Land within 300 feet of a river or stream or the landward size of a floodplain delineated by ordinance on the river or stream, whichever is greater.

STABILIZED. The exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats or other material that prevents erosion from occurring. Applying mulch, hydromulch, tackifier, polyacrylamide, or similar erosion prevention practices is not acceptable stabilization in temporary or permanent drainage ditches or areas where concentrated overland flow occurs. Grass seeding is not stabilization.

~~—STANDARD PLATES. General drawings having or showing similar characteristics or qualities that are representative of a construction activity or practice.~~

STORM SEWER. A pipe system for stormwater conveyance.

STORMWATER. Defined under Minn. Rules 7077.0105, Subd. 41(b), meaning precipitation runoff, stormwater runoff, snowmelt runoff, and any other surface runoff and drainage.

STORMWATER FACILITY, PRIVATE. Any BMP that is maintained by a private property owner, or other private entity and not maintained by a public agency.

STORMWATER MANAGEMENT PLAN. A plan for the permanent management and control of runoff prepared and implemented in accordance with the standards set forth in this chapter.

~~STORMWATER POLLUTION PREVENTION PLAN. A document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or waterbodies to the maximum extent practicable.~~

STORMWATER POND. Constructed basins placed in the landscape to capture stormwater runoff.

SUBDIVISION. The legal separation of an area, parcel, or tract of land under single ownership into two or more parcels, tracts, lots.

SURFACE WATERS. All streams, lakes, ponds, marshes, wetlands, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.

UNDERGROUND WATERS. Water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term GROUND WATER shall be synonymous with underground water.

WATER QUANTITY BEST MANAGEMENT PRACTICE. The use of on-site runoff management practices such as biofiltration, infiltration, buffers/conservation areas, impervious disconnection, and greenway connections to satisfy stormwater management requirements.

WATERS OF THE STATE. As defined in M.S. § ~~115.01, Subd. 22, 103G.005, Subd. 17~~ means surface or underground waters, except surface waters that are not confined but are spread and diffused over the land. Waters of the state includes boundary and

~~inland waters means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.~~

WETLAND. Land transitional between terrestrial and aquatic systems, as defined in M.S. § 103G.005, Subd. 19.

(Ord. 09-15, passed 10-26-2015)

§ 1011.007 APPLICABILITY.

All land disturbing activity may be subject to standard erosion and sediment control BMPs. A grading, erosion and sediment control permit and/or a stormwater management permit shall be required for projects that meet or exceed the thresholds established in §§ 1011.~~009-010~~ and 1011.~~010-011~~.

(Ord. 09-15, passed 10-26-2015)

§ 1011.008 EXEMPTIONS.

The following land disturbing activities will be exempt from the grading, erosion and sediment control and stormwater management permit requirements of this chapter:

- (1) Cemetery graves;
- (2) Routine agricultural activity such as tilling, planting, or harvesting of agricultural, horticultural, or silvicultural (forestry) crops; and
- (3) Emergency work necessary to protect life, limb, or property.

(Ord. 09-15, passed 10-26-2015)

~~§ 1011.009 TECHNICAL REFERENCES.~~

~~The following documents shall be used for technical reference:~~

- ~~(1) The Lino Lakes Surface Water Management Plan.~~
- ~~(2) The Lino Lakes Engineering Design Details.~~
- ~~(3) The Lino Lakes Standard City Specifications.~~
- ~~(4) The Rice Creek Watershed District (RCWD) Rules.~~
- ~~(5) The Vadnais Lakes Area Watershed Management Organization (VLAWMO) Rules.~~

~~(Ord. 09-15, passed 10-26-2015)~~

§ 1011.010 GRADING, EROSION AND SEDIMENT CONTROL REQUIREMENTS.

(1) *Grading, erosion and sediment control (ESC)*. A grading, erosion and sediment control (ESC) permit ~~including a grading, erosion and sediment control plan~~ shall be required for all proposed land disturbing activity unless otherwise exempted in this chapter that meets any or all of the following:

(a) Includes excavation, filing, or stockpiling of erodible material in excess of 50 cubic yards per acre;

~~(b) Involves the laying, repairing, replacing, or enlarging of an underground utility, pipe or other facility, or the disturbance of road ditch, grass swale, or other open channel for a distance of 500 feet or more;~~

~~(e)~~(b) Disturbs more than one acre of land or 10,000 square feet if within 300 feet of a lake, stream or wetland and drains towards it; and/or

~~(d)~~(c) A land disturbing activity, regardless of size, that the city determines is likely to cause an adverse impact to an environmentally sensitive area or other property.

(2) *Grading, erosion and sediment control plan design standards*. Grading, erosion and sediment control plans must comply with the following criteria:

~~(a) All plans shall be consistent with national pollutant discharge elimination permit (NPDES) requirements, the city engineering design standards, the Lino Lakes stormwater detail plates, and the filing or approval requirements of Rice Creek Watershed District, Vadnais Lakes Watershed Management Organization, Anoka County, Minnesota Department of Natural Resources, Minnesota Department of Transportation, Minnesota Pollution Control Agency, U.S. Army Corps of Engineers, State of Minnesota Stormwater Manual or other regulatory agencies; All site erosion and sediment control practices shall be consistent with Minnesota Pollution Control Agency document "Protecting water Quality in Urban Areas (1994) as amended and City of Lin Lakes General Specifications and Standard Detail Plates for Street and Utility Construction (January 2022 or current addition.~~

(b) Natural site topography and soil conditions must be specifically addressed to reduce erosion and sedimentation during construction and after project completion;

(c) Site erosion and sediment control practices must be consistent with the Minnesota Pollution Control Agency document Protecting Water Quality in Urban Areas (2000), as amended, city-specific written design guidance, and be sufficient to retain sediment on-site;

(d) The project must be phased as best possible to minimize disturbed areas and removal of existing vegetation until necessary for project progress;

(e) The city may require additional erosion and sediment control measures on areas with a continuous slope leading to a sensitive, impaired or special water body, stream, ditch or wetland to assure retention of sediment on site;

~~(f) When site restrictions do not allow for a temporary sediment basin or less than the required acreage is being developed, temporary sediment basins, where appropriate, are encouraged. They are not required in areas with steep slopes, highly~~

~~erodible soils, or to take equivalent measures such as smaller basins, check dams, and vegetated buffer strips;~~

~~(g)(f)~~ The plan must include conditions adequate to protect facilities to be used for post-construction stormwater infiltration;

~~(h) The plan must include conditions to minimize off-site sediment transport on trucks and equipment, such as rock entrances;~~

~~(i) The plan must minimize work in and adjacent to water bodies and wetlands;~~

~~(j) Stable slopes shall be maintained throughout the construction process.~~

~~(k) Steep slopes and the need for high cuts and fills shall be avoided (no slopes greater than 3(h): 1(v), except as approved by the City Engineer).~~

~~(l)(g)~~ Protection shall be provided to minimize disturbance to surrounding soils, root systems and trunks of trees adjacent to site activity that are intended to be left standing.

~~(m)(h)~~ Compaction of site soils shall be minimized.

~~(n)(i)~~ All imported materials shall be approved by the City Engineer prior to placement on the site.

~~(o)(j)~~ Appropriate on-site containment must be provided for all trash, solid waste, construction debris, floating debris, and hazardous materials. Disposal of collected sediment shall be deposited only in approved locations.

(3) *Grading, erosion and sediment control (ESC) required exhibits.* The plan shall be prepared and signed by a duly licensed professional engineer in the State of Minnesota. The following exhibits must accompany the permit application: two plan sets, full size (22 inches by 34 inches); ~~and one electronic copy in a .pdf format, one plan set, reduced to maximum size of 11 inches by 17 inches. Additional copies may be required in accordance with applicable zoning and subdivision provisions of city code.~~ All plan sets shall also be submitted electronically in a .dwg format or as otherwise determined by the City Engineer. The minimum requirements of the grading, erosion, and sediment control plan shall be consistent with the most recent version of the NPDES permit requirements and include the following information:

(a) Project name ~~and type (residential, commercial, industrial, road construction, or other)~~ and location;

~~(b) Project location;~~

~~(c)(b)~~ Address, cCounty parcel identification number ~~(and~~ legal description of the property);

~~(d)(c)~~ Names and addresses of the record owner, developer, land surveyor, engineer, designer of the plat, and any agents, contractors, and subcontractors who will be responsible for project implementation, including the name, address and phone number of the party responsible for maintenance of all erosion and sediment control measures;

~~(e)~~(d) Tabulation of construction implementation schedule, including: estimated start date, time frames, and schedules for each construction phase, and completion date;

~~(f)~~(e) Copies of permits or permit applications required by any other government entity or agencies including mitigation measures required as a result of any review for the project (e.g., wetland mitigation, EAW, EIS, archaeology survey);

~~(g)~~(f) *Existing conditions map*. An existing topographic site map, drawn to a legible scale and clearly labeled with a north arrow and date of preparation. The plan, based on a certificate of survey, shall include the following information:

1. Property lines and lot dimensions;
2. Existing zoning classifications for land within and abutting the development, including shoreland, floodway, floodway fringe, or general floodplain, and other natural resource overlay districts;
3. All buildings and outdoor uses including all dimensions and setbacks;
4. All public and private roads, interior roads, driveways and parking lots;
5. Show ordinary high water marks of all navigable waters, 100-year critical flood duration event elevations, and delineated wetland boundaries, if any. If not available, appropriate flood zone determination or wetland delineation, or both, may be required at the applicant's expense;
6. Identify all special waters and impaired waters, as identified in the most recent listing by the MPCA, within one mile of the project that receive runoff from the project;
7. Location of drainage areas, existing storm sewer facilities, including pipes, manholes, catch basins, ponds, swales and drainage channels within 100 feet of the subject property. Existing pipe sizes, grades, rim and invert elevations, and normal and high water elevations must be included;
8. Existing contours at one foot intervals, shown as dashed lines for the subject property and extending 100 feet beyond the outside boundary of the proposed plat;
9. Steep slopes where areas with an average slope of more than 12% over a distance of at least 50 feet, or bluff areas as defined in the shoreland ordinance, whichever is applicable; and
10. Wooded areas, high quality native plant communities, or other officially designated natural resource areas.

~~(h)~~(g) Proposed conditions map.

1. Maps identifying areas discussed in (3)(~~ef~~)1. through (~~ef~~)10. of this section.
2. Location, size, and approximate grade of proposed public sewer and water mains.

3. Elevations, sections, profiles, and details as needed to describe all natural and artificial features of the project.
4. Proposed grade contours at one-foot intervals shown as solid lines.
5. An estimate of the total volume (cubic yards) of materials proposed to be imported to or exported from the site.
6. Provisions for groundwater management (dewatering), including subsurface drains, disposals, ponding and flood controls.
7. Spot elevations at drainage break points and directional arrows indicating site swale and lot drainage.
8. Proposed lot lines, lot and block numbers, building style, building pad location and elevations at the lowest floor and garage slab, if applicable, for each lot.
9. Locations, sizes, grades, rim and invert elevations of all proposed stormwater facilities, including ponds, proposed to serve the subject property.
10. The location of all oversized, non-typical easements including conservation easements, if applicable.
11. Show the boundary of the 100-year flood elevations of all waterbodies.
12. Locations of all stormwater management practices, infiltration areas, and areas not to be disturbed during construction.
13. Normal water level, high water level, and emergency overflow elevations for the site and all associated ponding systems.
14. Location of areas where construction will be phased to minimize duration of exposed soil areas. Include map and calculations as necessary of areas of grubbing, clearing, tree removal, grading, excavation, fill, and other disturbance; areas of soil or earth material storage; quantities of soil or earth material to be removed, placed, stored, or otherwise moved on site, and delineated limits of disturbance.
15. Location and type of all temporary and permanent erosion prevention, sediment control, stormwater runoff, and soil stabilization BMPs, along with procedures to be used to establish additional temporary BMPs as necessary for the site conditions during construction. Standard plates and/or specifications for the BMP's used on the project must be included in the final plans and specifications for the project. Location and design of temporary sediment basins where ten acres or more (five acres or more for special or impaired waters) are disturbed and drained to a single point. When site restrictions do not allow for a temporary sediment basin or less than the required acreage is being developed, temporary sediment basins where appropriate are encouraged, but not required in areas with steep slopes or highly erodible soils or to take equivalent measures such as smaller basins, check dams, and vegetated buffer strips.
16. Methods to be used for final stabilization of all exposed soil areas.
17. Documentation that the project applicant has applied for the NPDES permit from the Minnesota Pollution Control Agency (MPCA), when applicable.

18. A stormwater pollution prevention plan for projects that require an NPDES permit.

(4) *Construction activity requirements.* Any activity subject to a permit under this chapter must conform to the standards of the NPDES general permit regarding construction-site erosion and sediment control.

(5) Inspections. (See also § 1101.011.)

(a) The applicant shall be responsible for inspection, maintenance and effectiveness of all erosion and sediment control measures until final soil stabilization is achieved.

(b) The city may inspect the project site and require the applicant to provide additional erosion control measures as it determined conditions warrant.

(6) *Final stabilization.*

(a) Erosion and sediment control measures must be maintained until final vegetation and ground cover is established to a density of 70% over the entire pervious surface area.

(b) All temporary erosion and sediment control BMPs will be removed after all disturbed areas have been permanently stabilized.

(Ord. 09-15, passed 10-26-2015)

§ 1011.011 STORMWATER MANAGEMENT REQUIREMENTS.

(1) *Stormwater management.* A permit incorporating an approved stormwater management plan shall be required for all proposed land development activity including public linear projects, unless otherwise exempted in this chapter, which meets any or all of the following:

(a) A development, redevelopment or reconstruction, except public linear projects, that creates or reconstructs 10,000 square feet or more of impervious surface, including smaller individual sites that are part of a common plan of development that may be constructed at different times.

(b) A subdivision of an area exceeding one acre. This includes subdivision for single-family residential, multi-unit residential, commercial, industrial, or institutional development.

(c) For public linear projects, a permit is required when one or more acres of impervious surface will be created or reconstructed ~~10,000 square feet or more of impervious surface~~ through multiple phases or connected actions of a single project, as defined by the city.

~~(d) The site is within the 100-year floodplain; within 1,000 feet of a public water or protected wetland; impacts a wetland; and/or within 300 feet of Rice Creek, Clearwater Creek, Hardwood Creek, or a public ditch.~~

~~(e)(d)~~ Any land disturbing activity, regardless of size, that the city determines would otherwise cause an adverse impact to an environmentally sensitive area or other property including areas within floodplain and shoreland districts.

(2) Exceptions

~~(f)(a)~~ A permit is not required for single family residential construction on an individual lot of record, if the proposed impervious surface of the lot is less than 10,000 square feet, excluding the driveway. Stormwater management requirements do not apply to development of an individual lot within a residential subdivision if it conforms to an approved development plan.

~~(g)(b)~~ Stormwater management requirements do not apply to sidewalks and trails ten feet wide or less that are bordered down-gradient by vegetated open space or vegetated filter strip with a minimum width of five feet, ~~however the grading, erosion and sediment control requirements are still effective.~~

~~(h)(c)~~ Stormwater management requirements do not apply to bridge spans, mill, reclamation and overlay projects ~~that do not expose underlying soils.~~

~~(i)~~ ~~Stormwater Management Requirements do not apply to bridge span projects, however grading, erosion and sediment control requirements are still effective.~~

(d) Stormwater Management Requirements do not apply to single family residential subdivisions creating seven or fewer lots that:

2. Establish no new public roadway; and

3. Includes no private roadway/driveway serving three or more lots

~~(2)(3) Stormwater management performance standards. Site plans for new development of any kind will be assessed for stormwater quantity control and stormwater quality management.~~ A stormwater management plan shall be submitted with the permit application for a project equaling or exceeding the threshold of Section 2.

The ~~plan shall be designed general policy on stormwater runoff rates is~~ to reduce the impacts of development by maintaining predevelopment hydrological conditions in the following ways:

(a) *Use of natural topography.* The applicant shall incorporate the use of natural topography and land cover such as natural swales and depressions as they exist before development to the degree that they can accommodate the additional flow of water without compromising the integrity or quality of the receiving waterbody.

(b) *Minimize impact to natural features.* The development shall minimize impact to significant natural features. Applicant shall review the site for natural features protected under city, state or Federal requirements, including steep slopes, wetlands, wooded areas, endangered or threatened species, or species of concern habitat, areas designated by the county biological survey, greenways, parks and open space, groundwater recharge areas, wellhead or surface water protection areas or regional stormwater pond locations.

(c) *Conveyance system.* Wherever possible untreated and treated stormwater runoff shall be conveyed in facilities open to the atmosphere (e.g. swales, vegetated

buffer strips, energy-dissipating structures, and the like) rather than through enclosed pipes, so as to decrease runoff velocity, allow for natural infiltration, allow suspended sediment particles to settle, and to remove pollutants.

(d) *Proposed development design shall:*

1. Maintain or decrease runoff volume, where practicable;
2. Decrease erosion and sedimentation;
3. Maintain or decrease flow frequency, duration, and peak runoff rates;
4. Increase infiltration (groundwater recharge) or filtration;
5. Maintain existing flow patterns;
6. Reduce time to peak flows by increasing the time of concentration to and through storm sewers;
7. Provide storage of stormwater runoff on site;
8. Avoid channel erosion;
9. The proposed project must not adversely affect water level off the site during or after construction; and

10. The proposed activity may not reduce hydraulic efficiency of the drainage ways at any point up-gradient of the applicant's parcel boundary.

10.11. A combination of Stormwater BMPs may be used to meet the requirements of section(s) 6, 7, or 8

(e) *Landlocked basins.* A landlocked basin may be provided an outlet only if it:

1. Retains a hydrologic regime that complies with the requirements of the local governmental unit (LGU) responsible for administration of the Wetland Conservation Act (WCA);
2. Provides sufficient dead storage volume to retain back to back 100-year, 24-hour rainfalls and runoff; and
3. Does not create adverse downstream flooding or water quality conditions as a result of increased discharge rate or volume, or other factors.

(f) All plans shall be consistent with National Pollutant Discharge Elimination permit (NPDES) requirements, the Lino Lakes engineering design standards, the Lino Lakes stormwater design standards, and the filing or approval requirements of Rice Creek Watershed District, Vadnais Lakes Watershed Management Organization, Anoka County, Minnesota Department of Natural Resources, Minnesota Department of Transportation, Minnesota Pollution Control Agency, U.S. Army Corps of Engineers, State of Minnesota Stormwater Manual or other regulatory agencies.

(4) Comprehensive Stormwater Management Plan.

(a) The City of Lino Lakes may develop a comprehensive stormwater management plan (CSMP) as an alternative way to meet the stormwater requirements of the local watershed agencies for development within a defined area and a common resource of concern (ROC). The CSMP will be submitted to the applicable watershed district for review and must comply with the requirements of the watershed district. .

(b) The following Comprehensive Stormwater Management Plans are adopted and in effect:

1. Legacy at Woods Edge Development (LWED) CSMP (August 2016): The LWED CSMP sets forth an alternate means of meeting the standards of Rule C for the LWED. The LWED is defined as that area within the City of Lino Lakes bounded by 1-35W to the north, Town Center Parkway to the south, and Lake Drive to the west. The following LWED CSMP policies and regulations supersede portions of Rule C within the LWED:

i Rule C – 6. Water Quality Treatment and 7. Peak Stormwater Runoff Control: Private development shall not exceed the impervious areas listed in Appendix E of the LWED CSMP. If developers choose to exceed the impervious limits, they will be required to address any additional stormwater requirements within that parcel at their own expense and demonstrate how the additional runoff will be treated to meet the applicable Rice Creek Watershed District rules. Any such best management practices (BMPs) will be considered private and be maintained by the owner/developer of the parcel.

2. Northeast Lino Lakes Drainage Area (NEDA) CSMP (September 2018): The NEDA CSMP sets forth an alternate means of meeting the standards of Rule C for the Northeast Drainage Overlay District (NDOD). The NDOD is defined as that area within the City of Lino Lakes bounded by Main Street to the south, the City of Hugo to the east, Lake Peltier to the west and Rehbein Street to the north. The following NEDA CSMP policies and regulations supersede portions of Rule C within the NDOD:

i Rule C – 6. Water Quality Treatment: Rice Creek Watershed District's water quality treatment requirements shall be met through a variety of measures as is feasible on a regional or development- by-development basis. On-site infiltration is not feasible for most of the NDOD due to poor soils, high groundwater and the presence of wetlands. As development proceeds within the NDOD, developers shall be required to demonstrate that infiltration is not feasible on-site before utilizing any regional basins or other BMP alternatives.

ii Rule C – 7. Peak Stormwater Runoff Control: Private development shall be restricted to an allowable flow rate of 0.1 cfs per acre for the 100-year, 24-hour peak discharge rate. This will result in a maximum peak discharge rate from the NDOD into Peltier Lake of no more than 135 cfs. This restriction may be met through a combination of rate control practices on a regional or development-by-development basis.

~~(3)(5)~~ Stormwater management plan modeling requirements. The City adopts by reference RCWD Rule C4. Modeling for Stormwater Management Plans, as amended.

~~(a) A hydrograph method or computer program based on Natural Resources Conservation Service Technical Release #20 (TR-20) and subsequent guidance must be used to analyze stormwater runoff for the design or analysis of flows and water levels within and off the project site. Composite curve numbers shall not include directly connected impervious surfaces.~~

~~(b) In determining curve numbers to model runoff in the post-development condition, the hydrologic soil group (HSG) of areas within construction limits is to be shifted down one classification (or one half classification for HSG A) to account for the impacts of grading on soil structure unless the project specifications incorporate soil amendments in accordance with Rice Creek Watershed District Soil Amendment guidelines.~~

~~(c) The following curve numbers (Table 1) shall be utilized for modeling of those site areas not covered by impervious surface:~~

Table 1. Curve numbers for use with pervious areas			
Hydrologic Soil Group	Existing Runoff Curve Number *	Post-Construction Runoff Curve Number**	
		Undisturbed Land	Disturbed Land
A	39	39	49
B	61	61	74
C	74	74	80
D	80	80	80
* Curve numbers from USDA-NRCS, Technical Release 55			
** Rice Creek Watershed District 2013 Rules			

~~The analysis of flood levels, storage volumes, and discharge rates for waterbodies and stormwater management basins must include the NOAA Atlas 14 values, as amended, for the two-year, ten-year and 100-year return period, 24-hour rainfall events and the ten-day snowmelt event, in order to identify the critical duration flood event. The ten-day snowmelt event is simulated by a 7.2 inch, ten-day spring runoff event during which it is assumed the ground is frozen solid and no infiltration occurs (CN set to 100 for all areas). The City Engineer may require analysis of additional precipitation durations to determine the critical duration flood event. Analysis~~

of the ten-day snowmelt event is not required for stormwater management detention basins with a defined outlet elevation at or below the 100-year, 24-hour event elevation.

~~(4)(6)~~ Water quality treatment. The City Adopts by reference RCWD Rule C6. Water Quality Treatment as amended.

(a) ~~Land development activities creating impervious surface shall address the use of better site design (BSD) techniques as outlined in the better site design and low impact development sections of the Minnesota Stormwater Manual (MPCA, 2014 and subsequent revisions).~~

(b) ~~The water quality treatment volume standard for all projects, except public linear projects, is determined as follows (Table 2):~~

Table 2. Required quality volume calculations for new or reconstructed developments		
BMP	BMP Design Variation	Water Treatment Volume Calculation [ft³]
Infiltration	Infiltration Feature	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / 12 \text{ [in/ft]}$
Water Reuse	Irrigation	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / 12 \text{ [in/ft]}$
Biofiltration	Underdrain	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.65 * 12 \text{ [in/ft]})$
Filtration	Sand or Rock Filter	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.50 * 12 \text{ [in/ft]})$
Stormwater Wetlands	Shallow Wetland	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.40 * 12 \text{ [in/ft]})$
	Pond/Wetland	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.55 * 12 \text{ [in/ft]})$
Stormwater Pond	Wet Pond	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.50 * 12 \text{ [in/ft]})$
	Multiple Pond	$\text{Impervious surface [ft}^2\text{]} * 1.1 \text{ [in]} / (0.60 * 12 \text{ [in/ft]})$

(c) ~~The required water quality treatment volume standard for public linear projects is determined as follows:~~

$$\text{Required Water Quality Treatment Volume [ft}^3\text{]} = \text{Area of New or Reconstructed Impervious Surface [ft}^2\text{]} \times 0.75 \text{ [in]} \div 2 \text{ [in/ft]} + 4$$

(d) ~~Public linear projects shall meet the requirements of the Rice Creek Watershed District (RCWD) or Vadnais Lakes Area Water Management Organization (VLAWMO) as applicable.~~

(e) ~~Infiltration BMPs (see city BMP standard plates and design criteria) are to be incorporated in areas with A and B hydrologic soil groups. Stormwater from impervious surfaces other than rooftops must be pretreated before discharge to infiltration BMPs, to remove sediment and floatables, or other materials that would restrict the BMP's capacity or contaminate ground water.~~

(f) ~~If the project meets any of the following conditions listed in Table 3, infiltration is prohibited and the water quality volume requirements shall be provided the remaining options in Table 2:~~

-

<i>Table 3. Specific conditions that may restrict infiltration.</i>	
<i>Type</i>	<i>Specific Site Conditions</i>
Potential Contamination	Potential stormwater hotspots [PSH]
	Contaminated soils
	Vehicle fueling and maintenance areas
Physical Limitations	Low permeability soils [HSG C and D]
	Bedrock within three vertical feet of bottom of infiltration area
	Seasonal high water table within three vertical feet of bottom of infiltration area
	Where soil infiltration tests are more than 8.3 inches per hour

Land Use Limitations	Utility locations
	Adjacent wells

~~BMPs must provide infiltration where feasible. If the city concurs that the infiltration BMPs are not feasible or directs that infiltration not be used, then any BMP may be chosen. If infiltration is feasible on-site, then a regionally-sited BMP must provide equivalent runoff volume reduction.~~

~~(5)(7) Peak stormwater runoff control. The City adopts by reference RCWD Rule C7. Peak Stormwater Runoff Control as amended.~~

~~(a) Stormwater runoff rates for the proposed project at the site boundary, in aggregate, must not exceed existing runoff rates for the critical two-, ten-, and 100-year frequency events.~~

~~(b) Any increase in a critical event rate at a specific point of discharge from the site must be limited and cause no adverse down gradient impact. The project must meet the hydroperiod standards found in Table 4 with respect to all down-gradient wetlands.~~

Table 4. Hydroperiod standards			
Wetland Susceptibility Class	Permitted Storm Bounce for 2-year and 10-year Event*	Inundation Period for 2-year Event*	Inundation Period for 10-year Event*
Highly Susceptible	Existing	Existing	Existing
Moderately Susceptible	Existing + 0.5-ft	Existing + 1 day	Existing + 7 days
Slightly Susceptible	Existing + 1.0-ft	Existing + 2 days	Existing + 14 days
Least Susceptible	No Limit	Existing + 7 days	Existing + 21 days
* Duration of 24 hours for the return periods utilizing NOAA Atlas 14 precipitation data. Source: Adapted from Rice Creek Watershed District 2013 Rules.			

~~Wetland Susceptibility Class is determined based on wetland type, as follows:~~

Highly susceptible wetland types include: sedge meadows, bogs, coniferous bogs, open bogs, calcareous fens, low prairies, coniferous swamps, lowland hardwood forests, and seasonally flooded water basins.

Moderately susceptible wetland types include: shrub carrs, alder thickets, fresh (wet) meadows, and shallow and deep marshes.

Slightly susceptible wetland types include: floodplain forests and fresh wet meadows or shallow marshes dominated by cattail giant reed, reed canary grass or purple loosestrife.

Least susceptible wetland includes severely degraded wetlands. Examples of this condition include cultivated hydric soils, dredge/fill disposal sites and some gravel pits.

Exceptions. Rate control criteria of division (5) may be waived if the site discharges directly to a water body with large storage capacity (such as a public water) that has a time to peak elevation greater than that for an on-site pond and the volume discharged from the on-site pond is negligible, relative to the volume of runoff entering the water body.

(6)(9) Design criteria. Best Management Practices shall be designed in accordance with the following standards:

(a) Infiltration BMPs. Infiltration BMPs must be designed to provide: The City adopts by reference RCWD Rules C.9.(a) as amended.

1. Adequate pretreatment measures to remove sediment before runoff enters the primary infiltration area;
2. Drawdown within 48 hours or 72 hours from the end of a storm event, for surface or sub-surface features, respectively. Soil infiltration rates shall be based on the appropriate HSG classification and associated infiltration rates (Table 5). Infiltration area will be limited to the horizontal areas subject to prolonged wetting;

Table 5. Soil Infiltration Rates.				
HSG	Soil Tecture*	Corresponding Unified Soil Classification**		Infiltration Rate [in/hr]
A	Gravel	GW	Well-graded gravels, sandy gravels	1.63
	Sandy Gravel Silty Gravel	GP	Gap-graded or uniform gravels, sandy gravels	
		GM	Silty Gravels, silty sandy gravels	

		SW	Well-graded or uniform sands, gravelly sands	
	Sand Loamy Sand Sandy Loam	SP	Gap-graded or uniform sands, gravelly sands	0.8
B	Loam Silt Loam	SM	Silty sands, silty gravelly sands	0.45
		MH	Micaceous silts, diatomaceous silts volcanic ash	0.3
C	Sandy Clay Loam	ML	Silts, very fine sands, silty or clayey fine sands	0.2
D	Clay Loam Silty Clay Loam Sandy Clay Silty Clay Clay	GC	Clayey gravels, clayey sandy gravels	.06
		SC	Clayey sands, clayey sandy gravels	
		CL	Low plasticity clays, sandy or silty clays	
		OL	Organic silts and clays of low plasticity	
		CH	Highly plastic clays and sandy clays	
		OH	Organic silts and clays of high plasticity	

Source: Adapted from the "Design Infiltration Rates" table from the Minnesota Stormwater Manual, MPCA (January 2014).

* U.S. Department of Agriculture, Natural Resources Conservation Service, 2005. National Soil Survey Handbook, title 430-VI. (Online) Available: <http://soils.usda.gov/technical/handbook/>.

** ASTM standard D2487-00

3. ~~A minimum of three feet of separation from the seasonal high water table.~~

4. ~~Design and placement in accordance with the 2007 Minnesota Department of Health guidance Evaluating Proposed Stormwater Infiltration Projects in Vulnerable Wellhead Protection Areas.~~

(b) Water reuse. The City adopts by reference RCWD Rules C.9.(b) as amended. Water reuse BMPs must be designed to provide:

- i ~~design~~ An maximum irrigation rate of one inch per week over the irrigated lawn/turf grass area(s);
- ii ~~No greater than a 26 week (April 15 to October 15) growing season; and~~

2. ~~No increase in stormwater runoff from the irrigated area or project site.~~

- i ~~The amount of water quality treatment volume credit given will be based upon the three year average of the volume irrigated, determined by the average of three years of monitoring records.~~

(c) *Biofiltration and filtration BMPs.* The City adopts by reference RCWD Rules C.9.(c) as amended. ~~Biofiltration and filtration BMPs must be designed to provide:~~

1. ~~Adequate pretreatment measures to remove sediment before runoff enters the primary biofiltration area;~~
2. ~~Drawdown within 48 hours or 72 hours from the end of the storm event for surface or sub-surface features, respectively;~~
3. ~~A minimum of 12 inches of organic material or sand above the rock trench or drain tile system; and~~
4. ~~Drain tile system must be designed above the seasonal high water table.~~

(d) *Stormwater ponds.* The City adopts by reference RCWD Rules C.9.(d) as amended.

~~(d)~~(e) *Soil Borings.* The City adopts by reference RCWD Rules C.9.(e) as amended. ~~Stormwater ponds must be designed to provide:~~

1. ~~Water quality features consistent with NURP criteria and city standard plate;~~
2. ~~Permanent wet pool with dead storage at least equal to the runoff from a two and one half inch rainfall over the area tributary to the pond~~
3. ~~An outlet structure capable of preventing migration of floating debris and oils for at least the one-year storm.~~
4. ~~An outlet structure to control the two-year, ten-year and 100-year frequency events to existing peak runoff sites; and~~
5. ~~An identified overflow spill way sufficiently stabilized to convey flows greater than the 100-year critical storm event.~~

~~(e)~~(f) *Outfalls.* ~~An outfall structure discharging to a wetland, public water or public water wetland must incorporate a stilling basin, surge basin, energy dissipater, placement of ungrouted natural rock riprap or other feature to minimize disturbance and erosion of natural shoreline and bed resulting from stormwater discharges~~ The City adopts by reference RCWD Rules C.9.(f) as amended.

(f)(g) *Freeboard requirements.* All new residential, commercial, industrial and other habitable or non-habitable structures, and all stormwater basins, must be constructed so that the lowest floor and lowest entry elevations of structures comply with the following: Table 6.

Table 6. Low floor and low entry freeboard requirements

	<i>Regional Elevations</i>	<i>Local Detention Basins & Wetlands</i>			<i>Infiltration Basins</i>			<i>Rain Gardens</i>	<i>Groundwater¹</i>
		EOF	100 year	EOF	Bottom	100 year	EOF		
Elevation	100 year	EOF	100 year	EOF	Bottom	100 year	EOF	EOF	Seasonal High Level
Low Floor Freeboard	2- ft.	1-ft	0-ft	N/A	0-ft	N/A	N/A	N/A	4-ft
Low Entry Freeboard	N/A	N/A	2-ft	1-ft	N/A	2-ft	1-ft	0.5-ft	N/A

¹ The seasonal high groundwater level shall be determined within 12 months of proposed construction of the structure by a soil scientist or geotechnical engineer registered in the State of Minnesota as indicated by redoximorphic features such as mottling within the soil or by direct groundwater observation.

(h) Within a landlocked basin, lowest floor elevations must be at least one foot above the surveyed basin overflow elevation. Where a structure is proposed below the runoff elevation of a land-locked basin, the low-floor elevation will be a minimum of two feet above the high water level as determined from an estimate of high water levels determined from the highest of either the 100-year, ten-day runoff event or back-to-back 100-year, 24-hour rainfalls. Aerial photos, vegetation, soils, and topography will be used to derive a "normal" water elevation for the basin for the purpose of computing the 100-year elevation.

(10) *Drainage and utility easements.*

(a) If a stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the applicant to obtain from adjacent property owners any necessary easements or other property interests concerning flowage of water.

(b) Easements are required for all stormwater management facilities, stormwater conveyances and on-site floodplain and **shall extend a minimum of ten feet beyond** the basin's normal water level or the 100-year storm high water level elevation, whichever is greater.

(c) Easements are required for all outlet swales and ditches, and for overland overflow routes located downstream of basins located on site.

(d) If the storm sewer is to be installed less than ten feet deep within private property, the easement shall be a minimum of 20 feet wide. If the storm sewer is ten feet or greater, the easement shall be twice as wide as the depth.

(e) Easements necessary for maintenance vehicle access are required for all of the above where not directly available on a public road.

(11) Wetlands. Runoff shall not be routed directly to wetlands without first passing through an appropriate settling or approved pre-treatment basin. Said basins must meet standards for volume and flow directed to the basin

(a) A protective buffer strip of natural vegetation shall surround all wetlands as follows:

1. Where RCWD is the Local Government Unit (LGU) for administration of the Minnesota Wetland Conservation Act (WCA) the City adopts RCWD Rule F.6.(e), as amended. Wetlands not subject to RCWD Rule F.6. (e) shall have a minimum buffer width of 10'.

2. Where Vadnais Lakes Area Water Management Organization (VLAWMO) is the LGU for administration of WCA, the City adopts VLAWMO Water Quality Standards Section 11, as amended.

(b) Wetlands must not be drained, filled, or altered, wholly or partially, unless in compliance with and permitted under the most current rules adopted by the Minnesota Board of Water and Soil Resources in the Wetland Conservation Act (WCA. Wetland replacement must be guided by the following principles in descending order:

1. Avoidance.

2. Minimization.

3. Mitigation.

(c) Permits to work in wetlands must be obtained from the local water management organizations, acting as local governmental units (LGU), with respective jurisdiction with the City of Lino Lakes to administer the WCA.

(d) Permanent boundary markers, in the form of signage approved by the City of Lino lakes, should be installed prior to final approval of the required clearing and grading plan.

~~(11)~~(12) Stormwater management plan required exhibits. The stormwater management plan shall be prepared and signed by a duly licensed engineer in the State of Minnesota. The following exhibits must accompany the permit application: two plan sets, full size (22 inches by 34 inches); and one electronic copy in a .pdf one plan set, reduced to maximum size of 11 inches by 17 inches. Additional copies may be required in accordance with applicable zoning and subdivision provisions of city code. Allformat. All plan sets shall also be submitted electronically in a .dwg format or as otherwise determined by the City Engineer. ~~The minimum information requirements of the~~

~~stormwater management plan shall be consistent with the most recent version of the NPDES permit requirements and include the following information:~~

(a) A grading, erosion and sediment control plan and, for projects that require a NPDES permit, a stormwater pollution prevention plan (SWPPP) ~~is required~~;

(b) Stormwater management plan including existing and proposed hydrologic calculations for total runoff volume and peak discharge rates as described in this chapter, including:

1. A narrative including a project description, discussion of BMP selection, incorporation of infiltration BMPs, and revegetation plan for the project site;
2. Delineation of all drainage areas, including contributing runoff from off-site areas, proposed and existing subwatersheds on-site, emergency overflows, and drainage ways;
3. Existing, proposed, and total amount of impervious surfaces created by the project;
4. Existing and proposed runoff curve numbers;
5. Time of concentration used in calculations; and
6. Existing and proposed total runoff volume and peak discharge rates for the two-, ten-, and 100-year critical events utilizing NOAA Atlas 14.

(c) Property of lines and delineation of lands under ownership of the applicant.

(d) Locations of all stormwater management practices, infiltration areas, and areas not to be disturbed during construction.

(e) Location of all drain tiles on the project site shall be identified.

(f) Location and engineered designs for structural stormwater management practices including stormwater treatment devices that remove oil and floatable material (e.g., basin outlets with submerged inlets).

(g) Normal water level, high water level, and emergency overflow elevations for the site and all ponding systems related to NAVD88.

(h) Identification of existing and proposed one-foot contour elevations within the project site related to NAVD88.

(i) Geotechnical analysis including soil borings at all proposed stormwater management facility locations.

(j) Provisions for groundwater management (dewatering), including subsurface drains, disposals, ponding and flood controls.

(k) Completed city worksheet explaining better site design techniques that were evaluated during project design, the results of the evaluation of each and for any techniques deemed infeasible.

(l) A long-term maintenance plan and schedule for all permanent stormwater practices, along with the identity of the party responsible for the maintenance of the

project. The maintenance responsibility must be memorialized in a document executed by the property owner in a form acceptable to the city and filed for record on the deed.

(m) Before work is deemed complete, as-built plans must be submitted demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications.

(n) Other project site-specific submittal requirements as may be required by the city.

(Ord. 09-15, passed 10-26-2015)

§ 1011.012 INSPECTIONS AND MAINTENANCE.

(1) *Inspections.* The applicant is responsible for inspections and record keeping in accordance with the NPDES permit requirements. The city shall conduct inspections on a regular basis to ensure that both stormwater and erosion and sediment control measures are properly installed and maintained prior to construction, during construction, and at the completion of the project. In all cases the inspectors will attempt to work with the applicant or developer to maintain proper stormwater management. Mandatory inspections, conducted by the city, are required as follows:

- (a) Before any land disturbing activity begins;
- (b) Five working days after footing inspections;
- (c) At the completion of the project; and
- (d) Prior to the release of financial securities.

(2) Post-construction inspection and maintenance of stormwater facilities.

(a) *Private stormwater facilities.* No private stormwater facility may be approved unless a maintenance agreement is provided that defines who will conduct maintenance, the type of maintenance, and the maintenance intervals. All private stormwater facilities shall be inspected by the owner and maintained in proper condition consistent with the performance standards for which they were originally designed.

1. *Facility access.* Access to all stormwater facilities must be inspected annually and maintained as necessary. It shall be the responsibility of the applicant to obtain any necessary easements or other property interests to allow access to the facilities for inspection or maintenance for both the responsible party and the city.

2. *Maintenance.* All settled materials from ponds, sumps, grit chambers, and other devices, including settled solids, shall be removed and properly disposed of once capacity is reduced by 30%.

3. *Inspection.* All private stormwater facilities must submit an as-built record plan of the facility and must provide documentation to the city of an inspection during construction, during the first year of operation, and at least once every five years thereafter. Private facilities are subject to city inspection at any time to ensure compliance.

(b) *Public stormwater facilities.*

1. *Acceptance of publicly owned facilities.* Before work under the permit is deemed complete, as-builts and certification must be submitted demonstrating at the time of final stabilization that the stormwater facilities conform to design specifications. A final inspection shall be required before the city accepts ownership of the stormwater facilities.

2. *Inventory of stormwater facilities.* The city shall inventory and maintain a database for all public stormwater facilities within the city requiring maintenance to ensure compliance with this chapter.

(3) *Maintenance.* The city shall perform maintenance of publicly owned stormwater facilities within the city as provided for in the local surface water management plan.

(Ord. 09-15, passed 10-26-2015)

§ 1011.013 PLAN REVIEW PROCEDURE.

Plan review. The applicant shall not commence any construction activity subject to this chapter until the stormwater management plan and/or the grading, erosion and sediment control plan have been approved by the city. The submittal shall be processed in accordance with:

[Ch. 1007.020 of city code as applicable. § 2 of the Zoning Ordinance or Ch. 1011 of city code as applicable.](#) City approval is contingent on issuance of all other permits required by the city or other agencies having jurisdiction on the project. The following standards shall apply to all developments within the city:

(1) *Plan approval.* If the city determines that the stormwater management plan and/or the grading, erosion and sediment control plan meets the requirements of this chapter, the city shall issue a plan approval valid for a specified period of time that authorizes the land disturbance activity contingent on the implementation and completion of this plan.

(2) *Plan denial.* If the city determines that the plan does not meet the requirements of this chapter, the city shall not issue plan approval for the land disturbance activity. This plan must be resubmitted for approval before the land disturbance activity begins. All land use and building permits shall be suspended until the developer has an approved ESC or stormwater management permit.

(3) *Modification of plan.* The applicant must amend the plan as necessary to include additional requirements such as additional or modified BMPs designed to correct problems identified or address situations whenever:

(a) A change in design, construction, operation, maintenance, weather, or seasonal conditions that has a significant effect on the discharge or pollutants to surface waters or underground waters;

(b) Inspections or investigations indicate the plans are not effective in eliminating or significantly minimizing the discharge or pollutants to surface waters or underground waters or that the discharges are causing water quality degradation;

(c) The plan is not achieving the general objectives of minimizing pollutants in stormwater discharges associated with construction activity; or

(d) The plan is not consistent with the terms and conditions of this chapter.

(Ord. 09-15, passed 10-26-2015)

§ 1011.014 FINANCIAL SECURITIES.

The applicant shall be subject to the financial security provisions of the city development agreement, site improvement performance agreement and/or the city public improvement financing policy, as applicable.

(Ord. 09-15, passed 10-26-2015)

§ 1011.015 ENFORCEMENT.

(1) *Notification of failure of the permit.* The city shall notify the permit holder of the failure of the permit's measures.

(a) *Initial contact.* The initial contact will be to the party or parties listed on the application and/or the SWPPP as contacts. Except during an emergency action, 48 hours after notification by the city or 72 hours after the failure of erosion and sediment control measures, whichever is less, the city at its discretion may begin corrective work. Such notification should be in writing, but if it is verbal, a written notification should follow as quickly as practical. If after making a good faith effort to notify the responsible party or parties, the city has been unable to establish contact, the city may proceed with corrective work. There are conditions when time is of the essence in controlling erosion. During such a condition, the city may take immediate action and then notify the applicant as soon as possible.

(b) *Emergency action.* If circumstances exist such that non-compliance with this chapter poses an immediate danger to the public health, safety and welfare, as determined by the city, the city may take emergency preventative action. The city shall also take every reasonable action possible to contact and direct the applicant to take any necessary action. Any cost to the city may be recovered from the applicant's financial security.

(c) *Erosion off site.* If erosion breaches the perimeter of the site, the applicant shall clean up and repair or supplement with functional BMPs within 24 hours of discovery or immediately as conditions allow. If, in the discretion of the city, the permit holder does not repair the damage caused by the erosion, the city may do the remedial work required and charge the cost to the applicant. When restoration to wetlands and other resources are required, the applicant shall be required to work with the appropriate agency to ensure that the work is done properly.

(d) *Erosion into streets, wetlands, or water bodies.* If eroded soils (including tracked soils from construction activities) enter or appear likely to enter streets, wetlands, or other water bodies, cleanup and repair shall be immediate. The applicant

shall provide all traffic control and flagging required to protect the traveling public during the cleanup operations.

(e) *Failure to do corrective work.* When an applicant fails to conform to any provision of this policy within the time stipulated, the city may take the following actions:

1. Issue a stop work order, withhold the scheduling of inspections, and/or the issuance of a certificate of occupancy.
2. Revoke any permit issued by the city to the applicant for the site in question or any other of the applicant's sites within the city's jurisdiction.
3. Correct the deficiency or hire a contractor to correct the deficiency.
4. Require reimbursement to the city for all costs incurred in correcting stormwater pollution control deficiencies. If payment is not made within 30 days after costs are incurred by the city, payment will be made from the applicant's financial securities as described above.
5. If there is an insufficient financial amount in the applicant's financial securities as described above, then the city may assess the remaining amount against the property. As a condition of the permit, the owner shall waive notice of any assessment hearing to be conducted by the city, concur that the benefit to the property exceeds the amount of the proposed assessment, and waive all rights by virtue of M.S. § 429.081 to challenge the amount or validity of assessment.

(2) *Enforcement.* The city shall be responsible for enforcing this chapter.

(c) *Penalties.* Any person, firm, or corporation failing to comply with or violating any of these regulations shall be deemed guilty of a misdemeanor and be subject to a fine or imprisonment or both. All land use and building permits shall be suspended until the applicant has corrected the violation. Each day that a separate violation exists shall constitute a separate offense.

(d) *Right-of-entry and inspection; powers.* The issuance of a permit constitutes a right-of-entry for the city or its contractor to enter upon the construction site. The applicant shall allow the city and their authorized representatives, upon presentation of credentials, to:

1. Enter upon the permitted site for the purpose of obtaining information, examination of records, conducting investigations or surveys;
2. Bring such equipment upon the permitted site as is necessary to conduct such surveys and investigations;
3. Examine and copy any books, papers, records, or memoranda pertaining to activities or records required to be kept under the terms and conditions of the permitted site;
4. Inspect the stormwater pollution control measures; and
5. Sample and monitor any items or activities pertaining to stormwater pollution control measures;

6. Correcting deficiencies in stormwater and erosion and sediment control measures.

(Ord. 09-15, passed 10-26-2015)

§ 1011.016 ABROGATION AND GREATER RESTRICTIONS.

In the event of any conflict between the provisions of this chapter and the provisions of any other city ordinance adopted by the City Council, the more restrictive standard prevails.

(Ord. 09-15, passed 10-26-2015)

**ENVIRONMENTAL BOARD
AGENDA ITEM 6B**

STAFF ORIGINATOR: Michael Grochala, Community Development Director

MEETING DATE: October 26, 2022

REQUEST: Discussion – Draft Chloride Reduction/ Bulk Storage Ordinance

APPLICANT City of Lino Lakes

BACKGROUND:

Section 18.6 of the Cities General Permit for Separate Storm Sewer System requires that the City adopt a regulatory mechanism (Ordinance) that requires proper salt storage at commercial, institutional, and non-NPDES Permitted industrial facilities. At a minimum the ordinance must require the following:

- a. Designated salt storage areas must be covered or indoors;
- b. Designated salt storage areas must be located on an impervious surface; and
- c. Implementation of practices to reduce exposure when transferring material in designated salt storage areas (e.g., sweeping, diversions, and/containment)

ANALYSIS

Deicers used to reduce ice and snow on roads, parking lots, and sidewalks often include salt, which contains chloride. Chloride is easily transmitted into lakes, streams, and groundwater. This has the potential to impact drinking water supplies, as well as the health of freshwater fish and other aquatic life. Once in the water, there is no easy way to remove it. Residents experience the impacts of chloride in many ways:

- Fish and aquatic bugs – High amounts of chloride are toxic to fish, aquatic bugs, and amphibians. Chloride can negatively affect the fish and insect community structure, diversity, and productivity, even at lower levels.
- Plants – Road salt splash can kill plants and trees along the roadside, and plants that take up salty water through their roots can also suffer, Chloride in streams, lakes, and wetlands harms aquatic vegetation and can change the plant community structure.
- Salt-laden soil can lose its ability to retain water and store nutrients and be more prone to erosion and sediment runoff (which also harms water quality).
- Pets – Salt can sicken pets who consume it, lick it off their paws, or drink salty snow melt/runoff. It can also irritate their paw pads.

- Wildlife – Some birds, like finches and house sparrow, can die from ingesting deicing salt. Some salt-sensitive species are particularly at risk.
- Infrastructure – Chloride corrodes road surfaces and bridge and damages reinforcing rods, increasing maintenance and repair costs.

The draft ordinance establishes minimum requirements for the safe storage of deicer materials. The requirements are applicable to all commercial, institutional and industrial properties in the City. Typically, these are uses that have large parking areas and routinely use deicers as part of their snow removal procedures.

ENVIRONMENTAL DIRECTION:

Discussion Only. Staff is requesting comments or concerns regarding the proposed requirements.

Additionally the board should consider providing an opportunity for public feedback on the proposed ordinance. This could be in the form of a feedback survey or by holding a public hearing.

ATTACHMENTS:

1. Draft Chloride Reduction/ Bulk Storage

ORDINANCE NO. xx - 2022

AN ORDINANCE AMENDING SECTION 900 OF THE LINO LAKES CITY CODE, RELATING TO NUSANCES, BY ADDING A NEW SECTION 905, CONCERNING STORAGE OF BULK DEICING MATERIAL

The City Council of Lino Lakes Ordains:

Section 1. Chapter 900 of the Lino Lakes City Code is amended by adding a new section 905 as follows:

905.01 FINDINGS

- (1) The removal of snow and ice from roadways is essential to both public safety and to the local economy and in order to protect the public safety, during and after winter storm events, the use of pavement deicing chemicals is a widely accepted means of keeping roadways passable; and
- (2) Pavement deicing is typically accomplished through the use of deicers which can be corrosive to vehicles, roadway surfaces, and bridges and has been found to have adverse effects on the surface waters, groundwater and to environmentally sensitive areas; and
- (3) The restoration of surface and ground water quality and ecosystems in such areas can be very difficult and costly, if not impossible to rehabilitate through reverse osmosis, once the events or contamination occur; and
- (4) Proper utilization and management of deicing materials is critical to ensure that the environmental impacts of related practices are reduced to the maximum extent possible; and
- (5) Negative environmental impacts may occur when salt and other deicers are not properly stored and transported; and
- (6) One of the primary sources of chloride entering the ground water is salt spillage that is either plowed or washed from maintenance yards, unloading, and loading areas and it is necessary to regulate all persons engaged in the storage and use of bulk deicing materials on their property and elsewhere in order to reduce the costly impacts of such use to the surrounding vegetation, surface water and ground water; and

905.02 DEFINITIONS

Definitions. For the purpose of this section the following words, terms, phrases, shall have the meanings ascribed to them below.

Bulk Storage: means the storage of any deicing material (liquid or solid used for deicing during winter conditions that is more than five tons in solid form (or 1,000 gallons in liquid form).

Deicer: means any substance used to melt snow and ice or used for its anti-icing effects.

905.03 APPLICABILITY

The following sections apply to all indoor and outdoor bulk deicer storage facilities and facilities (temporary and permanent) including salt piles, salt bag storage, sand piles and other storage of deicing materials commercial, institutional, and non-NPDES permitted industrial properties within the City

905.04 **Nuisance Declared:** responsible party. It shall be a public nuisance for the owner of commercial, institutional, or industrial property in the city, or for the owner or operation of a business or nonprofit establishment on such property, to store bulk deicing materials on the property in violation of this section.

905.05 **GENERAL REQUIREMENTS**

- (1) Indoor operations for the storage of deicing materials must be provided wherever possible in order to prevent such materials from being affected by rain, snow and melt water.
- (2) All salt, sand and other deicing materials stored outdoors must be covered at all times.
 - (a) When not using a permanent roof, a waterproof impermeable, flexible cover must be placed over all storage piles (to protect against precipitation and surface water runoff). The cover must prevent runoff and leachate from being generated by the outdoor storage piles. The cover must be secured to prevent removal by wind or other storm events. Piles must be formed in a conical shape and covered as necessary to prevent leaching.
 - (b) Any roof leaks, tears or damage should be temporarily repaired during winter to reduce the entrance of precipitation. Permanent repairs must be completed prior to the next winter season.
 - (c) Tanks used for liquid deicing material storage must be dual wall contained, or if a single wall tank is used then a containment system must be in place surrounding the tank.
- (3) Outdoor storage of deicing materials must be located on an impermeable surface.
- (4) The facility must be in close proximity to the area in which the deicing materials are to be used, if practical.
- (5) Each facility must be located outside of floodplains and 300 feet from lakes, rivers, streams, ditches, storm drains, manholes, catch basins, wetlands and any other areas likely to absorb runoff. A facility must not be located in close proximity to surface water features, water supplies, wells or drywells.
- (6) The property slope must be away from the facility's salt, deicer, and sand storage area.
- (7) Practices must be implemented in order to reduce exposure (e.g., sweeping, diversions, and/or containment) when transferring salt or other deicing material.

905.06 **ENFORCEMENT**

The Police Department and any other officers, employees or agents as the Council may designate shall enforce the provisions of this chapter. The officers shall have the power to inspect private

premises and take all reasonable precautions to prevent the commission and maintenance of public nuisances. No person shall enter private property under this section without the express written permission of the owner or occupant of the property. If permission is not granted, the provisions of § 101.14 concerning administrative search and seizure warrants shall be followed.

9050.07 ABATEMENT.

A nuisance under this section may be abated according to the provisions of Chapter 903.

Section 2. This ordinance shall be in effect 30 days after publication