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Stormwater Management Facilities Maintenance Policy

Adopted XXXXX XX, 2024

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1) Purpose of Policy

The purpose of this policy is to provide direction and guidance for maintaining the water quality and flood prevention functions of all City of Ramsey (City) stormwater management facilities including drainageways, storm sewer pipes and culverts, drainage structures, ponds (man-made) and wetlands (natural).

This policy supports the City's Municipal Separate Storm Sewer System Permit, Surface Water Management Plan, and Stormwater Pollution Prevention Plan.

All activities undertaken as part of this policy will be performed in compliance with applicable local, state and federal codes, rules, statutes, and other legal requirements.

2) City Responsibilities

The City is responsible for maintaining all City-owned stormwater management facilities including structures, pipes, ponds, wetlands and drainageways that are part of the City's drainage system. If a ditch, pond or wetland is not part of the City's drainage system, that responsibility belongs to the property owner.

The level of maintenance will vary by pond based on the design and function of the pond.

Work on naturally-occurring ponds, wetlands, brooks, rivers, streams, and other surface water conveyances, will be limited to maintaining drainage structures, pipes and culverts, and to removing obstructions to flow such as excess silt or vegetation in connecting conveyances, to maintain the flow of water and to prevent flooding. While some naturally-occurring ponds and wetlands may also provide water quality benefits, maintenance projects will not be undertaken to enhance water quality functions but rather to maintain the quantity and rate of surface water flow to prevent property damage caused by flooding.

Maintenance work will not be completed solely for aesthetic purposes or to control odors, such as removal of trash, debris, or vegetation, or restoration of open water areas. Such work will only be completed if required to maintain the drainage functions of the pond.

Work on man-made stormwater retention ponds will be done to the same standards as the naturally-occurring ponds and wetlands. Maintenance work will focus on maintaining the flood prevention function of the pond as necessary to restore the pond to its original design standard for treatment of surface water, in addition to maintaining connected drainage structures, pipes, culverts and channels to prevent flooding.

Some ponds are subject to maintenance agreements between the City and the landowner. Before the City performs any maintenance work on these ponds, the agreement must be dissolved upon agreement by all parties.

In order to take responsibility for ponds and wetlands that are part of the City's drainage system, the City must have the legal right to enter and perform the necessary work. If easements are not in place, the property owner must grant the necessary easements before the City completes any work on the property. The City will not normally purchase easements, and will only condemn easements if the owner refuses to grant them and there is a significant flooding problem threatening structures on public or private property that must be corrected.

Nothing in this policy shall be interpreted to require that the City be responsible for any costs incurred or work completed in the past on any ponds, or to assume responsibility for any pond covered by an existing maintenance agreement unless it has been dissolved according to the terms of the agreement. Nothing in this policy shall be interpreted to require that the City be responsible for any new pond or drainage feature until and unless the City has accepted its final design and condition as provided by a development agreement.

3) Regulatory Requirements and Design Standards

a) State

All maintenance work undertaken by the City shall conform to applicable requirements of the Minnesota Pollution Control Agency and the Minnesota Department of Natural Resources.

b) Lower Rum River Watershed Management Organization

The City shall obtain required permits from the Lower Rum River Watershed Management Organization before conducting maintenance work, if necessary.

c) City of Ramsey

i) Municipal Separate Storm Sewer System Permit (MS4)

All requirements of the City's Municipal Separate Storm Sewer System permit will be adhered to while inspecting and performing all stormwater facilities maintenance work.

ii) Stormwater Pollution Prevention Program (SWPPP)

All requirements of the City's Stormwater Pollution Prevention Program will be adhered to while inspecting and performing all stormwater facilities maintenance work.

iii) Surface Water Management Plan (SWMP)

The City adopted a Surface Water Management Plan (SWMP) in 2015 to promote, preserve and enhance the natural resources within the City of Ramsey. All

requirements of the City's Surface Water Management Plan will be adhered to while inspecting and performing all stormwater facilities maintenance work.

4) Stormwater Facilities Maintenance Plans

a) Stormwater Ponds

i) State Ponds

State-owned stormwater ponds are managed by the Minnesota Department of Transportation.

ii) County Ponds

County-owned stormwater ponds are managed by the Anoka Highway Department.

iii) City Ponds

City-owned stormwater ponds and wetlands are managed by the City to provide storage for surface water runoff and to allow for free flow of stormwater through the system. These ponds also reduce peak stormwater flows, promote settling of suspended pollutants and removal of Phosphorus, and reduce velocities downstream of the outlet structure. These ponds may also promote biological uptake of pollutants when vegetated.

If problems are identified during inspections, a Work Order will be prepared in accordance with the following guidelines;

(1) Trees and other vegetation on side slopes will be maintained to provide safe sight distances for traffic and pedestrians
(2) Sediment and vegetation will be removed around inlets and outlets when flows are obstructed.
(3) Bank erosion will be corrected when sediment within the pond bottom is greater than one foot deep.

iv) Private Ponds

Private stormwater ponds are managed by the property owner.

b) Ditches

i) State Ditches

The Minnesota Department of Transportation (MnDOT) is responsible for maintaining all ditches along State Highways within the City including;

(1) Highway 47 (Saint Francis Boulevard)
(2) Highway 10 / 169

ii) County Ditches

Anoka County owns and maintains several County Ditches within the City of Ramsey as identified within the SWMP. Two County Ditches are maintained by the City of Ramsey, those being Ditch 43 and Ditch 66.

iii) City Ditches

The City of Ramsey is responsible for maintaining all ditches and other drainage conveyances that collect drainage from City streets, that convey stormwater runoff from ditches along streets to ponds and wetlands, as well as County Ditches 43 and 66. Ditches will be inspected and maintained as needed to protect properties and prevent standing water on streets.

It is normal to observe standing water in ditches for up to several days following heavy rain events, and ditches may hold water for weeks during the Spring thaw. Maintenance work will not be performed to address standing water in ditches for such periods of time.

c) Storm Sewer Systems

i) State

The State is responsible for maintaining its storm sewer systems unless a separate maintenance agreement exists between the State and the City or County designating the City/ County as the responsible party for maintaining all or a portion of the State system.

ii) County

The County is responsible for maintaining its storm sewer systems unless a separate maintenance agreement exists between the County and the City designating the City as the responsible party for maintaining all or a portion of the County system.

iii) City

The City is responsible for maintaining its storm sewer systems unless a separate maintenance agreement exists between the City and the County or State designating the County or State as the responsible party for maintaining all or a portion of the City system.

d) Rivers

i) Mississippi

The Mississippi River borders the south edge of the City and receives stormwater runoff from the City through outfalls along the river banks.

All Mississippi River outfalls are inspected annually. Minor repairs are performed as needed. Major repairs are programmed through the Capital Improvement Program.

ii) Rum

The Rum River borders the east edge of the City and receives stormwater runoff from the City through outfalls along the river banks.

All Rum River outfalls are inspected annually. Minor repairs are performed as needed. Major repairs are programmed through the Capital Improvement Program.

e) Lakes

Numerous lakes exist within the City as defined by the City and/or the Minnesota Department of Natural Resources. Some lakes have stormwater inlets, which are not currently inspected on a routine basis. More information on lakes within the City is located within the Surface Water Management Plan.

f) Brooks

i) Ford Brook

The Ford Brook begins at the Trott Brook and flows north into the City of Nowthen near the northeast corner of the City. The Ford Brook receives a very small amount of stormwater runoff from the City.

ii) Trott Brook

The Trott Brook generally traverses across the center of the City and receives a significant amount of stormwater runoff from the City. Numerous stormwater inlets exist along the Trott Brook, which are not currently inspected on a routine basis.

g) Wetlands

Approximately 20-percent of the surface area of the City of Ramsey is covered by wetlands as outlined within the Surface Water Management Plan.

h) Structural Pollution Control Devices

The City maintains over a dozen Structural Pollution Control Devices installed at various locations within the City's storm sewer system. These devices capture pollutants from stormwater runoff near the point of discharge to receiving water bodies to reduce pollutant loading in receiving water bodies. The City removes pollutants from all of these devices annually, or more often if needed, using the City vacuum truck.

5) Goals

The goals of this Policy are as follows;

a) Prevent flooding of private properties and public lands.
b) Reduce pollutant loads entering receiving waters.
c) Ensure compliance with regulatory agency requirements.
d) Improve water quality in brooks, lakes, ponds, and wetlands.
e) Cost-effectively maintain stormwater management facilities.

6) Priorities

The priorities of this Policy are as follows;

a) Start inspections and maintenance of stormwater management facilities along the Mississippi and Rum Rivers. These facilities are anticipated to have the greatest maintenance needs since they are located at the downstream end of the storm sewer system. Maintaining these facilities first will provide the biggest benefit to the receiving waters.
b) Continue moving inland incrementally with inspections and maintenance of stormwater management facilities for the same reasons noted above.
c) Continue updating this Policy to refine work schedules and incorporate additional maintenance practices based on what is working well and what could work better.
d) Coordinate work with MS4, SWPPP and SWMP requirements.
e) Continue to improve cost-effectiveness of programmed maintenance practices and operations.

7) Inspections

Stormwater management facilities will be routinely inspected to ensure they continue to function as designed. The guidelines set forth below were developed to provide City staff with practical tools to inspect and maintain all stormwater facilities on a routine basis.

a) **Water Body Inspections -** The inspection program proposes to begin by annually inspecting 5% of known stormwater ponds under City ownership and/or drainage and utility easements, starting at the Mississippi and Rum Rivers and working inland. Initial inspections will consist of enlisting consultants to survey the ponds to determine how much stormwater storage capacity remains and to schedule pond dredging projects to remove sediment and restore storage capacities. Ongoing inspection requirements include observations for blockage of outlets due to trash, debris, vegetation, or downed trees. Blockages shall be cleared from obstructed outlets as soon as practical. Damaged or deteriorated inlets, outlets and pipes, and malfunctioning valves, gates, locks or access hatches, shall be scheduled for repair or replacement as soon as is economically feasible to do so.
b) **Structure Inspections –** Drainage structures, castings and grates shall be inspected for debris and repair needs during development of pavement management projects, during flood events, or at a minimum once every 5 years. Structure sumps shall be inspected a minimum of every 4 years to determine if the sump needs to be repaired or pumped.

Sumps in new developments are checked within one year after completion of the development to determine if cleaning is required.

c) **Lift Station Inspections –** The structure and pumping equipment shall be inspected annually.
d) **Storm Sewer and Culvert Inspections -** Video inspections shall be conducted during development of pavement management projects or when public complaints or concerns are received.
e) Inspection documentation and maintenance recommendations and requests for routine and emergency maintenance needs shall be submitted to the Public Works Administrative Assistant for scheduling repairs and reporting purposes. Results of the inspection program are used to update the 10-year Capital Improvement Program for budgeting purposes. Emergency repairs include items such as imminent structure failure or suspicious discharges that require the responsible party to be notified to take immediate action to remedy the issue. Routine maintenance shall be performed as needed. Additional maintenance needs, such as pond dredging, will be scheduled and performed as needed.

8) Financial Considerations

All costs for the administration and operation of this Policy shall be funded through the City's Stormwater Funds. The main source of revenues for this fund is the Stormwater Utility Fee. In order to fully fund this program, annual increases in the stormwater utility fee rate will be necessary for the foreseeable future. The City Council will make the decision on whether or not to fund the program, and at what level, each year as part of its budget process.

Decisions on what projects to undertake will also be made as part of the budget process and the concurrent annual review of the City's Capital Improvement Program (CIP). The budget will include funds for specific projects and routine maintenance, as well as contingencies for emergencies.

9) Recommendations

The City plans to integrate all inventoried stormwater management facilities into our GIS system to allow the City to more efficiently manage our stormwater facilities. The data will be updated as more information is made available.

The City also plans to continue updating its as-built record plans and stormwater facilities inventories, and will include applicable inventories within the appendix of this Policy at such time that the inventories are reasonably accurate.

The City will work to evaluate the effectiveness of this Policy over time and will maintain records of observed sediment accumulations over time for future estimating purposes, pond volumes for constructed stormwater ponds including both the water quality volume and

permanent pool volume based on pond geometry and inlet, outlet (invert or outlet control), and emergency overflow/spillway elevations.

The City will attempt to calculate load-based removal efficiencies to analyze the treatment effectiveness of ponds to determine whether opportunities exist to upgrade the functionality of ponds in areas where additional treatment may benefit receiving waters.

This Policy will be evaluated annually to determine if changes to the frequencies or scopes of work are required.

Please contact Bruce Westby, City Engineer / Public Works Director, at 763-433-9863 or bwestby@cityoframsey.com with any questions regarding this Policy.

APPENDIX

Definitions

Drainage structures – Catch basins, control structures, flared ends, manholes, and structural pollution control devices. Sump catch basins and sump manholes are constructed with a sump structure for collection of sediment and debris.

Drainage pipes – Storm sewer and culverts.

Dry retention basins – A shallow, dry basin with an outlet at the invert of the basin. Dry retention basins are constructed to attenuate peak discharges and temporarily detain runoff to promote sedimentation.

Wet detention basins – A shallow basin that maintains a permanent pool of water by using an elevated outlet control structure. Stormwater is treated through sedimentation and biological uptake of pollutants.

Filtration basins – A shallow basin or sand filter with engineered or amended soil and an under-drain system. The basin detains stormwater and allows it to infiltrate through the soil, sand or engineered media. Treated stormwater is directed to the receiving water via the under-drain system.

Infiltration basins – A shallow basin in permeable soils that detain and infiltrate stormwater. There is rarely an under-drain system unless needed to provide maintenance access. Infiltration basins use the natural filtering ability of the soil to remove pollutants from stormwater runoff. If problems are identified during inspections a Work Order is prepared in accordance with the following guidelines. Replace surface soil or vegetation as needed to maintain a layer of permeable soil or a dense cover of non-woody vegetation in the base of the infiltration area. Correct any structural deficiencies that interfere with the function of the basin. Remove undesirable vegetation, such as woody vegetation.

Swales, filter strips or ditches – Swales, filter strips or ditches are constructed to direct or convey stormwater runoff. They should be planted with vegetation that will maintain the structure and resist erosion. If problems are identified during inspections a Work Order shall be prepared in accordance with the following guidelines. Cleanout sediment when it blocks culverts or obstructs the pipe or flow of stormwater. Stabilize and re-seed when erosion gullies are more than one foot deep. Mow to remove vegetation that obstructs flow and to maintain desirable vegetation. These linear channels are vegetated to assist in decreasing runoff velocity and promote infiltration and physical filtration. Some may incorporate rock checks to reduce the slope of the channel.

Depressions – This includes shallow depressions at the end of a stormwater pipe or flared end section that acts as a stormwater infiltration area but was not designed or constructed.

Lakes – Larger bodies of water or deep-water aquatic habitats that have been defined as lakes by the City and/or Minnesota Department of Natural Resources.

Stormwater wetlands – A natural wetland or creek segment that has been modified to receive and treat stormwater discharges. Stormwater is treated primarily through biological uptake.

Mitigation wetlands – A wetland constructed for replacement of wetlands lost due to construction or alteration of the landscape. These wetlands typically have stormwater discharges routed to the basin to maintain hydrology.