Minimum Control Measure 6
Pollution Prevention and Good Housekeeping Practices for Municipal Facilities

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APPENDICES

MINIMUM CONTROL MEASURE 6

1. INTRODUCTION

1.1. Basis for the Standard Operating Procedures (SOPs)

On August 1, 2013, the Minnesota Pollution Control Agency issued a National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The MS4 GP requires the City of Rosemount to alter their own actions as well as work with other governmental agencies to help ensure a reduction in the amount and type of pollution that:

- Collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways.
- Results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

This SOP manual will assist the City of Rosemount in using targeted best management practices that are intended to reduce the discharge of pollutants from municipal activities.

1.2. Objectives of the SOPs

This manual is intended to provide guidance on Good Housekeeping Practices for Municipal Operations as follows:

- Provide BMPs used for municipal activities.
- Provide methods for employing spill prevention and response.
- Provide tools for documenting inspections of ponds, outfalls, and municipal facilities.

2. POLLUTION PREVENTION

2.1. Dumpsters/Garbage Storage

Activities and Definition

Potential for pollutants can occur if proper garbage management is not in place. An appropriate number of dumpsters should be located throughout the facility to provide enough storage for daily activities. In addition, facility dumpsters are to be marked for proper materials disposal.

Preparation

a. Train employees on proper trash disposal.
b. Place dumpsters and trash cans in convenient, easily observable areas.
c. Provide properly labeled recycling bins to reduce the amount of garbage disposed.

d. Where applicable install berms, curbing, or vegetation strips around storage areas to control water entering/leaving storage areas.
e. Whenever possible, store garbage containers beneath a covered structure or inside to prevent contact with stormwater.

Process

a. Inspect garbage bins for leaks on a regular basis and have repairs made immediately by responsible party.
b. Request/use dumpsters and trash cans with lids and without drain holes.
c. Place dumpsters on a flat, hard surface that does not slope or drain directly into the storm drain system.

Clean-up/Follow-up

a. Keep areas around dumpsters clean of all garbage.
b. Have garbage bins emptied regularly to keep from overfilling.
c. Wash the inside of bins or dumpsters as needed to keep odors from becoming a problem.

Documentation

a. Document training of employees.

2.2. Parking Lot Maintenance

Activities and Definition

Parking Lots can potentially generate increased pollutant loads to the stormwater system from run-off. A well maintained parking surface can help to reduce some of those pollutant concerns.

Preparation

a. Conduct regular employee training to reinforce proper housekeeping.
b. Restrict parking in areas to be swept prior to and during sweeping using regulations as necessary.
c. Perform regular maintenance and services in accordance with the recommended vehicle maintenance schedule on sweepers to increase and maintain efficiency.

Process

a. Sweep parking areas, as needed, or as directed by the City's responsible official.
b. Hand sweep sections of gutter if soil and debris accumulate.
c. Pick-up litter as required to keep parking areas clean and orderly.

Clean-up/Follow-up

a. Dispose of sweepings properly (appropriate facility).
b. Street sweepers to be cleaned out in a manner as instructed by the manufacturer and in a location that swept materials cannot be introduced into a storm drain.
c. Swept materials will not be stored in locations where stormwater could transport fine material into the storm drain system.

Documentation

a. Keep accurate logs to track swept parking areas and approximate quantities.
b. Document training of employees.

2.3. Parks – Chemical Application Pesticides, Herbicides, Fertilizers

Activities and Definition

A pivotal part of the beautification of the city is a great parks system. The health and beauty of lawns and natural areas take the application of some chemicals and fertilizers.

Preparation

a. Make sure your state Chemical Handling Certification is complete and up-to-date before handling any chemicals.
b. Calibrate fertilizer and pesticide application equipment to avoid excessive application.
c. Use pesticides only if there is an actual pest problem and periodically test soils for determining proper fertilizer use.
d. Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendations for best results ("Read the Label").
e. Know the weather conditions. Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).

Process

a. Always follow the manufacturer's recommendations for mixing, application and disposal ("Read the Label").
b. Do not mix or prepare pesticides for application near storm drains. Preferably mix pesticides inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
c. Employ techniques to minimize off-target application (e.g. spray drift, over broadcasting) of pesticides and fertilizers.

Clean-up/Follow-up

a. Sweep fertilizers or other solid chemicals that have fallen onto pavement or sidewalks back onto grassy areas before applying irrigation water.
b. Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
c. Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers ("Read the Label").

Documentation

a. Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
b. Record fertilizing and pesticide application activities, including date, individual who did the application, amount of product used and approximate area covered.

2.4. Parks – Cleaning Equipment

Activities and Definition

There are many benefits to taking proper care of the City's equipment. Prolonging the life of the equipment by taking the time to maintain critical parts is an essential part of the Parks Department's daily activities.

Preparation

a. Review process with all Parks employees.

Process

a. Wipe off dirt, dust and fluids with disposable towel.
b. Wash equipment in approved wash station.

Clean-up/Follow-up

a. Dispose of towels in proper trash receptacle.
b. Sweep floor and dispose of debris.

Documentation

a. N/A

2.5. Parks – Mowing and Trimming

Activities and Definition

Regular mowing and trimming activities have potential to deposit materials onto hard surfaces. Care should be taken to ensure mowing or trimming refuse is disposed of properly.

Preparation

a. Process overview with employees.
b. Check the oil and fuel levels of the mowers and other equipment. Fill in proper areas if needed.

Process

a. Install temporary catch basin protection on potentially affected basins.
b. Put on eye and hearing protection.
c. Mow and trim the lawn.
d. Sweep or blow clippings to grass areas.
e. Remove inlet protection if used.

Clean-up/Follow-up

a. Mowers are to be scraped and brushed at designated location.
b. Dry spoils are dry swept and disposed of properly.
c. Wash equipment in approved wash station.

Documentation

a. Document observed deficiencies for correction or repair.

2.6. Parks – Open Space Management

Activities and Definition

Open space provides great value to the park system that go beyond ball fields. This includes stormwater retention and potential flood relief.

Preparation

a. Provide regular observation and maintenance of parks, golf courses, and other pubic open spaces.
b. Identify public open spaces that are used for stormwater retention and verify that retention areas are included on the storm drain system mapping, inspection schedules, and maintenance schedules.

Process

a. Ensure that any storm drain or drainage system components on the property are properly maintained.
b. Avoid placing bark mulch (or other floatable landscaping materials) in stormwater retention areas or other areas where stormwater runoff can carry the mulch into the storm drainage system.
c. Follow all SOPs related to irrigation, mowing, landscaping, and pet waste management.

Clean-up/Follow-up

a. Keep all outdoor work areas neat and tidy. Clean by sweeping instead of washing whenever possible. If areas must be washed, ensure that wash water will enter a landscaped area rather than the storm drain. Do not use soap for outdoor washing.
b. Pick up trash on a regular basis.

Documentation

a. Document observed deficiencies for correction or repair.

2.7. Parks – Pet Waste

Activities and Definition

Pet waste has the potential to be a contributor to downstream degradation if not maintained and properly disposed of.

Preparation

a. Adopt and enforce ordinances that require pet owners to clean up pet wastes and use leashes in public areas. If public off-leash areas are designated, make sure they are clearly defined. Avoid designating public off-leash areas near streams and water bodies.
b. Whenever practical and cost effective, install dispensers for pet waste bags and provide disposal containers at locations such as trail heads or parks where pet waste has been a problem. Provide signs with instructions for proper cleanup and disposal.

Process

a. Check parks and trails for pet waste as needed.
b. Check public open space for pet waste prior to mowing and watering.
c. Provide ordinance enforcement as needed.

Clean up/Follow-up

a. Remove all pet waste; provide temporary storage in a covered waste container, and dispose of properly. Preferred method of disposal is at a solid waste disposal facility.

Documentation

a. Document problem areas for possible increased enforcement and/or public education signs.

2.8. Parks – Planting Vegetation (Starters)

Activities and Definition

Vegetation is a key component of establishing healthy ecosystems that hold water and nutrients on site.

Preparation

a. Call the appropriate numbers for location of utilities.
b. Decide where any spoils will be taken.

Process

a. Dig holes; place spoils near the hole where they may easily be placed back around the roots. Avoid placing spoils into the gutter system.
b. Bring each plant near the edge of the hole dug for it.
c. Check the depth of the hole, and adjust the depth if necessary. The depth of the hole for a tree should be as deep as the root ball, so that the top of the root ball is level with the top of the hole.
d. Carefully remove pot or burlap.
e. Place the plant in the hole.
f. Backfill the hole with existing spoils, compost, and a litter fertilizer if desired. Do not use excessive amendments.
g. Water the plant.
h. Stake the plant if necessary to stabilize it.

Clean-up/Follow-up

a. Remove any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
b. Sweep dirt from surrounding pavement(s) into the planter area.
c. Transport spoils to their designated fill or disposal area.

Documentation

a. N/A

2.9. Parks – Planting Vegetation (Seeds)

Activities and Definition

Vegetation is a key component of establishing healthy ecosystems that hold water and nutrients on site.

Preparation

a. Call the appropriate numbers for location of utilities.
b. Decide where any spoils will be taken.
c. Decide on the application rate, method, water source, and ensure adequate materials are on hand.
d. Grade and prepare soil to receive the seed. Place any extra soil in a convenient location to collect.

Process

a. Place the seed and any cover suing the pre-determined application method (and rate).
b. Lightly moisten the seed.

Clean-up/Follow-up

a. Remove any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
b. Sweep dirt from surrounding pavement(s) into the planter area.
c. Transport spoils to their designated fill or disposal area.

Documentation

a. N/A

2.10. Parks – Transporting Equipment

Activities and Definition

Equipment transportation is a pivotal part of the daily activities that occurs on a daily basis.

Preparation

a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.
b. Conduct pre-trip inspection of equipment.

Process

a. Load and secure equipment on trailer or truck.
b. Load and secure fuel containers for equipment usage.

Clean-up/Follow-up

a. Off load equipment.
b. Store equipment and trailer in proper location.
c. Conduct post-trip inspection of equipment.
d. Wash equipment if needed, according to the written procedure for Cleaning Equipment.

Documentation

a. Pre-trip and post-trip inspection report.

2.11. Streets/Storm Drain – Catch Basin Cleaning

Activities and Definition

Catch Basin Cleaning needs to be completed on a regular basis to ensure the functionality of the stormsewer system.

Preparation

a. Clean sediment and trash off of grate.
b. Do visual inspection on outside of grate.
c. Make sure nothing needs to be replaced.
d. Do inside visual inspection to see what needs to be cleaned.

Process

a. Clean using a high powered vacuum truck to start sucking out standing water and sediment.
b. Use a high pressure washer to clean any remaining material out of catch basin, while capturing the slurry with the vacuum.
c. After catch basin is clean, send the rodder of the vacuum truck downstream to clean pipe and pull back sediment that might have gotten downstream of pipe.
d. Move truck downstream of pipe to next catch basin.

Clean-up/Follow-up

a. When vacuum truck is full of sediment, take it to the designated location to dump all the sediment out of truck into a drying bed.

b. When it evaporates, clean it up with a backhoe/skid loader, put it into dump truck and take to permanent disposal site (landfill).

Documentation

a. Keep logs of number of catch basins cleaned.
b. Record the amount of waste collected.
c. Keep any notes or comments of any problems.

2.12. Streets/Storm Drain – Curb Painting

Activities and Definition

Storm drains are gateways that allow pollutants in stormwater to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Calculate the amount of paint required for the job.
b. Use water based paints if possible.
c. Determine whether the wastes will be hazardous or not and the required proper disposal of said wastes. Prepare surfaces to be painted without generating wastewater by sandblasting and/or scraping.
d. Thoroughly sweep up all sand, blastings, and/or paint scrapings.
e. If paint stripping is needed, use a citrus-based paint remover whenever possible since it is less toxic than chemical strippers.
f. If wastewater will be generated, use curb, dyke, etc. around the activity to collect the filter and collect the debris.

Process

a. Paint curb.
b. Prevent over-spraying of paints and/or excessive sandblasting.
c. Use drip pans and drop clothes in areas of mixing paints and painting.
d. Store latex paint rollers and brushes in air tight bags to be reused later with the same color.
e. Have available absorbent material and other BMP's ready for an accidental paint spill.

Clean-up/Follow-up

a. Paint out brushes and rollers as much as possible. Squeeze excess paint from brushes and rollers back into the containers prior to cleaning them.
b. Pour excess paint from trays and buckets back into the paint can containers and wipe with cloth or paper towels. Dispose of the towels according to the recommendations on the paint being used.
c. Rinse water-based paint brushes in the sink after pre-cleaning. Never pour excess paint or wastewater from cleanup of paint in the storm drain.
d. Cleanup oil based paints with paint thinner. Never clean oil based brushes in a sink or over a storm drain. Filter solvents for reuse if possible and/or store in approved drum for recycling.
e. Dispose of waste collected by placing it in a garbage container. Left-over paint and solvents should be stored for later use (do not place these liquids in the garbage).

Documentation

a. Write-up/report of any discharges into storm drain system.

2.13. Streets/Storm Drain – Retention Pond Cleaning

Activities and Definition

Storm drains are gateways that allow pollutants in stormwater to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Schedule the Pond cleaning work for a time when dry weather is expected.
b. Remove any sediment and trash from grates, placing it in a truck for disposal.
c. Do a visual inspection to make sure any grates, structures, manholes, and pipes are in good working order. Remove manhole covers and grates as necessary for inspecting.

Process

a. Provide outlet protection where feasible to minimize the amount of debris that might leave basin during cleaning process.
b. Start cleaning basin by using backhoe to remove debris and sediment off the bottom.
c. Continue cleaning structures and pond bottom as necessary by sweeping and shoveling.
d. Put all material removed from the pond into a dump truck.

e. Some structures might require use of a vacuum truck. If so use the same procedures described for cleaning catch basins.

Clean-up/Follow-up

a. After cleaning basins, clean off the concrete pads using dry methods (sweeping and shoveling).
b. Make sure they are swept up and clean.
c. Take the material that was removed to the landfill for final disposal.

Documentation

a. Keep logs of each retention basins/pond cleaned including date, individuals involved in cleaning, and a description of the type of debris removed.
b. Record the amount of waste collected.
c. Keep any notes or comments of any problems.

2.14. Streets/Storm Drain – Creek Management

Activities and Definition

Storm drains, streets, and creeks are gateways that allow pollutants in stormwater to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Monitor streams on a regular basis (Annually).
b. Check culverts and crossings after every storm.
c. Maintain access to stream channels wherever possible.
d. Identify areas requiring maintenance.
e. Determine what manpower or equipment will be required.
f. Identify access and easements to area requiring maintenance.
g. Determine method of maintenance that will be least damaging to the channel.
h. Obtain stream alteration permit.

Process

a. Remove unwanted material (debris, branches, soil) from the creek channel and place it in a truck to be hauled away.

Clean up/Follow-up

a. Stabilize all disturbed soils.
b. Remove all tracking from paved surfaces near maintenance site, if applicable.
c. Haul all debris or sediment removed from area to approved dumping site.

Documentation

a. Keep log of actions performed including date and individuals involved.
b. Record the amount of materials removed or imported.
c. Keep any notes or comments of any problems.
d. Use "before" and "after" photographs to document activities as applicable.

2.15. Streets/Storm Drain – Ditch Management

Activities and Definition

Storm drains are gateways that allow pollutants in stormwater to flow untreated from local streets to lakes, rivers and streams. Residual oil, grease, solids, antifreeze, cigarette butts, yard waste, plastic and other wastes found on roads, parking lots and driveways pollute downstream waters by increasing phosphorus levels, reducing oxygen levels and ultimately impairing aquatic habitat for fish and other organisms as well as drinking water sources.

Preparation

a. Monitor ditches on a regular basis (annually) and identify areas requiring maintenance.
b. Maintain access to ditch channels wherever possible.
c. Identify access and easement to area requiring maintenance.
d. Contact affected property owners and utility owners.
e. Determine what manpower or equipment will be required
f. Determine method of maintenance that will be least damaging to the channel and adjacent properties or utilities.

Process

a. Repair ditch as needed.
b. Remove unwanted material (debris, branches, soil) and place it in a truck to be hauled away.

Clean-up/Follow-up

a. Stabilize all disturbed soils.
b. Remove all tracking from paved surfaces near maintenance site, if applicable.
c. Haul all debris or sediment removed from area to approved dumping site.

Documentation

a. Keep log of actions performed including date and individuals involved.
b. Record the amount of materials removed or imported.
c. Keep any notes or comments of any problems.
d. Use "before" and "after" photographs to document activities as applicable.

2.16. Streets/Storm Drain – Chip Seal

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear. Chip sealing is a part of the maintenance of these surfaces that helps to prolong the life of the roadway.

Preparation

a. Clean and dry areas where materials are to be applied.
b. Apply temporary covers to manholes and catch basins to prevent oil and materials from getting inside of them.

Process

a. Apply emulsion at recommended rate.
b. Spread chips closely behind emulsion distributor, slowly such that the chips do not roll when they hit the surface.
c. Roll chips. Rollers follow closely behind the chip spreader. Roll entire surface twice.
d. Maximum speed 5 mph.

Clean-up/Follow-up

a. All loose aggregate is removed from the roadway by sweeping it up (see SOP for Street Sweeping).
b. Excessive asphalt applications and spills are removed with shovels and scraping tools.
c. Remove the temporary covers from manholes and catch basins. If it appears that any chip seal materials have gotten into the inlet boxes, remove the material according to the SOP for inlet boxes.
d. Dispose of the waste material that has been swept and scraped up by taking it to the landfill.

Documentation

a. Record location and date on the maintenance database and map.

2.17. Streets/Storm Drain – Slurry Seal

Activities and Definition

Plans that are submitted to the City for approval will have a review process to guarantee that erosion and sediment control standards are being met.

Preparation

a. Remove weeds from the roads. Sweep areas where materials are to be applied, and allow drying, if necessary. Verify that existing pavement has been inspected for detrimental effects of poor drainage.
b. Cover/protect catch basins and manholes.

Process

a. Apply materials in a smooth and uniform manner. Slurry material should not run onto adjacent pavement surface, curb and gutter or waterway.

Clean-up/Follow-up

a. If loose aggregate is remaining in street or curb, sweep it up.
b. Ensure that excess emulsion materials are removed from the site and stored for later use in an area or container that is not exposed to the weather.
c. Remove covers/protection from catch basins and manholes, and valves.

Documentation

a. Record location and date on the maintenance database and map.

2.18. Streets/Storm Drain – Overlays and Patching

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear. Overlays and patching are a part of the maintenance of these surfaces that help prolong the life of the roadway.

Preparation

a. Measure and mark locations of manholes and valves on the curb.
b. Apply temporary covers to manholes and catch basins to prevent oil and materials from getting inside of them.
c. Cracks should be properly sealed. Alligator cracks and potholes should be removed and patched. Rutting should be milled.

d. Surface should be clean and dry.
e. Uniform tack coat applied and cured prior to placement of overlay.
f. If milling is required, install inlet protection as needed.

Process

a. Check hot asphalt mix for proper temperature, percentage asphalt, gradation, air voids, and any other agency requirements.
b. Raise manhole lids and valves to elevation of new asphalt surface with riser rings.
c. Surface texture should be uniform, no tearing or scuffing.
d. Rolling should be done to achieve proper in-place air void specification.

Clean up/Follow-up

a. Covering should be removed as soon as the threat of imported materials entering the system is reduced and prior to a storm event.
b. After pavement has cooled, sweep gutters to remove loose aggregate.

Documentation

a. Record location and date on the maintenance database and map.

2.19. Streets/Storm Drain – Crack Seal

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear. Crack sealing is a part of the maintenance of these surfaces that help prolong the life of the roadway.

Preparation

a. Apply temporary covers to manholes and catch basins to prevent oil and materials from getting inside of them.
b. Remove weeds from the road.
c. Air-blast the cracks to remove sediments from the crack to allow for proper adhesion.
d. Ensure that surface is clean and dry.

Process

a. Proper temperature of material should be maintained.
b. Sufficient material is applied to form the specified configuration.

Clean-up/Follow-up

a. Excessive sealant application or spills are removed.
b. Sweep all loose debris from the pavement and dispose of it in the local landfill.

Documentation

a. Record location and date on the maintenance database and map.

2.20. Streets/Storm Drain – Shouldering and Mowing

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear, and litter from adjacent lawn maintenance (grass clippings). The shoulders of the road should be properly maintained to ensure infiltration and other techniques for stormwater run-off are working with the most efficiency.

Preparation

a. Set up temporary traffic control devices

Process

a. Place import material as needed and perform grading to achieve proper drainage.
b. Mulch clippings to help reduce the amount of supplemental fertilizer required.

Clean up/Follow-up

a. Clean any loose material off asphalt or gutter.

Documentation

a. Record location and date on the maintenance database and map.

2.21. Streets/Storm Drain – Secondary Road Maintenance

Activities and Definition

Plans that are submitted to the City for approval will have a review process to guarantee that erosion and sediment control standards are being met.

Preparation

a. Determine length amount and type of roadbase or gravel that will be needed.
b. Determine proper equipment to be used and or any safety hazards.

c. Design proper drainage: slopes, berms, etc.

Process

a. Have truck drivers follow a designated route for hauling in the soil (See SOP for transporting soil and gravel).
b. If soils are too dry to achieve compaction, loosen surface material and moisture condition.
c. Smooth or grade soil with the desired crown or cross-slope.
d. Compact soil.

Clean up/Follow-up

a. Replace filter fabric with washed rock (if necessary) on monthly maintenance.
b. Clean up equipment according to the SOP for Cleaning Equipment
c. Clean up any debris on traveled roads, and dispose of it in the landfill.

Documentation

a. Fill out daily activity report in log book or journal. Include date, time, personnel, and location.

2.22. Streets/Storm Drain – Concrete Work

Activities and Definition

The use of concrete is a common practice for BMP maintenance, proper management of those materials is critical for pollution prevention.

Preparation

a. Train employees and contractors in proper concrete waste management.
b. Store dry and wet materials under cover, away from drainage areas.
c. Remove any damaged concrete that may need to be replaced.
d. Prepare and compact sub-base.
e. Set forms and place any reinforcing steel that may be required.
f. Determine how much new concrete will be needed.
g. Locate or construct approved concrete washout facility.

Process

a. Install inlet protection as needed.
b. Avoid mixing excess amounts of fresh concrete on-site.
c. Moisten sub-base just prior to placing new concrete. This helps keep the soil from wicking moisture out of the concrete into the ground.
d. Place new concrete in forms.

e. Consolidate new concrete.
f. Screed off surface.
g. Let concrete obtain its initial set.
h. Apply appropriate surface finish.
i. Remove forms when concrete will not slump.

Clean-up/Follow-up

a. Perform washout of concrete trucks and equipment in designated areas only.
b. Do not washout concrete trucks or equipment into stormdrains, open ditches, streets or streams.
c. Cement and concrete dust from grinding activities is swept up and removed from the site.
d. Remove dirt or debris from street and gutter.

Documentation

a. N/A

2.23. Streets/Storm Drain – Garbage Storage

Activities and Definition

Illegal dumping of non-hazardous household waste and improper dumping of yard waste in streets, storm drains, wetlands, lakes, and other water bodies pollutes surface waters. Non-hazardous household waste includes items such as tires, furniture, common household appliances and other bulk items. Yard waste includes any organic debris such as grass clippings, leaves, and tree branches.

Preparation

a. Locate dumpsters and trash cans with lids in convenient, easily observable areas.
b. Provide properly labeled recycling bins to reduce the amount of garbage disposed.
c. Provide training to employees to prevent improper disposal of general trash.

Process

a. Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.
b. Locate dumpsters on a flat, impervious surface that does not slope or drain directly into the storm drain system.
c. Install berms, curbing or vegetation strips around storage areas to control water entering/leaving storage areas.
d. Keep lids closed when not actively filling dumpster.

Clean-up/Follow-up

a. Keep areas around dumpsters clean of all garbage.
b. Have garbage bins emptied as often as needed to keep from overfilling.
c. Wash out bins or dumpsters as needed to keep odors from becoming a problem. Wash out in properly designated areas only.

Documentation

a. N/A

2.24. Streets/Storm Drain – Snow Removal and De-icing

Activities and Definition

The concentration of chloride is increasing in our surface and ground water largely due to stormwater runoff from road salt storage piles, areas of excessive application, or simply from years of repeated application since chloride does not degrade in soil and water. Chloride in road salt and road salt additives (e.g. ferrocyanide for anti-caking) can create toxic conditions for fish, insects and vegetation.

Preparation

a. Store de-icing material under a covered storage area or in an area where water coming off the de-icing materials is collected and delivered to the sanitary sewer or reused as salt brine.
b. Slope loading area away from storm drain inlets.
c. Design drainage from loading area to collect runoff before entering stormwater system.
d. Washout vehicles (if necessary) in approved washout area before preparing them for snow removal.
e. Calibrate spreaders to minimize amount of de-icing material used and still be effective.
f. Provide vehicles with spill cleanup kits in case of hydraulic line rupture or other spill.
g. Train employees in spill cleanup procedures and proper handling and storage of de-icing materials.

Process

a. Load material into trucks carefully to minimize spillage.
b. Periodically dry sweep loading area to reduce the amount of de-icing materials exposed to runoff.
c. Distribute the minimum amount of de-icing material to be effective on the roads.
d. Do not allow spreaders to idle while distributing de-icing materials.
e. Park trucks loaded with de-icing materials inside when possible.

Clean-up/Follow-up

a. Sweep up all spilled de-icing material around loading area.
b. Clean out trucks after snow removal duty in approved washout area.
c. Provide maintenance for vehicles in covered areas.
d. If sand is used in de-icing operations, sweep up residual sand form streets when weather permits.

Documentation

a. Fill out daily activity report in log book or journal. Include date, time, personnel, and location.

2.25. Streets/Storm Drain – Street Sweeping

Activities and Definition

Pollutants collect on surfaces in between storm events as a result of atmospheric deposition, vehicle emissions, winter road maintenance, construction site debris, trash, road wear and tear, and litter from adjacent lawn maintenance (grass clippings). Sweeping of materials such as sand, salt, leaves and debris from city streets, parking lots and sidewalks prevents them from being washed into storm sewers and surface waters. Timing, frequency and critical area targeting greatly influence the effectiveness of sweeping.

Preparation

a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.
b. Restrict street parking prior to and during sweeping using regulations as necessary.
c. Increase sweeping frequency just before the rainy season, unless sweeping occurs continuously throughout the year.
d. Perform preventative maintenance and services on sweepers to increase and maintain their efficiency.

Process

a. Streets are to be swept as needed or specified by the city; street maps are used to ensure all streets are swept at a specific interval.
b. Drive street sweeper safely and pickup debris.
c. When full take the sweeper to an approved street sweeper cleaning station.

Clean-up/Follow-up

a. Street sweepers are to be cleaned out in an approved street sweeper cleaning station.
b. Street sweeping cleaning stations shall separate the solids from the liquids.

c. Once solids have dried out, haul them to the local landfill.
d. Decant water is to be collected and routed to an approved wastewater collection system area only.
e. Haul all dumped material to the landfill.

Documentation

a. Keep accurate logs to track streets swept and streets still requiring sweeping.
b. Log the amount of debris collected and hauled off.

2.26. Streets/Storm Drain – Transporting Soil and Gravel

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Dry out wet materials before transporting.
b. Spray down dusty materials to keep from blowing.
c. Make sure you know and understand the SWPPP requirements for the site you will be working at.
d. Determine the location that the truck and other equipment will be cleaned afterwards.

Process

a. Use a stabilized construction entrance to access or leave the site where materials are being transported to/from.
b. Cover truck bed with a secured tarp before transporting.
c. Follow the SWPPP requirements for the specific site to /from which the materials are being hauled.
d. Make sure not to overfill materials when loading trucks.

Clean-up/Follow-up

a. Use sweeper to clean up any materials tracked out on the roads from site.
b. Washout truck and other equipment when needed in properly designated area.

Documentation

a. Keep records of any material that is tracked out of site and what was done to clean it up and how long it took to clean up and what the weather conditions were at the time.

2.27. Vehicles – Fueling

Activities and Definition

Fueling of equipment and vehicles should always occur in designated areas when possible. Spill prevention and planning should occur before any fueling takes place.

Preparation

a. Train employees on proper fueling methods and spill cleanup techniques.
b. Install a canopy or roof over aboveground storage tanks and fuel transfer areas.
c. Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on mobile fueling vehicles and shall be disposed of properly after use.

Process

a. Shut off the engine
b. Ensure that the fuel is the proper type of fuel for the vehicle.
c. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut off to prevent overfill.
d. Fuel vehicle carefully to minimize drips to the ground.
e. Fuel tanks shall not be topped off.
f. Mobile fueling shall be minimized. Whenever practical vehicles and equipment shall be transported to the designated fueling area in the Facilities area.
g. When fueling small equipment from portable containers, fuel in an area away from stormdrains and water bodies.

Clean-up/Follow-up

a. Immediately clean up spills using dry absorbent (e.g. kitty litter, sawdust, etc.) sweep up absorbent material and properly dispose of contaminated clean up materials.
b. Large spills shall be contained as best as possible and the Duty officer and Hazmat team should be notified as soon as possible.

Documentation

a. Comply with underground storage tank records and monitoring requirements.
b. Document training of employees.

2.28. Vehicles – Vehicle and Equipment Storage

Activities and Definition

When hazardous material comes into contact with rain or snow, the pollutants are washed into the storm sewer system and, ultimately, to surface water bodies and/or ground water.

Hazardous materials have negative impacts on fish habitat, ground water drinking water sources, and recreational uses.

Preparation

a. Inspect parking areas for stains/leaks on a regular basis.
b. Provide drip pans or absorbents for leaking vehicles.

Process

a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer systems.
b. When inside storage is not available, vehicles and equipment will be parked in the approved designated areas.
c. Maintain vehicles to prevent leaks as much as possible.
d. Address any known leaks or drips as soon as possible. When a leak is detected a drip pan will be placed under the leaking vehicle.
e. The shop will provide a labeled location to empty and store drip pans.
f. Clean up all spills using dry methods.
g. Never store leaking vehicles over a storm drain.

Clean-up/Follow-up

a. Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent; the dry absorbent will be swept up and disposed of in the garbage.
b. The paved surfaces around the building will be swept every two weeks, weather permitting.

Documentation

a. N/A

2.29. Vehicles – Washing

Activities and Definition

MS4 vehicle washing involves the removal of dust and dirt from the exterior of trucks, boats and other vehicles, as well as the cleaning of cargo areas and engines and other mechanical parts. Washing of vehicles and equipment generates oil, grease, sediment and metals in the wash water as well as degreasing solvents, cleaning solutions and detergents used in the cleaning operations.

Preparation

a. Provide wash areas for small vehicles inside the maintenance building that has a drain system which is attached to the sanitary sewer system.

b. Provide wash areas for large vehicles on an approved outside wash pad that has a drain system which is attached to the sanitary sewer system.
c. No vehicle washing will be done where the drain system is connected to the storm sewer system.

Process

a. Minimize water and soap use when washing vehicles inside the shop building.
b. Soap should not be used when washing vehicles outside the shop building.
c. Use hoses with automatic shut off nozzles to minimize water usage.
d. When washing outside the building, it is the operator's responsibility to make sure all wash water is contained on the wash pad and does not have access to the storm drain.
e. Never wash vehicles over a storm drain.

Clean-up/Follow-up

a. Sweep wash areas after every washing to collect what solids can be collected to prevent them from washing down the drain system.
b. Clean solids from the settling pits on an as needed basis.

Documentation

a. N/A

2.30. Water – Planned Waterline Excavation Repair/Replacement

Activities and Definition

Waterline excavation and repair of an MS4 system can potentially involve activities that could affect the health of the MS4 system. Planning is critical.

Preparation

a. Determine where discharge flow will go.
b. Place inlet protection at nearest downstream storm drain inlets.
c. Clean gutters leading to inlets.
d. Isolate waterline to be worked on.
e. Neutralize any chlorine residual before discharging water.

Process

a. Make efforts to keep water from pipeline from entering the excavation.
b. Direct any discharge to pre-determined area.
c. Backfill and compact excavation.
d. Haul of excavated material or stock pile nearby.

Clean-up/Follow-up

a. Clear gutter /waterway where water flowed.
b. Clean up all areas around excavation.
c. Clean up travel path of trucked material.

Documentation

a. Complete paperwork.

2.31. Water – Unplanned Waterline Excavation Repair/Replacement

Activities and Definition

Waterline Excavation and repair of an MS4 system can potentially involve activities that could affect the health of the MS4 system. Unplanned excavations can be additionally tricky and pre-planning is critical.

Preparation

a. Make sure service trucks have wattles, gravel bags, or other materials for inlet protection.

Process

a. Slow the discharge.
b. Inspect flow path of discharge water.
c. Protect water inlet areas.
d. Follow planned repair procedures.
e. Haul off spoils of excavation.
f. Consider use of silt filter bags on pumps.

Clean-up/Follow-up

a. Repair eroded areas as needed.
b. Follow planned repair procedures.
c. Clean up the travel path of trucked excavated material.

Documentation

a. Complete paperwork.

2.32. Water – Transporting Dry Excavated Materials and Spoils

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Utilize truck with proper containment of materials.
b. Determine disposal site of excavated materials.

Process

a. Load
b. Check truck after loading for possible spillage.
c. Transport in manner to eliminate spillage and tracking.
d. Utilize one route for transporting.

Clean-up/Follow-up

a. Clean loading area.
b. Clean transporting route.
c. Wash off truck and other equipment in a designated equipment cleaning area.

Documentation

a. Complete paperwork.

2.33. Water – Transporting Wet Excavated Materials & Spoils

Activities and Definition

Transportation of materials should be handled with pre-planning and contingency planning.

Preparation

a. Utilize truck with containment for material.
b. Determine disposal site of excavated material.

Process

a. Load and Transport in manner to minimize spillage & tracking of material.
b. Check truck for spillage.
c. Utilize one route of transport.

Clean-up/Follow-up

a. Clean route of transport to provide cleaning of any spilled material.
b. Washout equipment truck and other equipment in designated wash area.

Documentation

a. Complete paperwork.

2.34. Water – Waterline Flushing for Routine Maintenance

Activities and Definition

Flushing is a process that rapidly removes water from the city's water piping system. Flushing uses water force to scour out materials that accumulate in the city's pipes. Water pipes are usually flushed by opening fire hydrants, where the discharged water flows off the streets the same as rainwater.

Preparation

a. Determine flow path of discharge to inlet of waterway.
b. Determine chlorine residual.
c. Neutralize chlorine residual.

Process

a. Clean flow path.
b. Protect inlet structures.
c. Use diffuser to dissipate pressure to reduce erosion possibilities.

Clean-up/Follow-up

a. Clean flow path.
b. Remove inlet protection

Documentation

a. Residual tests of discharge water.
b. Complete paperwork.

2.35. Water – Waterline Flushing after Construction/System Disinfection with Discharge to Storm Drain.

Activities and Definition

Flushing is a process that rapidly removes water from the city's water piping system. Flushing uses water force to scour out materials that accumulate in the city's pipes.

Water pipes are usually flushed by opening fire hydrants, where the discharged water flows off the streets the same as rainwater.

Preparation

a. Determine chlorine content of discharge water, and select de-chlorination equipment to be used.
b. Determine flow path of discharge.

Process

a. Protect inlets in flow path.
b. Install de-chlorination equipment.
c. Sweep and clean flow path.
d. Use diffuser to reduce velocities.

Clean-up/Follow-up

a. Pick up inlet protection.
b. Clean flow paths.
c. Remove equipment from flush point.

Documentation

a. Residual tests of discharge water.
b. Complete paperwork.

2.36. Water – Chemical Handling/Transporting and Spill Release

Activities and Definition

Hotspot facilities are facilities that produce higher levels of stormwater pollutants and/or present a higher potential risk for spills, leaks or illicit discharges. Hazardous material storage and handling is of particular concern in these areas.

Preparation

a. Understand MSDS sheets for handling of product.
b. Determine proper place of handling.
c. Have necessary containment and spill kits at handling place.

Process

a. Begin transfer process.
b. Discontinue operations if a spill level occurs.
c. Disconnect and store handling equipment.

Clean-up/Follow-up

a. Clean up spills with proper material.
b. Dispose of contaminated material at appropriate facility.

Documentation

a. Report spills to duty officer.
b. Complete paperwork.

ROSEMOUNT FACILITIES

ID	NAME	ADDRESS	POC PRESENT
1	Ames Soccer Complex	1300 145th St W	N
2	Birch Park	2181 Birch St	N
3	Biscayne Park	2420 145th St W	N
4	Bloomfield Park	14225 Bloomfield Path	N
5	Brockway Park	13669 Bronze Pkwy	N
6	Camfield Park	14795 Canada Ave	N
7	Carrolls Woods Park	3335 142nd St W	N
8	Central Park	2893 145th St W	N
9	Charlie's Park	3155 144th St W	N
10	Chippendale Park	14876 Chrysler Ave	N
11	City Dump	15690 Chasewood Court	Y
12	City Hall	2875 145th St W	N
13	Claret Park	15130 Claret Ave	N
14	Community Center	13885 South Robert Trail	N
15	Connemara Park	13930 Connemara Trl	N
16	Dallara Park	4175 147th St W	N
17	Erickson Park	14115 Brazil Ave	N
18	Fire Station #1	14700 Shannon Pkwy	N
19	Fire Station #2	2047 Connemara Trl	N
20	Flint Hills Athletic Complex	1201 Bonaire Ave E	N
21	Innisfree Park	4270 Evermoor Pkwy	N
22	Jaycee Park	15425 Shannon Pkwy	N
23	Kidder Park	3652 146th St W	N
24	Lions Park	15155 December Trl	N
25	Meadows of Bloomfield Park	13690 Azalea Ave	N
26	Old City Hall Park	1300 145th St E	N
27	Prestwick Park		N
28	Public Works Central	14435 Brazil Ave	Y
29	Public Works North	14425 Brazil Ave	Y
30	Public Works South	14455 Brazil Ave	Y
31	RMS Rink	3135 143rd St W	N
32	Rosemount Family Resource Center	14521 Cimarron Ave	N
33	San Lift Station #1	2901 145th St W	N
34	San Lift Station #3	15995 Shannon Pkwy	N
35	San Lift Station #4	14392 Davenport Ave	N
36	San Lift Station #5	4295 135th St W	N
37	San Lift Station #6	12993 Shannon Pkwy	N
38	San Lift Station #7	14419 Atwater Way	N
39	San Lift Station #8	13861 Autumnwood Ct	N
40	San Lift Station #9	13316 Couchtown Ct	N
41	San Lift Station #10	14048 Burgundy Way	N
42	Schwarz Pond Park	13787 Dodd Blvd	N
43	Shannon Park	13260 Shannon Pkwy	N
44	Strm Lift Station #1 Copper Pond	13974 Shannon Pkwy	N
45	Strm Lift Station #2 Schwarz Pond	13793 Dodd Blvd	N
46	Strm Lift Station #3 Birger Pond	13530 Diamond Path	N
47	Strm Lift Station #4 Marcotte Pond	12991 Shannon Pkwy	N

ROSEMOUNT FACILITIES

ID	NAME	ADDRESS	POC PRESENT
48	Strm Lift Station #5 Hawkins Pond	14396 Davenport Ave	N
49	Strm Lift Station #6 Wensmann Pond	4435 155th St W	N
50	Strm Lift Station #7 Glendalough Pond	3039 134th Street West	N
51	Twin Puddles	14884 Dodd Blvd	N
52	UMore Park/Ballfields	14860 Akron Ave	N
53	Water Tower #1 Chippendale	14950 Chippendale Ave	N
54	Water Tower #2 Connemara	13831 Connemara Trl	N
55	Water Tower # 3 East Side	3696 145th St E	N
56	Water Tower #4 Bacardi	13581 Azalea Ave	N
57	Well #7	14950 Chippendale Ave	N
58	Well #8	15623 Shannon Pkwy	N
59	Well #9	15260 Shannon Pkwy	N
60	Well #12	15210 Boulder Ave	N
61	Well #14	13599 Azalea Ave	N
62	Well #15	13610 Autumn Path	N
63	Well #16	Bacardi Ave	N
64	Well PRV	1289 145th St E	N
65	Well Rural	1301 145th St E	N
66	Wickland Park	Bacardi Ave	N
67	Winds Park	15675 Chippendale Ave	N

Standard Operating Procedures for Facility Inspection

Purpose:
The purpose of this SOP is to prolong the functional life of city owned facilities within Rosemount. Performing maintenance to city owned facilities is critical for the long-term operation of the MS4 system and to minimize the discharge of pollutants into the MS4 system. Equipment will also have prolonged life when properly maintained.

Description:
City owned facilities are those facilities that contribute pollutants to stormwater discharges. Facility operators are required to use the following checklist to evaluate whether the activities and the best management practices are functioning in accordance with the MS4 permit. The following municipal facilities need to be inspected quarterly:

- City Dump Site
- Public Works Central Building
- Public Works North Building
- Public Works South Building

Primary Operational Procedures:

<u>Maintenance</u>:
There are several maintenance activities that may be associated with facility inspections. The appropriate activity will be chosen to correspond to the reported condition and based on the BMPs identified on the facility maps (Appendix A). The following activities are addressed:

1. Good Housekeeping
2. General Practices
3. Landscape Maintenance
4. Building Maintenance
5. Material Storage
6. Secondary Containment
7. Equipment Storage
8. Vehicle and Equipment Fueling
9. Vehicle and Equipment Maintenance
10. Loading Docks
11. Waste Management
12. Hazardous Waste Management
13. Spill Cleanup and Prevention

Facility ID:	Location:
Completed by:	Signature:
Date:	Date of pervious inspection:

Activities	Yes√	No √	NA √	Comments
Good Housekeeping				
Outdoor work areas and storage areas are neat and tidy.				
Access roads and parking lots are inspected for excess dirt, debris, and oil drips and are cleaned as necessary.				
General Practices				
A map of the property is available identifying the direction of stormwater flow and the location of storm drains.				
Storm drains are free of debris and stains of oil and chemicals.				
Nearby water bodies (streams, ponds, etc.) and drainage ditches are free of trash, oily sheen, foam, etc. that may be coming from the facility.				
Materials found in nearby waterbodies and drainage ditches are cleaned up.				
Landscape Maintenance				
Landscape waste and materials (i.e., grass clippings, compost, mulch) are stored in a covered, bermed, or contained area.				
Piles of mulch, compost, or yard waste are not kept next to streams, channels, or storm drain inlets.				
Grass clippings are left on the grass after mowing.				
Clippings and debris are swept off sidewalks/pavement after mowing.				
No pesticides/herbicides are sprayed near surface waters, creeks, ditches, or storm drains.				
Spot spraying is performed for weed and insect control (broadcast spraying is avoided).				
Building Maintenance				
Surface or pressure washing wastewater is directed to nearby landscaping or is allowed to evaporate if no chemicals or detergents are used and only ambient dirt is being cleaned.				
Wastewater is sent to the sanitary sewer system when chemicals or soap are being used or if materials other than ambient dirt are being cleaned from the pavement.				
Dry clean-up methods are used before pressure washing is performed (including using absorbents to clean up spills, sweeping, vacuuming, and scraping off dried debris) and debris is disposed of properly.				
Material Storage				
Materials that are potential stormwater contaminants (see Page 1) are stored under cover or in appropriately sized secondary containment.				
Materials are not loaded or unloaded near storm drain inlets or drainage ditches or over unpaved surfaces unless drains are protected.				
Unused materials are kept in original containers which are labeled to identify contents.				
Materials are not stored next to waterbodies (streams, drainage channels, etc.).				
Sand is stored under cover or in bermed location.				
Salt is stored under cover.				
55-gallon drums, bulk storage tanks, or other containers				

Activities	Yes√	No √	NA √	Comments
stored outside are specifically designed for outdoor storage.				
Secondary Containment				
The structure of secondary containment is sound.				
Water in secondary containment structures is inspected for contaminants and drained as needed.				
Contaminants and contaminated water in secondary containment is drained to the sanitary sewer or other appropriate facility.				
Equipment Storage				
Equipment is stored under cover when possible.				
Equipment is inspected regularly for spills and leaks due to operator error or equipment failure.				
Any spills and leaks from equipment are cleaned up promptly.				
Preventative maintenance is routinely performed on equipment to prevent leaks.				
Vehicle and Equipment Fueling				
Signs are present at fueling stations that prohibit "topping off" and describe spill procedures.				
Drips and leaks are spot cleaned promptly and absorbent is collected and disposed of properly.				
Fueling equipment/tanks are properly maintained and labeled (i.e., overflow protection devices, automatic shut-off valves, etc.)				
Vehicle and Equipment Maintenance				
Vehicle maintenance activities are conducted in specified area not exposed to stormwater.				
If vehicle/equipment maintenance is performed outside drip pans are placed under places where spills can occur (i.e., hose connections, filler nozzles, etc.)				
Leaking vehicles are reported to fleet maintenance.				
Vehicle and Equipment Washing				
Washwater is directed to nearby landscaping or is allowed to evaporate if no chemicals or detergents are used and only ambient dirt is being cleaned.				
Washwater is sent to the sanitary sewer system when chemicals or soap are being used or if materials other than ambient dirt are being cleaned from the pavement.				
Waste Management				
Waste is properly disposed of.				
Dumpsters or outdoor trash containers are covered at all times unless in use.				
Hazardous Waste Management				
Hazardous materials are properly labeled to identify material.				
Hazardous materials are stored to prevent exposure to stormwater runoff.				
Spill Cleanup and Prevention				
The facility has a spill response plan that is readily accessible.				
Fueling stations/islands have spill kits with absorbents immediately accessible.				
Spill kits are complete and restocked.				
Spills are cleaned up promptly.				
All employees know where spill kits are located.				
Employees are trained in proper spill containment and cleanup.				
Phone numbers and contact information for spill reporting is readily available.				