



**STORMWATER POLLUTION PREVENTION PLAN  
RAYMORE MUNICIPAL COMPLEX  
CITY OF RAYMORE**

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# Raymore Municipal Complex Stormwater Pollution Prevention Plan

## Table of Contents

I. Introduction

II. Pollutant Sources

III. Facilities Locations, Activities and Pollution Control Measures

1. City Parks & Recreation Buildings

2. Parks

**3. Buildings**

IV. Field Activities and Control Measures

V. Spill Prevention

VI. Inspections

VII. Employee Training

VIII. Appendices

Appendix A - Site Maps

Appendix B - Visual Inspection Log

Appendix C - High Priority Facility Compliance Report

Appendix D - Spill Reports

Appendix E - Corrective Action Log

Appendix F - Employee Training Log

# **Raymore Municipal Complex SWPPP**

## **I. Introduction**

This manual is designed to assist City of Raymore personnel on how to properly implement Best Management Practices (BMPs) on City owned facilities and field activities as part of the municipal stormwater management program.

This manual will identify the potential pollutants and activities that can contribute to the pollution of storm waters as well as the BMPs used to ensure that the potential for these pollutants affecting storm water is diminished to the maximum extent practicable.

## **II. Potential Pollutant Sources**

A variety of pollutants are associated with stormwater pollution due to municipal activities including: sediment, nutrients, bacteria and viruses, oxygen demanding substances, oil and grease, metals, toxic pollutants and floatables (Table 1). The impacts of these pollutants on water quality along with a discussion on municipal activities which can potentially contribute to their introduction into stormwater runoff are presented in the following subsections.

A) Sediment. Sediment is a common component of stormwater, and is considered to be one of the most damaging pollutants. Sediment fills in streams, lakes, rivers, wetlands and road drainage ditches, and can affect aquatic life by smothering fish larvae and eggs. Suspended soil particles can cause water to look cloudy or turbid. Excessive turbidity reduces light penetration in the water, impairing the sight of feeding fish; clogs fish fills, and increases drinking water treatment costs. Fine sediment also acts as a vehicle to transport other pollutants including nutrients, trace metals and hydrocarbons to nearby surface waters. Significant sediment-borne pollutants are associated with highway runoff; originating from pavement wear, vehicles and other road maintenance.

Other sources of sediment include erosion from new development and construction sites.

B) Nutrients- nutrients, especially nitrogen and phosphorus, can cause algae blooms and excessive aquatic plant growth in water bodies. These conditions can impair many important uses of these waters, including recreation, fish habitat, and water supply. Nitrogen and phosphorus associated with stormwater runoff come mostly from fertilizer application. Phosphorus has also been associated with application of sand and salt of roads. Nutrients are a result of yard debris, garbage, as well as fertilizer and pesticide use.

C) Metals- Trace metals are a water quality concern because the toxic effects they can have on aquatic life. Metals can also be a health hazard to humans through direct ingestion of contaminated water or through eating contaminated fish. The most common trace metals found in stormwater runoff in urban areas are lead, zinc, copper, cadmium, nickel and other metal sources originating from body rust, brake lining wear steel highway structures, tire wear, steel fabrication and vehicle maintenance.

D) Oxygen-demanding substances- oxygen-demanding substances tend to deplete the dissolved oxygen levels in streams and lakes. The depleted oxygen supply can result in the reduction of aquatic life. Oxygen demanding substances are found in yard waste (such as leaves and lawn clippings), animal wastes, street litter and organic matter.

E) Bacteria and Viruses- bacteria and viruses are the most common microorganisms found in surface water runoff. Bacteria and viruses often carry diseases which can be transferred to animal life and to humans. The main sources of these contaminants are animal excrement and sanitary sewer overflows.

F) Oil, Grease and Hydrocarbons- oil grease and hydrocarbons contain a wide array of compounds, some of which are toxic to aquatic organisms at low concentrations. The main sources of oil and grease are leakage from engines and waste oil disposal. Hydrocarbons typically come from spills, leaks, lubricants and asphalt surface leachate. Hydrocarbon levels are highest from parking lots, roads and service stations.

G) Floatables- floatables (garbage) are pollutants that may be contaminated with heavy metals, pesticides and bacteria. Typically resulting from street refuse or industrial yard waste, floatables also create an eyesore in water

ways *and* detention basins.

### III. Facilities Locations, Activities and Control Measures

#### 1. Raymore Municipal Complex (Low priority)

**Location-** The City of Raymore Municipal Complex is located at 100 Municipal Circle Raymore, Missouri 64083. It houses City Departmental offices, Council Chambers and Utility and Court Clerks on the main level. The Police Department is located on the lower level. There are two parking lots for city employees, police and visitors located on the north and south sides of the building and a detention basin located adjacent to the south parking lot.

**Map 1. Raymore Municipal Complex and grounds**



**Activities-** The Municipal Complex is a City departmental business office that does not contribute any significant stormwater impacts or concerns.

The most common supplies stored in the buildings are:

Cleaning Supplies

### **Control Measures SOPs-**

Good Housekeeping. Good housekeeping practices offer a practical and cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with storm water. Good housekeeping practices also help to enhance safety and improve the overall work environment.

- Indoor work areas will be kept clean and organized.
- The yard will be walked to pick up and dispose of litter weekly
- The paved surfaces around the building will be swept as needed.
- Fertilizers, herbicides, paint, solvents and other chemicals will be stored indoors neatly organized; containers must be properly labeled, hazardous chemicals will be stored in a locked container.

### **City Vehicle and Visitor Parking Areas**

- Vehicles and equipment will be parked on the approved designated area.
- If any leaks are discovered, a drip pan will be used to collect the fluid and vehicle will be scheduled for repairs( City vehicles)
- Any leaks or spills that do wind up on the pavement will be cleaned using dry methods (absorbent material, sweep when dry and dispose in the proper waste container). **Spill kit is kept on the premises.**
- Parking lots are swept as needed by the Public Works Operations Department.
- Snow removal and Ice control is performed by the Public Works Operations Department. The minimum amount of de-icing material needed to be effective will be applied. Material is stored at the Public Works Facility in the Salt Dome.

### **Lawn Mowing and/or trimming**

- Mowing/trimming operations will occur weekly, twice weekly, or as outlined in the Maintenance Schedule.
- All mowing/trimming equipment will be properly fueled at a proper fueling location. Any spilled fuels will have absorbent materials applied to absorb

them. Absorbent materials will be disposed of in a proper waste container.

- Mowers will have mulching type decks that are kept in good repair with all guards and deflectors in place.
- Trimmers will have all deflectors in place and in good repair.
- All materials resulting from mowing/trimming operations should remain on grass.
- ***Mowers shall remain at least 20 feet from streams, ponds or lakes. Clipping and materials shall not be allowed to enter any body of water.***
- Trimmings that are found on hard surfaces will be blown or swept back on to the grass.
- Trimmings that cannot be swept or blown back on to grass will be swept and deposited into appropriate waste container or composted.
- ***Landscaping and mowing is performed by the Parks Department. BMP's are detailed in the Parks Department SWPPP and SOP manual.***

#### **Sidewalks, Parking Lots, and Trails in and around Parks and Public Facilities.**

- Parking lots will be swept by Public Works annually or as needed.
- Trails and sidewalks will be kept free of debris as necessary.
- Trails and sidewalks will be blown off as needed. Debris will be blown onto grass or planted areas.
- Curbs and gutters around parking lots will be blown out or swept as needed. Debris will be blown onto grass or planted areas when possible. When not possible, debris will be collected and deposited into proper waste container.
- Garbage and other debris will be removed from catch basins.

Weekly visual inspections and repaired problems will be logged on the appropriate reports located on the appendices section of this manual.

#### **Snow Melt/ Road Salt storage and use**

- All snow melt materials will be kept in bags and stored in a storage building until they are consumed.
- Road salts will be stored in a proper road salt storage location (Public Works Salt Dome) Road salts will be stored in a manner to be protected from storms and to allow minimal dissolving of salts.
- Snow melt and road salt materials will be loaded into spreading devices as needed and as can be consumed. Materials will not remain in spreading devices if unused. Unused road salts will be returned to stockpile.
- Snow melt and road salts will be applied to parking lots and walkways as needed using minimal necessary materials. Materials may be reapplied only as needed for public safety.
- Any spillage of snow melt material or road salts will be returned to the spreading device and applied to appropriate areas. Spilled materials may also be swept and



deposited in appropriate waste container.

- Snow melt or road salts that are not dissolved will be blown or swept of parking lots or walkways as needed. Removed materials will either be blown to landscaped areas or collected and deposited in an appropriate waste container.

- Snow removal equipment is washed at the Public Works Maintenance Bay.

***Only hand-applied snow melt material is kept at this facility.***

## **Cleaning Chemicals**

- All cleaning chemicals are to be mixed in accordance to manufacturer's directions.

- All cleaning chemicals are to be mixed in an area with adequate ventilation and an area that has a drain that connects to the sanitary sewer.

- If no connection to a sanitary sewer is available, cleaning chemicals are to be mixed on grass or other landscaped area.

- All appropriate PPE shall be work when mixing cleaning chemicals.

- Any spills will be immediately contained with absorbent materials.

Absorbent materials will be disposed if in a proper waste container.

- Excess mixed materials will be stored in a properly marked and appropriate container, and in a closed cabinet or storage space. Excess materials should be consumed as soon as possible through appropriate cleaning activities.

- Maintain MSDS at a central, designated location at the facility.

## **IV. Field Activities and Control Measures**

### **Activities and Control Measures**

- Tree removal or pruning as needed- All tree removal materials are hauled to green waste facility or composted, all debris from the work area are cleaned up by the end of each work day.

- Plant trees/vegetation- trees and vegetation are planted throughout the year; a backhoe is used to excavate the holes for trees, trees/vegetation are brought in to the work area on a flatbed trailer or truck, street and gutters are swept by the end of each work day.

- Mulch Piles- Maintained at a concentrated location on the Parks Maintenance Building Lot with an adequate vegetative buffer or perimeter erosion/sediment control.

- Sprinkler repair- is an as needed activity, any dirt that is placed on the street, gutters or parking lot will be removed from these hard surfaces

by the end of each work day.

- Snow removal of City facilities sidewalks. Salt and de-icing chemicals are used in limited amounts. Any over application is cleaned up.

## **V. Spill Prevention and Response Procedures**

Each facility work area has a spill response kit. Most spills can be cleaned up following the product manufacturer recommendations or for liquid spills using absorbent oil/dry materials. Absorbent oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response kit.

- Make sure the spill area is safe to enter and that it does not pose an immediate threat to the health or safety of any person.
- Stop the spill source
- Check for hazards (flammable material, noxious fumes, cause of spill) -if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.**
- Call supervisor for assistance and to make them aware of the spill and potential dangers.
- If possible, stop the spill from entering drains (use absorbent or other material as necessary).
- Stop spill from spreading (use absorbent or other material)
- If spilled material has entered a storm sewer; contact the Public Works Department Operations Director.
- Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
- Properly dispose of cleaning materials and used absorbent material according to Manufacturer specifications.

## **VI. Inspections**

Qualified personnel from the Parks and Recreation Department will conduct inspections of the assigned areas and document with the appropriate report. Inspection reports and logs are located on the appendices section of this manual.

- Weekly visual inspections: Parks (include buildings and parking lots).

Buildings (include grounds and parking lots)

- High Priority Facilities Compliance Reports

Weekly visual inspections will be tracked in the log attached on appendix F, High Priority Facility Compliance reports will be documented on appendix G; spills will be cleaned up immediately and documented on a spill report located on appendix D.

Deficiencies will have to be corrected within one week of being reported. All

inspections and follow up actions will be documented and kept in the Corrective Action Log Appendix E

## **VII. Employee Training**

All of the Parks & Recreation employees will receive training regarding this O&M Manual and Storm Water Controls at least annually. The training will cover the following subjects:

- Impacts associated with illicit discharges;
- Proper disposal and management of wastes;
- Proper maintenance of indoor and outdoor working areas including parking lot surfaces;
- Spill response; and
- Inspections training.

## **VIII. Appendices**

Appendix A - Site Maps

Appendix B - Visual Inspection Log

Appendix C - High Priority Facility Compliance Report

Appendix D - Spill Reports

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