



**STORMWATER POLLUTION PREVENTION PLAN  
RAYMORE ANIMAL CONTROL BUILDING  
CITY OF RAYMORE**

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**Raymore Animal Control Building  
SWPPP and Operation and Maintenance (O&M) Manual**

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# **Raymore Animal Control Building Stormwater Pollution Prevention Plan**

## **I. Introduction**

This manual is designed to assist City of Raymore personnel on how to properly implement Best Management Practices (BMP's) 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 BMP's 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.

**Table 1. Pollutant sources and their Impacts**

<b>Pollutant</b>	<b>Source</b>	<b>Impacts</b>
<b>Sediment</b>	Construction sites, vehicle/boat washing, agricultural sites	Destruction of aquatic habitat for fish and plants, transportation of attached oils, nutrients, and other chemical contamination, increased flooding.
<b>Nutrients (Phosphorus, Nitrogen, Potassium, Ammonia)</b>	Fertilizers from agricultural operations, lawns and gardens, livestock and pet waste, decaying grass and leaves, sewer overflows and leaks.	Harmful algal blooms, reduced oxygen in the water, changes in water chemistry and pH. Nutrients can result in excessive or accelerated growth of vegetation, resulting in impaired use of water in lakes and other receiving waters.
<b>Hydrocarbons (Petroleum Products, Benzene, Toluene, Ethyl Benzene, Xylene)</b>	Vehicle and equipment fluid leaks engine emissions, pesticides, equipment . cleaning, leaking fuel storage containers, fuel spills, parking lot runoff	These pollutants are toxic to humans and wildlife at very low levels. Carcinogenic. Teratogenic.
<b>Heavy Metals</b>	Vehicle brake and equipment wear, engine emissions, parking lot runoff, batteries, paint and wood preservatives, fuels and fuel additives, pesticides, cleaning agents	Metals including lead, zinc, cadmium, copper, chromium and nickel are commonly found in stormwater. Metals are of concern because they are toxic to all life at very low levels. Carcinogenic. Teratogenic.
<b>Toxic Chemicals (Chlorides)</b>	Pesticides, herbicides, dioxins, PCBs, industrial chemical spills and leaks, deicers, solvents,	Chemicals are of concern because they are toxic to all life at very low levels. Carcinogenic. Teratogenic.
<b>Debris/Litter/Trash</b>	Improper solid waste storage and disposal, abandoned equipment, litter	Aesthetically unpleasant. Risk of decay product toxicity. Risk of aquatic animal entrapment or ingestion and death.
<b>Pathogens (Bacteria)</b>	Livestock, human, and pet waste, sewer overflows and leaks, septic systems	Human health risks due to disease and toxic contamination of aquatic life.

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

#### 1. Raymore Animal Control Building (Low priority)

**Location-** The City of Raymore Animal Control Building is located at 11023 S. Madison, Raymore, Missouri 64083. It houses an Animal Control office, storage area ,and indoor/outdoor kennels . There is a shared parking lot for Public Works Operations/Parks Employees and visitors located on the northeast side of the building.

**Map 1. Raymore Animal Control Building and grounds**



**Activities-** The Raymore Animal Control Building does not contribute any significant stormwater impacts or concerns. Cleaning supplies are stored inside the building and kennel drains are piped to the sanitary sewer system both inside and out.

The most common supplies stored in the buildings are:

Cleaning Supplies(Bleach)

## **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)
- 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.

### **Activities**

- Animal Intake
- Care, feeding and cleaning up of animals (primarily, dogs and cats).

## **Control Measures SOPs**

### **Grounds Maintenance**

- Grounds maintenance is the duty of the Parks Department. All control measures fall under compliance within the Parks Department SWPPP.

- Maintain MSDS sheets at a central, designated location in the Parks Maintenance Building.

### **3. Buildings**

#### **Buildings & Locations:**

City Hall	100 Municipal Circle
Parks and Recreation Maintenance Shop	909 South Madison
Parks and Recreation Admin Offices	1210 South Madison

#### **Activities:**

- All facilities have multiple floor drains that flow into the sewer system.

#### **Control Measures SOPs**

- Care for the building grounds is the responsibility of the Parks Department..
- Parking lot sweeping and snow removal is Public Works responsibility.

#### **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 of 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**

- Care for the building grounds is the responsibility of the Parks Department..
- Parking lot sweeping and snow removal is Public Works responsibility.

## **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 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**

Animal Control Officers are employees of the Police Department and, at this time, are not required to participate in Stormwater/ Illicit Discharge training.

## **VIII. Appendices**

Appendix A - Site Maps

Appendix B - Visual Inspection Log

Appendix C - High Priority Facility Compliance Report

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