Unincorporated Weber County

# Storm Water Management Plan

July 2026

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# Storm Water Management Plan

Permittee: Weber County
Permit Number: UTR090022
Location of MS4: Northern part of the Wasatch Front

Submitted with this permit is the following:

A map of the MS4 location

Information Regarding the overall quality concerns, priorities, and measureable goals specific to the Permittee that were considered in the development and/or revisions to the SWMP document

A description of the program elements that will be implemented in each of the six minimum control measures

A description of any modifications to ordinances or long-term/ongoing processes implemented in accordance with the previous MS4 general permit for each of the six minimum control measures

A description of how the Permittee intends to meet the requirements Permit as described in Part 4.0 by either referencing existing program areas that already meet the Permit requirements or a description and relevant measurable goals that include, as appropriate, the year by which the Permittee will achieve required actions, including interim milestones.

If applicable indication of joint submittal of Co-Permittees and the associated responsibility in meeting requirements of the SWMP

Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations"

Signed:_____ Date:_____
Chairman Weber County Commission

# Storm Water Management Plan

## Delegation Authority

I, _____ designate the person(s) or specifically described position(s) below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the MS4 Permit. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

*Weber County Engineer*

*Gary Myers, PE*
*2380 Washington Blvd.*
*Ogden, UT 84401*
*(801) 399-8374*

*Director of Operations*

*Sean Wilkinson*
*2380 Washington Blvd.*
*Ogden, UT 84401*
*(801) 625-3850*

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in UTR090022, Section 6.8 and that the designee above meets the definition of a "duly authorized representative" as set forth in UTR090022, Section 6.8.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

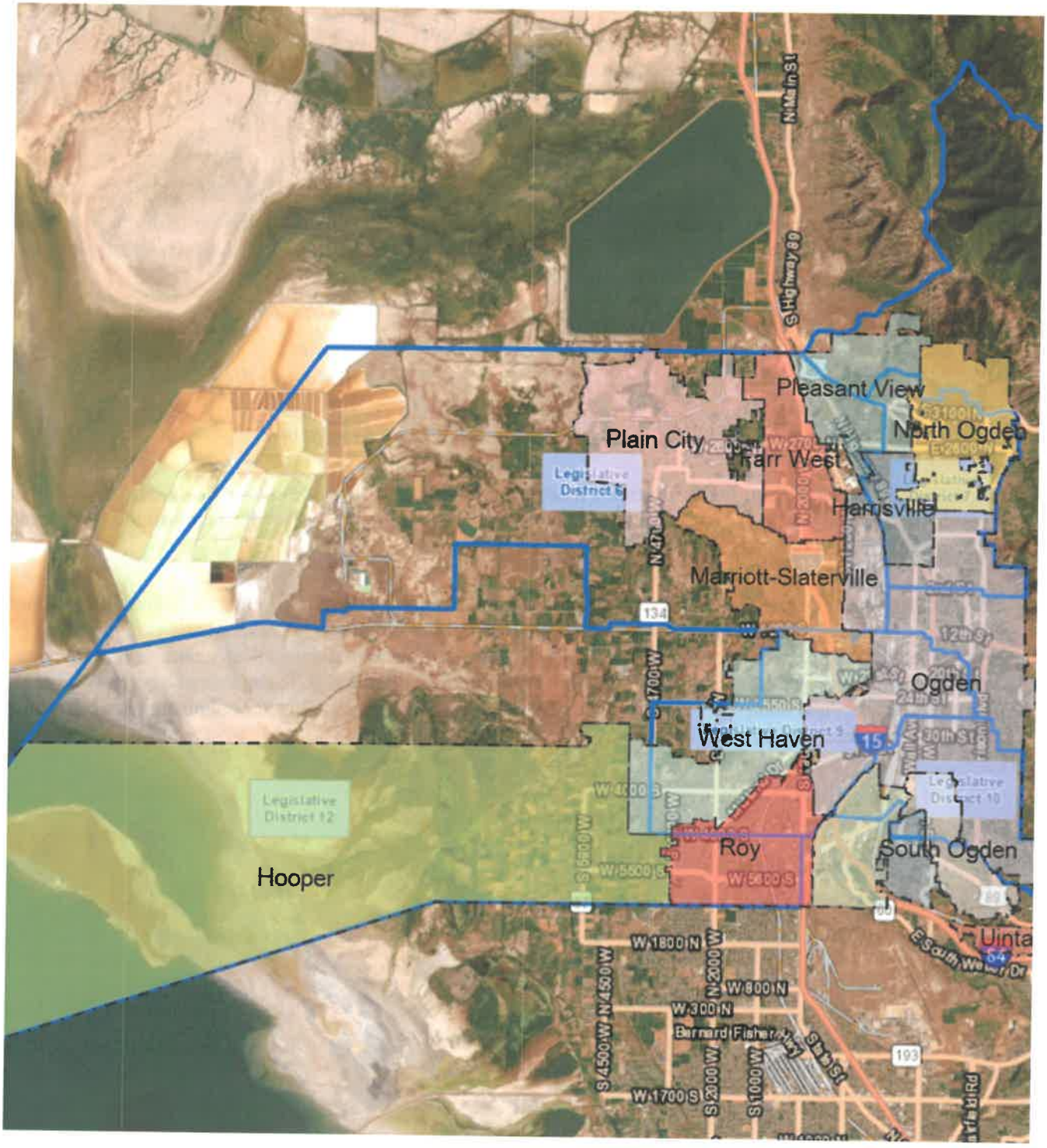
*Name:*

*Company:* *Weber County*

*Title:* *Chairman Weber County Commission*

*Signature:* _____

*Date:* _____


Pleasant View
North Ogden
Plain City
Farr West
Harrisville
Marriott-Slaterville
Ogden
West Haven
Roy
South Ogden
Hooper
Legislative District 6
Legislative District 12
Legislative District 10
S Highway 89
N Main St
W 1700 S
W 1800 N
W 300 N
W 800 N
Bernard Fisher Hwy
E South Weber Dr
12th St
24th St
30th St
Uinta
134
15
193
84
89

# Storm Water Management Plan

## General Information

### • Introduction

The Clean Water Act required that all communities within certain metropolitan areas adopt a Storm Water Management Plan by March 8, 2003 and said plan to be updated on a regular basis. Unincorporated Weber County hereinafter referred to as "County", in the Wasatch Front Metropolitan area falls under this requirement. This updated Storm Water Management Plan or SWMP plan is intended to address the requirements of the Clean Water Act for the County.

As a minimum, these requirements consist of community information, naming responsible persons, mapping, addressing six Minimum Control Measures (MCM's), establishing Best Management Practices (BMP's), measurable goals and addressing the fiscal requirements of the plan. All of these items are discussed below. This document is being developed in accordance with the Small MS4 General UPDES Permit UTR090000. Weber County has been issued permit #UTR090022.

### • Community Information

Weber County is located on the Wasatch Front of the Rocky Mountains in the north part of the State of Utah. The Unincorporated areas of Weber County mainly include the western and the eastern portions of the county. The eastern portion of the County is very mountainous, and has several water bodies, including Pineview Reservoir and Causey Reservoir. The population per the 2024 Annual Comprehensive Report is 276,118. The population of the entire county from the 2020 Census is 262,223. In 2010, the Population was 231,236. The majority of the land use in the community is agricultural with blossoming areas of residential, commercial and industrial development.

### • Responsible Persons

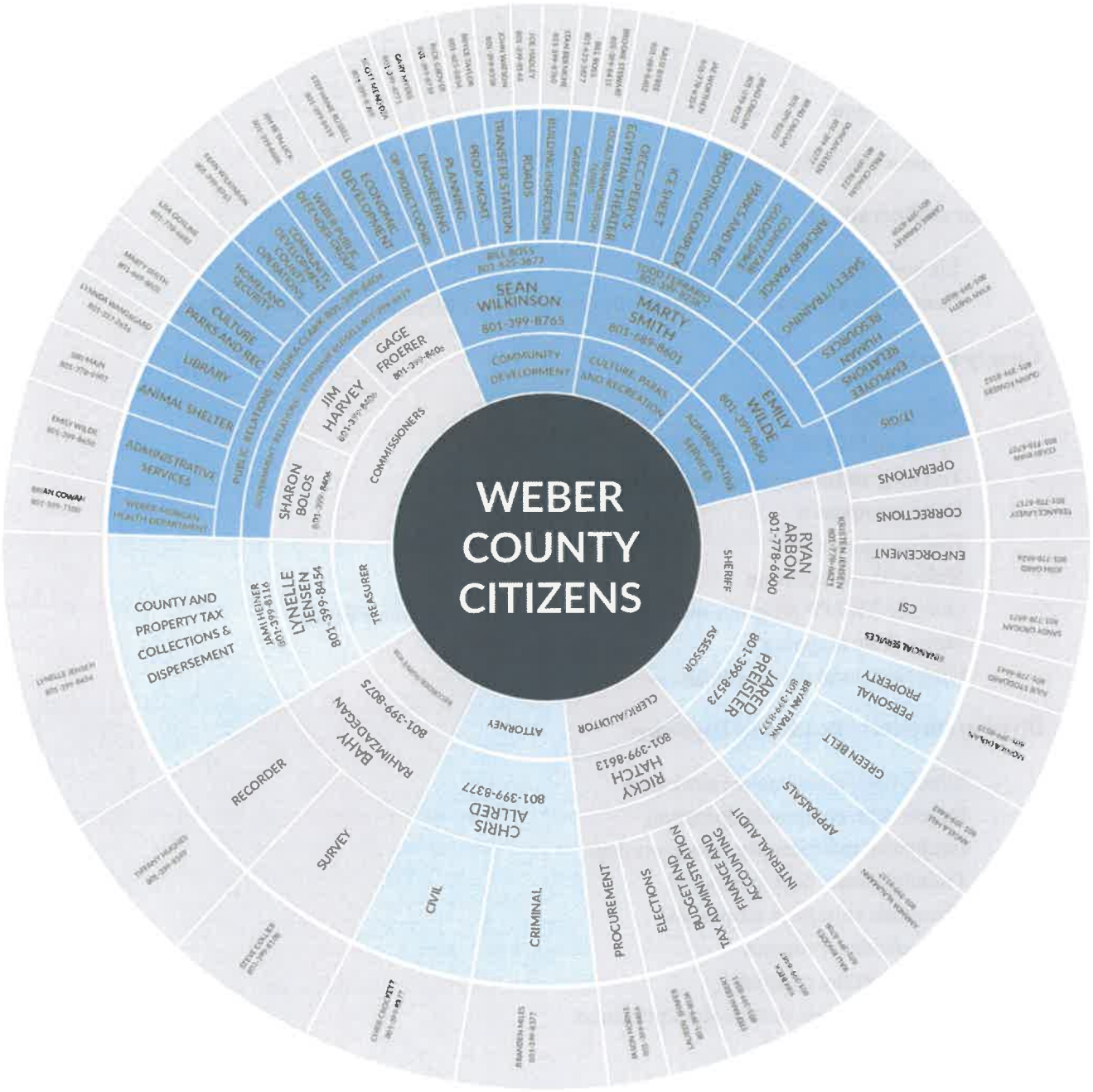
The responsible persons for the Storm Water System are the current Operations Director, and The County Engineer:

Sean Wilkinson, Operations Director
2380 Washington Blvd., Suite 250
Ogden, UT 84401 Office: (801) 625-3850

Gary Myers PE, Weber County Engineer
2380 Washington Blvd., Suite 240
Ogden, UT 84401
Office: (801) 399-8374

Please see the included Organizational Chart for additional responsibilities.

# WEBER COUNTY
## ORGANIZATION CHART




| | | |
|---|---|---|
| WEBER-MORGAN CHILDREN'S JUSTICE CENTER | SCOTT BRENKMAN | 801-778-6261 |
| NORTHERN UTAH ECONOMIC ALLIANCE | CHRIS ROYBAL | 801-455-5690 |
| USU EXTENSION | NAOMI BROWER | 801-399-8200 |
| VISIT OGDEN | SARA TOLIVER | 801-778-6250 |
| WEBER COUNTY RAMP | SHELLY HALACY | 801-399-8405 |
| WEBER HOUSING AUTHORITY | ANDI BEADLES | 801-399-8691 |
| WEBER HUMAN SERVICES | KEVIN EASTMAN | 801-625-3700 |
| WEBER AREA DISPATCH 911 | KEVIN ROSE | 801-395-8222 |

#WinninginWeber

## General Information

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**

## Organization Chart Department

**Responsibilities**

**County Commission**

- Liaison with the public

**Director of Operations**

- Liaison with County Commission
- General coordination of the Storm Water Pollution Prevention Program (SWPPP)

**County Engineer**

- Annual report
- Updating SWPPP and SWMP
- Tracking and documentation of activities and actions
- Database updates
- Engineering support
- Help with all reporting
- Oversee SWPPP program specifics and works with department heads
- Storm drain mapping
- Updating storm drain ordinances

**Division Director – Roads and Highways**

- Streets dept. maintenance work area
- Streets dept. equipment operation
- Equipment maintenance for streets dept.
- Training streets dept. personnel
- Chemicals storage in work area
- Snow plowing program
- Street sweeping program
- Salt and materials storage stockpile areas
- Metal fabrication area
- Weed control
- Responsible for shared facilities and general work areas including:
    - Large equipment wash area
    - Fueling station
    - Salt and materials storage stockpile areas
    - Storm drain system maintenance
    - General BMP maintenance
    - Small vehicle wash area

## Organization Chart Department Responsibilities

**Facility Manager**

- Mowing program
- Snow removal from parking lots and walkways around the County's Buildings

**Fleet Management**

- Fleet department maintenance work area
- Purchase fleet vehicles
- Fleet maintenance (Outsourcing where possible to 3rd party shops)

**Planning Director**

- Development Coordinator

**Parks and Recreation Manager**

- Parks Department maintenance work area
- Pesticide, Herbicide, and Fertilizer (PHF) program
- Training parks personnel
- Chemical and fertilizer storage in work area
- Parks department equipment operation and maintenance
- Mowing program

**Golden Spike Event Center Manager**

- Building Facilities
- Grounds Maintenance
- Chemical Storage
- Equipment operation and maintenance
- Training personnel
- Salt pile storage

**Weber County Sheriff Facility Manager**

- Weber County Sheriff's 12th Street Complex
- Kiesel Facility
- Animal Shelter
- Monte Trailhead Office

**Ice Sheet Director**

- Building Maintenance
- Grounds Maintenance

## General Information

### • Storm Water Mapping

Included with this Plan, in Appendix G, are maps showing the storm drain system of the County. Discharges from the County are indicated. This is an electronic Geographic Information System (GIS) map assembled to show our existing Storm Drain Infrastructure for the unincorporated west area of the County as well as the unincorporated area around Pineview Reservoir outside of Huntsville and Ogden Valley City.

### • Priorities and Concerns

There have been pollutants of concern added to the different Minimum Control Measures. Please refer to the MCMs to view the concerns for each different area.

### • Impaired Waters

Impaired Waters is listed in the Draft 2024 Integrated Report prepared by the Utah Department of Water Quality including:

North and Middle Fork Ogden River: TMDL Needed for dissolved oxygen

South Fork Ogden River: TMDL Needed for nutrient/eutrophication biological

Pineview Reservoir – Required TMDL: E.coli, Harmful Algal Blooms, Temperature Approved TMDL: Dissolved Oxygen, pH, Phosphorus

Weber River and tributaries from the Great Salt Lake to the Slaterville Diversion-Required TMDL: Benthic Invertebrate Assessment

During 2026-2027 these locations will be reviewed for possible pollution contributing activities. The updated 2026 integrated report will be reviewed and the list updated as necessary.

### • Shared Responsibilities

The County in association with the member cities of the Golden Spike Storm Water Advisory Coalition are in progress with entering into new inter-local agreements. The County participates in the Golden Spike Storm Water Advisory Coalition working together the member cities with parts of various Minimum Control Measures.

### • Minimum Control Measures (MCM's)

The Phase II Rule of the Clean Water Act defines a small municipal separate storm sewer system (MS4s) storm water management program (SWMP), as a program comprising six elements that are expected to result in significant reductions of pollutants discharged into receiving water bodies within the State of Utah. The six MS4 program elements, termed "minimum control measures," are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/ Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)
6. Pollution Prevention and Good House Keeping for Municipal Operations

They are discussed in the order given with the measurable goals, implementation schedule, and responsible parties for each BMP.

## General Information

- The measurable goals are mandated by the EPA. A community must show improvement over time with these goals. The Implementation Schedule is also included in MCM sections, with the timetable for when the goals are scheduled to be reached. Responsible party is the person or department of the County that will properly administer the BMPs. The tables in each section briefly discusses the County's plan to meet these goals. Best Management Practices (BMPs) gives the details for the goals and provides information for staff and the public to implement these practices.

## • Appendices

This Storm Water Management Plan includes several appendices, which are as follows.

Appendix A – Supplemental Guide for Contractors (BMP's)

Appendix B – Supplemental Guide for Public Works (SOP's)

Appendix C – IDDE Program

Appendix D – Documentation

Appendix E – Ordinances

Appendix F – State/County Permits

Appendix G – Storm Sewer Maps

Additional Information

## *Public Education and Outreach on Storm Water Impacts*

# Public Education and Outreach on Storm Water Impacts

## Minimum Control Measure 1

### 1.1 Introduction

The County is committed to utilizing a multimedia approach to public education and outreach of these major audiences: (1) residents, (2) institutions, industrial, and commercial facilities, (3) engineers, construction contractors, developers, development review staff and land use planners. We participate with the member cities of the Golden Spike Storm Water Advisory Coalition to meet the requirements of the Public Education and Outreach MCMs.

The pollutants that have the potential to impact the beneficial use of receiving waters are petroleum products, nutrients and phosphorous, animal waste and sediment. These pollutants are present in all land uses of the County in various degrees and forms.

Residents

The Engineering website hosts fact sheets for various activities that educate the general public on ways to reduce and prevent pollution of stormwater.

Weber County also participates in the Weber County Annual Storm Water Fair put on for 5$^{th}$ grade elementary classes within the County to educate youth about preventing stormwater pollution.

Institutions, Industrial, and Commercial facilities

There are many, diverse institutional, industrial and commercial facilities within the unincorporated area of Weber County. The major facilities that have been identified are the schools, ski resorts, Weber Industrial Park and the commercial area around 9350 West. The messages to each will need to be tailored to their own potential pollutants and activities.

Developers, Contractors, Engineers and Planners

Weber County has hosted an annual contractors training in collaboration with Davis and Golden Spike Storm water Coalitions in regards to the construction general permit or CGP.

Weber County is also committed to participate in paying it proportional share as a coalition member in media and public relations, publications and advertisements, and school outreach programs. The County willingly responds to concerns from local city officials and relevant public committee recommendations.

### 1.2 Measurable Goals, Schedule and Responsible Party

Please refer to the tables in this section which summarize the BMP's, Measurable Goals, and Implementation Schedule for each BMP.

### 1.3 Best Management Practices (BMP)

Included in Appendix B are the fact sheets that are referenced from the measurable MCM Outreach goals. There is an updated and expanded set of BMPs listed on the Weber County Engineering website.

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Responible Person | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 1 | Trash, yard waste, chemicals | Residents and Businesses | 4.2.1.1 To educate audiences about impacts from storm water discharge | Ads run at theaters<br>Golden Spike Storm Water Advisory Coalition uses a website, Facebook and Instagram to share information | Annually | Engineering | Ads continue to run<br>Attendance at Coalition meetings |
| 1 | Trash, yard waste, chemicals, erosion | Residents (4th graders) | 4.2.1.1 To educate audiences on ways to avoid, minimize, and reduce impacts of storm water discharge | Continue to participate in the annual storm water fair. | Annually | Engineering | Fair occurs annually<br>Coordinate and volunteer at the Fair |
| 1 | See list in "desired result" column | General Public | 4.2.1.2 Information is provided to target audiences on prohibitions against illicit discharge and improper disposal of waste including: maintenance of septic systems; effects of outdoor activities, such as lawn care; benefits of on-site infiltration of storm water; effects of automotive work and car washing on water quality; proper disposal of swimming pool water; and property management of pet wastes or any other relevant topic. | Include information on the website | Ongoing | Engineering | Information is current on website |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Responsible Person | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 1 | See list in "desired result" column | Institutions, Industrial and Commercial | 4.2.1.3.1 Information is provided to target audiences on proper lawn maintenance, benefits of onsite infiltration storm water, building and equipment maintenance, use of salt or deicing materials, proper storage of materials, proper waste management, proper parking lot maintenance, and any other relevant topics | Include information on the website. | Annually | Engineering | Information is current on website |
| 1 | Construction pollution | Developers, Contractors, Engineers, and Planners | 4.2.1.4 Provide and document education and outreach given concerning development of SWPPPs and BMP use | Information on SWPPP and BMPs distributed via SWCAP as needed | Annually | Engineering | Information distributed on a project basis |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Responsible Person | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 2 | All pollutants | General public | 4.2.2.1 Have a program or policy in place that allows for the public to provide input | Coalition is open to stakeholders and general public | Ongoing | Engineering/IT | Meetings occur monthly |
| 2 | All pollutants | General public | 4.2.2.2 Have SWMP document available for public review | Have a copy of the draft of the SWMP available at the Engineering office | Ongoing | Engineering/IT | SWMP document is available for public review and feedback |
| 2 | All pollutants | General public | 4.2.2.3 Have SWMP document available to the public at all times | Post the SWMP on the website | Ongoing | Engineering/IT | SWMP is updated and posted on the website |

# Public Involvement and Participation

## Minimum Control Measure 2

### 2.1 Introduction

The County is committed to meet the requirements of Public Involvement and Participation MCM. The County is an active member of the Golden Spike Storm Water Advisory Coalition (GSSWC) a group of representatives from cities throughout Weber and Box Elder Counties serving as an advisory committee for public involvement and participation for addressing storm water issues.

### 2.2 Program to involve public input

The Storm Water Management Program will be drafted with best practices and in conjunction with other municipalities. Once the draft is prepared it is placed on the County website for public review and input. Input is allowed through the website, email, in person, and by attendance at the GSSWC. The SWMP along with the opportunity to comment through the website will be available throughout the life of the permit.

# Illicit Discharge Detection and Elimination

## Minimum Control Measure 3

### 3.1 Introduction

In addition to the County's own requirements regarding Illicit Discharge Detection and Elimination, the County is an active member of the Golden Spike Storm Water Coalition previously known on as the Weber County Storm Water Coalition. The Coalition is made up of representatives from the Cities of Weber and Box Elder Counties and as well as representatives from the Weber-Morgan Health Department, all of who together serve as a storm water advisory committee for public participation addressing storm water issues in the communities and Un-incorporated areas represented.

### 3.2 Measurable Goals, Schedule and Responsible Party

Please refer to the tables in this section which summarize the BMP's, Measurable Goals, Implementation Schedule and Responsible Party for each BMP.

### 3.3 Best Management Practices (BMP)

The following pages consist of the BMP's for the County. Each page represents a separate BMP with details given. The intent of this section is to provide a variety of practices that could be related to Illicit Discharge Detection and Elimination.

### 3.4 Storm Water System Mapping

Included in Appendix B are the fact sheets that are referenced from the Measurable Goals. There are also other BMPs listed on the Weber County Engineering website that include other possible BMPs for various applications.

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Responsible Person | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 3 | N/A | Engineering, Public Works, Spills Response | 4.2.3.1 Maintain Storm Water Map | Maintain SD System Map | Ongoing | Eng/IT | Editable GIS SD map is online |
| 3 | All Pollutants | All Audiences | 4.2.3.2 Prohibit through ordinance non-SW discharges | Review and update the ordinance to conform with new permit | Annually | Eng/Legal | Review ordinance 40-2 if it meets the permit requirements |
| 3 | " | " | 4.2.3.3.1 Priority area identification | Review and update the priority areas documentation | Annually | Eng/WMHD | |
| 3 | " | " | 4.2.3.3.2 Inspection of priority areas | Field inspection of priority areas with documentation | Annually | Eng/WMHD | |
| 3 | " | " | 4.2.3.3.3 Dry weather screening | 20% of all system outfalls each year | Annual report | Eng/WMHD | Successful if screenings are completed |
| 3 | Household Hazardous Waste | Residents | 4.2.3.3.5. Promote or provide services for the collection of HHW | Transfer Station Address and Phone number is on County Web Site | Completed | Eng/IT | Successful |
| 3 | Household Hazardous Waste | Residents | 4.2.3.3.6. Publicly list and promote phone number for spills or illicit discharges | Health Department Phone number is on County Web Site | Completed | Eng/IT | Successful |
| 3 | All Pollutants | All Audiences | 4.2.3.4.1. Develop and implement standard operating procedures for tracing the source of illicit discharge | SOP in place and training to Staff | Annually | Eng | SOP in place and training being held |
| 3 | All Pollutants | All Audiences | 4.2.3.4.2. Develop and implement standard operating procedures for characterizing illicit discharge | SOP in place and training to Staff | Annually | Eng | SOP in place and training being held |
| 3 | All Pollutants | All Audiences | 4.2.3.4.3. Develop and implement standard operating procedures for ceasing illicit discharge | SOP in place and training to Staff | Annually | Eng | SOP in place and training being held |
| 3 | All Pollutants | All Audiences | 4.2.3.4.4. Develop and implement SOP for spill and improper disposal response | SOP in place and training to Staff | Annually | Eng | SOP in place and training being held |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Measurable Goals**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | All Pollutants | All Audiences | 4.2.3.4.5. Develop and implement SOP for program evaluation and assessment | SOP in place and training to Staff | Annually | Eng | SOP in place and training being held |
| 3 | All Pollutants | MS4 Staff | 4.2.3.6 Train staff regarding receiving phone calls, coming into contract with or observing illicit non-storm discharge | Provide and document the training | Annually | Eng | Successful if completed by that date and staff is following SOP |
| 3 | All Pollutants | MS4 Staff | 4.2.3.6.3. Keep and maintain new hire date, names, activities and course descriptions | Provide and document the training | Annually | Eng | Successful if training is complete |

# Construction Site Storm Water Runoff Control

## Minimum Control Measure 4

## 4.1 Introduction

The County has established a Stormwater Construction Activity Permit for construction sites over 5,000 square feet of disturbance and or in moving in excess of 200 cubic yards of material.

Through building permits, subdivision applications and excavation permits the County is able to coordinate that construction sites meet the requirements of the Construction General Permit as well as the MS4 Permits.

## 4.2 Pollutants of Concern

Sediment in stormwater is the primary pollutant of concern during construction. Other pollutants including heavy metals, nutrients, and additional toxics (construction materials and chemicals) however, are also often found in runoff waters from construction sites. The following pollutants of concern are associated with construction site activity along with their impacts to receiving waters.

Sediment

Soil erosion is the process by which soil particles are removed from the land surface by wind, water, or gravity. Water erosion is the primary mechanism for the transport of sediment into storm runoff and receiving waters. Vegetation protects soil from erosion by intercepting and absorbing rainfall, and by binding soil together with their root structure. When trees and brush are removed, soil is exposed and is easily transported off site, resulting in increased sediment migration. Natural depressions and hills which temporarily pond water are often removed by grading activities; rainfall then runs off the area, taking with it soil particles. Runoff from areas which have been cleared and grubbed typically result in higher volumes of runoff flowing faster and carrying sediments.

Excessive sediment in water can cause increased turbidity and reduced light penetration, resulting in impaired vision for aquatic life, clogging of fish gills, and a reduction in aesthetic values. In addition, other substances including but not limited to: nutrients, heavy metals, and hydrocarbons tend to attach to sediment and in turn are transported with the sediments.

Nutrients

Nutrients like nitrogen and phosphorus from: soil disturbance, fertilizers, pesticides, construction chemicals, and solid waste are often generated at construction sites. Excessive discharge into waterways may result in algae growth which can cause odor problems and reduce the dissolved oxygen available to fish and other aquatic life.

Construction Site Storm Water Runoff Control

Oils and Greases

Oil and grease contain a wide array of hydrocarbon compounds, some of which are toxic to fish and other aquatic life at very low concentrations. The main sources of oil and grease during construction activities are leakage from engines, spills at fueling stations, overfilled tanks, and waste oil disposal.

Other Toxic Chemicals

Construction of buildings and roads may require toxic or hazardous materials such as pesticides, herbicides, petroleum products, and building materials such as asphalt, sealants and concrete which may pollute stormwater running off the construction site. These types of pollutants often contain small amounts of metals and other toxic materials which may be harmful to humans, plants, and fish in streams.

Miscellaneous Wastes

Miscellaneous wastes include wash water from car washing, concrete mixing, paints and painting equipment cleaning activities, solid wastes resulting from trees and shrubs removed during land clearing, wood and paper materials derived from packaging of building products, food containers such as paper, aluminum, and metal cans, and sanitary wastes. The discharge of these can lead to unsightly, smelly polluted waterways.

## 4.3 Measurable Goals, Schedule and Responsible Party

Please refer to the tables in this section which summarize the BMP's, Measurable Goals, Implementation Schedule for each BMP.

## 4.4 Best Management Practices (BMP)

Included in Appendix B are the fact sheets that are referenced from the Measurable Goals.

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Resp. Party | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.1 Regulatory mechanism to require erosion and sediment control on const. sites including SWPPP & NOI | Require a SWPPP & NOI for every construction site as required by UPDES | Ongoing | Eng. | Successful if all new construction sites have a NOI |
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.2 Develop a written enforcement strategy and implement the enforcement provisions of the ordinance or other regulatory mechanism | Review and update ordinance to include escalating enforcement provisions | Ongoing | Eng. | Successful |
| 4 | " | " | 4.2.4.2.2 Documentation and tracking of all enforcement actions | Construction inspections are logged in ComplianceGo | Ongoing | Eng. | Successful |
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.3 Develop and implement a checklist for pre-construction SWPPP review for construction sites | Utilize checklist for pre-construction reviews of SWPPP | Ongoing | Eng. | Successful |
| 4 | " | " | 4.2.4.3.1 Conduct a pre-construction meeting | Hold Pre-con meetings on all sites greater than 1 acre | Ongoing | Eng. | Successful |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Resp. Party | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 4 | " | " | 4.2.4.3.3 Identify the priority construction sites | Rank the construction sites during SWPPP review | Ongoing | Eng. | Integrate the rating process with SWPPP review |
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.4.2 Inspections of all new qualifying construction sites ... at least monthly by qualified personnel | Conduct applicable inspections of new construction sites | Ongoing | Eng. | Successful if all new construction sites are inspected monthly |
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.4 Inspections of all new construction sites ... by qualified personnel, document inspections and follow-up as necessary | Conduct applicable inspections of construction sites | Ongoing | Eng. | Successful if all new construction sites are inspected monthly |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | Sediment, Construction Site Debris, Hydrocarbons | Contractors and Developers | 4.2.4.4.3. Inspections of all priority construction sites ... at least monthly by qualified personnel, document inspections and follow-up as necessary | Conduct monthly inspections of priority construction sites | Ongoing | CCIT | Successful if all new construction sites are inspected monthly |
| 4 | " | Contractors, developers and MS4 staff | 4.2.4.5 Provide training to construction inspection staff | Annual training completed | Annual | CCIT | Successful |

*Long-Term Storm Water Management in New Development and Redevelopment*
*(Post-Construction Storm Water Management)*

# Minimum Control Measure 5

## 5.1 Introduction

The County includes in its Best Management Practice list Post Construction practices for construction sites. The County is an active member of the Golden Spike Storm Water Coalition a county-wide storm water advisory committee for public participation and for addressing storm water issues. The County is otherwise limited to enforcement of such to the unincorporated areas of the county.

This section is similar to MCM 6 – Pollution Prevention/Good Housekeeping, except that this section applies more to Redevelopment and Long Term Operation and Maintenance. MCM 6 applies more to preventing pollution in areas other than maintenance.

## 5.2 Pollutants of Concern

Because of the many different types of residential, commercial and construction activities, there can be a wide variety of pollutants that make it into stormwater runoff. Even different facilities of the same industry may need different approaches to reducing pollutant discharges to stormwater. Therefore, it is imperative that the owner/operator of each facility understand the potential pollutants and impacts from their individual processes. This chapter will only discuss the most typical pollutants found in industrial stormwater runoff.

Solids, nutrients, metals, oxygen demanding substances, bacteria and viruses, and oil and grease are the pollutants most frequently associated with stormwater runoff. These pollutants are discussed in the following subsection.

Solids

Solids (often referred to as total or suspended solids) can cause many receiving water problems. First, it can cause direct toxicity to aquatic organisms, through such mechanisms as fouling of gills, suffocation, etc. Second, high solids concentrations can reduce water clarity. Third, solids act as a vehicle to transport other pollutants. Excessive solids are often the result of poor construction practices at the industrial site.

Nutrients

Excessive nutrients such as nitrogen and phosphorus in the receiving water can cause problems by stimulating the growth of algae or rooted aquatic plants. Excessive plant growth can cause dissolved oxygen problems, reduce biologic diversity, worsen aesthetics, or impair use for water supply. Some industrial activities typically associated with nutrients include fertilizer/pesticide manufacturing and distribution, waste treatment, and food processing.

Metals

Metals, especially "heavy" metals can be toxic at very low concentrations. Metals can also bio accumulate in fish and other species and be passed on to higher levels of the food chain, including humans. Certain metals including cadmium, copper, lead, silver, and zinc are the most common metals which contaminate waterways. Industrial activities which commonly deal with metals include mining, electroplating, cement, battery production, and metal recycling.



Oxygen-Demanding Substances

Oxygen-demanding substances tend to deplete the dissolved oxygen levels in streams and lakes. The depleted oxygen supply can result in loss of aquatic life. Oxygen demanding substances are commonly found in food processing industries and chemical manufacturing plants.

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. Food processing and medical wastes are often associated with microbiological contamination.

Oil and Grease
Oil and grease contain a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Industrial sources of oil and grease are generally associated with automobile related industries such as: repair shops, body and paint shops, retail distribution, and dismantlers/recyclers.

Floatables
Trash and litter from industrial sites may contain amounts of pollutants which will affect stormwater quality. Floatables in waterways and drainage systems pose both aesthetic and maintenance problems.

Other Toxic Materials (Priority Pollutants)
Facilities may contribute other toxic materials to storm water in low concentrations. Pesticides, phenols and polynuclear or polycyclic aromatic hydrocarbons (PAHs) are most frequently found in stormwater discharges associated with industrial operations.

## 5.3 Measurable Goals, Schedule and Responsible Party

The following table summarizes the BMPs, Measurable Goals, Implementation Schedule, and Fiscal ability of the County for each BMP.

## 5.4 Best Management Practices (BMP)

Included in Appendix B are the fact sheets that are referenced from the measurable-goals. There are also new and updated BMPs being added to the Weber County Engineering website that include BMPs for Low Impact and Greenscape Development, as well as the onsite retention of the 80 percentile storm and other various BMP applications.

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Resp. Party | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 5 | All Pollutants | All Audiences | 4.2.5.1. Develop and adopt requirements or standards that ensures long-term post-construction storm water controls at new development and redevelopment sites will prevent or minimize impacts to water quality. | Annually review existing ordinance to determine if it meets requirements | Ongoing | Eng. | Successful |
| 5 | " | " | 4.2.5.1.2 Retention Requirement: Develop hydrologic methods | Update ordinance as necessary for ongoing improvements | Ongoing | Eng. | Successful |
| 5 | " | " | 4.2.5.1.3 LID Requirement: Require evaluation of LID approach to promote implementation of BMPs that infiltrate, evapotranspire, or harvest storm water | Develop evaluation process, select minimum of five accepted LID practices | Ongoing | Eng. | Successful |
| 5 | " | " | 4.2.5.1.4 Feasibility: Require evaluation of LID feasibility | Evaluate each development | Ongoing | Eng. | Successful |
| 5 | " | " | 4.2.5.2. Regulatory mechanism for post-construction controls | Review ordinance to verify enforcement strategy | Ongoing | Eng. | |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5 | " | MS4 Staff | 4.2.5.2.2. Post-Construction Access | Review ordinance to verify accessibility | Ongoing | IPL | Successful |
| 5 | " | MS4 Staff | 4.2.5.2.3. Maintenance agreements | Incorporate maintenance agreements with private facilities | Ongoing | IPL | Successful |
| 5 | " | MS4 Staff | 4.2.5.3. Plan Review SOP | Review and update SOP & Incorporate into development review process | Ongoing | IPL | Successful |
| 5 | " | MS4 Staff | 4.2.5.4. Post-construction inspections | Review and update SOP & Inspect controls & maintenance | Ongoing | IPL | Successful |
| 5 | " | MS4 Staff | 4.2.5.5. The Permittee shall maintain an inventory of post-construction structural storm water control measures. | Incorporate into GIS | Ongoing | IPL | Successful |
| 5 | " | MS4 staff | 4.2.5.6. Permittees shall provide adequate training for all staff involved in post-construction storm water management, planning and review, and inspections and enforcement. | Schedule and conduct training for appropriate personnel | Annually | BMPIM | If all appropriate personnel are trained |

*Pollution Prevention/Good House Keeping*

*For Municipal Operations*

# Pollution Prevention and Good House Keeping for Municipal Operations

## Minimum Control Measure 6

## 6.1 Introduction

The County includes in its Standard Operating Procedures for all of the county facilities for pollution prevention and good housekeeping. The County is an active member of the Golden Spike Storm Water Advisory Coalition a multi-county storm water advisory committee for public participation and for addressing storm water issues.

MCM 6 applies to preventing pollution in areas other than construction areas and establishing good techniques for Public Works maintenance activities.

## 6.2 Pollutants of Concern

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 6-1). 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 is presented in the following subsections.

Sediment

Sediment is a common component of stormwater, and is considered to be one of the most damaging pollutants in Utah. Sediment fills in streams, lakes, rivers, wetlands, and road 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 water, impairs sight of feeding fish, clogs fish gills, 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, atmospheric deposition, and road maintenance. Other sources of sediment include erosion from new development and construction sites.

Nutrients

Nutrients, especially nitrogen and phosphorus, can cause algal blooms and excessive aquatic plant growth in lakes. These conditions can impair many important uses of these waters, including recreation, fish habitat, and water supply.

Nitrogen and phosphorus associated with highway runoff come from atmospheric deposition and roadside fertilizer application. Phosphorus has also been associated with application of sand and salt on roads. Nutrients are a result of yard debris, garbage, as well as fertilizer and pesticide use.

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, and copper. These metals originate from galvanizing, chrome plating, and other metal sources associated with automobiles. Lead, cadmium, nickel and zinc in urban runoff have also been associated with different sources including body rust, brake lining wear, steel highway structures, and tire wear from automobiles.

# Pollution Prevention and Good House Keeping for Municipal Operations

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.

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.

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, restaurant grease traps, 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.

Floatables

Floatables 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 aesthetic "eye sore" in waterways or detention basins.

*Table 6-1.* Potential pollutants of concern associated with municipal activities.

| Activity | Pollutant | Potential Source |
|---|---|---|
| **Construction** | Sediment | Poor erosion control practices on hillsides, undeveloped property, right-of-way for construction sites |
| **Residential and Parks** | Nutrients | Yard debris, garbage, fertilizer and pesticide use, rat poison, pyrotechnics |
| **Transportation and** | Metals | Paint, plastics, pottery pigments and glazes, automobile tires, common galvanized coatings, pesticide use, root killer application on sewer lines, old lead paint an glazes, wood preservatives, batteries |
| **Residential** | Oxygen demanding Substances | Yard debris, animal wastes, organic chemical use |
| **Parks and Residential** | Bacteria and Viruses | Human and animal (pets and aquatic life) waste, sanitary sewer infiltration into storm drain system, decomposing yard waste |
| **Commercial Residential** | Oil, Grease, and Hydrocarbons | Asphalt surface leaching, spills, leaks, construction activities |
| **Residential Parks** | Floatables | Street refuse, industrial yard waste |

# Pollution Prevention and Good House Keeping for Municipal Operations

## 6.3 Measurable Goals, Schedule and Responsible Party

Please refer to the tables in this section which summarize the BMP's, Measurable Goals, Implementation Schedule for each BMP.

## 6.4 Best Management Practices (BMP)

Included in Appendix B are the fact sheets that are referenced from the measurable-goals.

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| MCM | Target | | Desired Result | Measurable Goal | Milestone Date | Resp. Party | Measure of Success (Effectiveness) |
|---|---|---|---|---|---|---|---|
| | Pollutant(s) | Audience(s) | | | | | |
| 6 | All pollutants | MS4 staff | 4.2.6 All components of an O & M program shall be included in the SWMP document and must identify the department (and where appropriate, the specific staff) responsible for performing each activity described in this section... | Complete Org chart and define specific responsibilities for all departments shown | Ongoing | Eng. | Successful |
| 6 | " | " | 4.2.6.1. Permittees shall develop and keep current a written inventory of Permittee-owned or operated facilities | Complete listing of MS4 owned/operated facilities | Ongoing | Eng. | Successful |
| 6 | " | " | 4.2.6.2. Permittees must assess the written inventory of Permittee-owned or operated facilities, operations and storm water controls identified in Part 4.2.6.1. and list the common pollutants that may originate from the sites. | Document the process and findings | Ongoing | Eng. | Assessments are completed and documentation recorded in SWMP |
| 6 | " | " | 4.2.6.3. Permittees must identify "high priority" Permittee-owned or operated facilities, operations and storm water controls identified in Part 4.2.6.2. and implement control measures and SWPPPs. | Document the process and findings to identify "high priority" facilities | Ongoing | Eng. | Assessments are completed and documentation recorded in SWMP |

**General Permit for Discharges from Small Municipal**
**Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | " | " | 4.2.6.4. Each "high priority" facility identified in Part 4.2.6.3. shall conduct monthly, semi-annual and annual inspections. | Complete and document inspections | Ongoing | Eng. | Documented inspections |
| 6 | " | " | 4.2.6.5. Each "high priority" facility identified in Part 4.2.6.3. must develop facility-specific standard operating procedures (SOPs) or similar type of documents. | Review, customize and update appropriate SOPs | Ongoing | Eng. | SOPs are updated and current by milestone date |
| 6 | " | " | 4.2.6.6. Permittees must maintain a floor drain inventory of Permittee-owned or operated facilities. | Document the process and findings | Ongoing | Eng. | Assessments are completed and documentation recorded in SWMP |
| 6 | " | " | 4.2.6.7. Permittees must ensure that that contractors performing work for Permittee are using appropriate controls, measures and practices. | Document the process and findings | Ongoing | Eng. | Documentation and inspections recorded in SWMP |
| 6 | " | " | 4.2.6.8. Permittees shall develop and implement a process to assess water quality impacts and the design of flood controls owned or operated by the Permitee. | Document the process and findings | Ongoing | Eng. | Documentation and inspections recorded in SWMP |
| 6 | " | " | 4.2.6.9. Permittees shall develop a plan to retrofit sites that are adversely impacting water quality. | Document the process and findings | Ongoing | Eng. | Documentation and inspections recorded in SWMP |

**General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**
**Measurable Goals**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | " | " | 4.2.6.10. Permittees shall require new hires and MS4 contractors with job functions that may impact storm water quality. | Document the process and findings within 60 days of hire or annually | Ongoing | Eng. | Documentation and inspections recorded in SWMP |