Clinton City
Storm Water Management Program

Revised November 2021

Storm Water Management Plan

Permittee: Clinton City MS4

Permit Number: UTR-090054

Location of MS4: Clinton City, (Davis County)

Submitted with this permit is the following:

- ☐ A map of the MS4 location
- ☐ Information Regarding the overall quality concerns, priorities, and measurable 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
- ☐ Associated SOPs implemented by the Permittee

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"

Authorized Signature Kenneth W. Cluff Date 1-25-22

Contents

ABBREVIATIONS

BMP	Best Management Practice
DEQ	Department of Environmental
Quality EPA	Environmental Protection Agency
IDDE	Illicit Discharge Detection and Elimination
LID	Low Impact Development
MS4	Municipal Separate Storm Sewer System
MSGP	Multi Sector General Permit
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PHF	Pesticides, Herbicides and Fertilizers
SOP	Standard Operating Procedures
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UPDES	Utah Pollutant Discharge Elimination System

KEY PERSONS

Clinton City Public Works Department
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INTRODUCTION

Polluted storm water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local rivers and streams without treatment. EPA's Storm Water Phase II Rule establishes an MS4 storm water management program that is intended to improve the Nation's waterways by reducing the quantity of pollutants that are introduced into storm sewer systems during storm events.

Common pollutants include oil and grease from roadways, pesticides and fertilizers from lawns, sediment from construction sites, and carelessly discarded trash, such as cigarette butts, paper wrappers, and plastic bottles.

When deposited into nearby waterways through MS4 discharges, these pollutants can impair the waterways, thereby discouraging use of the resource, contaminating drinking water supplies, and interfering with the habitat for fish, other aquatic organisms, and wildlife.

In 1990, EPA promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program to certain "small" MS4s but takes a slightly different approach to how the storm water management program is developed and implemented.

1.0 COVERAGE UNDER THIS PERMIT

1.1 Authority to Discharge

Storm Water Management Program (SWMP)

A Storm Water Management Program should:

- Reduce the discharge of pollutants to the "maximum extent practicable" (MEP);
- Protect water quality;
- Satisfy the appropriate water quality requirements of the Clean Water Act and the State of Utah General Permit for Discharges from Small Municipal Separate Storm Sewer Systems.

Storm Water Management Programs must include:

- Best Management Practices (BMPs) for each of the six minimum control measures:

    1. Public Education and Outreach on Storm Water Impacts
    2. Public Involvement /Participation
    3. Illicit Discharge Detection and Elimination (IDDE)
    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 Housekeeping for Municipal Operations

- Measurable goals for each minimum control measure (i.e., narrative or numeric standards used to gauge program effectiveness);
- Estimated months and years in which actions to implement each measure will be undertaken, including interim milestones and frequency; and
- The method for determining the success or effectiveness of each goal.
- The person or persons responsible for implementing or coordinating the storm water program.

This SWMP separately addresses the execution of the minimum control measures to limit the discharge of pollutants in the following sections. The development and implementation of this SWMP will fulfill the requirements under the State of Utah's Utah Pollutant Discharge Elimination System (UPDES) Permit No. UTR090000 Authorization to Discharge Municipal Storm Water dated March 1, 2016 in accordance with Section 1.1 authority to discharge in the UTR09000.

This document has been organized to follow the permit organization of UTR090000. The effective MS4, best management practices (BMPs), and standard operating procedures (SOPs) that Clinton City has adopted, or will be adopting, to comply with the permit requirements are listed in the following sections.

2.0 NOTICE OF INTENT AND STORM WATER MANAGEMENT PROGRAM DESCRIPTION (2.3.2.1)

Permit Number

Clinton City MS4 SWMP Permit Number (UTR090054)

PERMIT APPLICATION AND NOTICE OF INTENT

Phase II Rule encourages the development of a storm water management program by requiring a Notice of Intent (NOI) describing the storm water management program to be submitted to the NPDES permitting authority. The Notice of Intent becomes the permit application.

The Notice of Intent has been prepared in conjunction with this document and a copy has been included.

Cities required to permit under Phase II are allowed to cooperate and work together with coalitions of neighboring cities. The individual MS4s may share responsibility for program development with neighboring communities or health department and/or take advantage of existing local or state programs.

See Interlocal Agreement.

2.3.2.2 MS4 Location Description and Map (Reference)

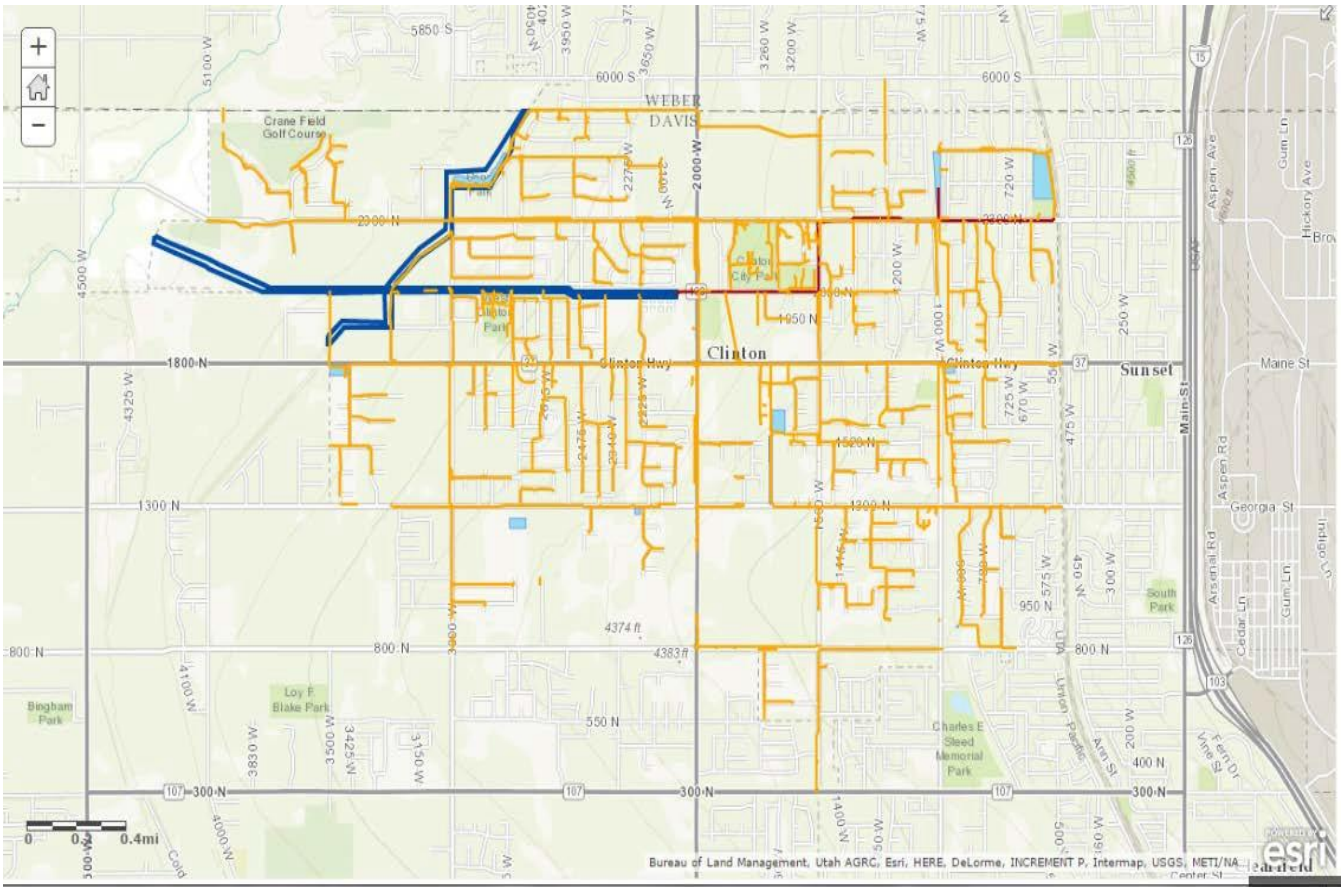

FIGURE 1-GENERAL STORM DRAIN SYSTEM MAP AS REFERENCE

CLINTON CITY CHARACTERISTICS

General Information

The Clinton City Storm Drain System falls under the Public Works Department for the City. The Collections System Supervisor can be contacted at the following address and phone number:

Mr. Kasey Jensen
2267 North 1500 West Clinton, Utah 84015
(801) 614-0870
kjensen@clintoncity.com

General Information for Clinton City

Population: 21,890

Size: 5.6 square miles

Geographic Description: Located in the I-15 corridor, south of the Davis/Weber County line in Davis County. About 9 miles southwest of Ogden, UT, and about 32 miles northwest of Salt Lake City, UT. Approximate elevation is 4,375 ft.

Receiving Waters: Howard Slough

Annual Precipitation: 19.33 Inches (Ogden Airport Data)

Type of Community: Suburban, mostly residential with some commercial business

Latitude: N 41° 8’

Longitude: W 112° 3’

The Clinton storm water system consists of curb and gutters, a few open ditches, ponds, culverts, piped sections, wet ponds, swales and canals. Most storm water facilities drain into the piped storm water system and eventually empty into the Clinton Creek and Howard Slough. The storm water all eventually ends up in the Great Salt Lake. There are several regional detention ponds built into the system. New commercial sites are required to detain storm water before releasing it. Most of the streets use curb and gutter to collect storm water runoff with the remaining using swales and ditches.

Local Water Quality Concerns

The water quality within the City of Clinton is relatively good. None of the streams or waterways have been identified as protected or impaired under Section 303(d) of the Clean Water Act. The hope and intent of this Storm Water Management program (SWMP) is to maintain that status and possibly even improve the current water quality.

The storm water in Clinton City drains to a piped collection system where it is transported to Clinton Creek, passing through settling ponds and into Howard Slough and eventually the Great Salt Lake.

The existing system works well. Continued growth is expected but the system has been designed and planned for this growth.

Stormwater Committee

A stormwater committee is used for the purpose of addressing the above-mentioned water quality items and consider options to develop a storm water management program. The steering committee includes:

Name	Representing
Valerie Claussen	Clinton Community Development Director
Dave Williams	Clinton Public Works Director
Kasey Jensen	Clinton City Collection System Supervisor
John Wyan	Clinton City Storm Water Inspector
Bryce Wilcox	J-U-B Engineers
Public Input	Public

Input and recommendations from this committee were used to develop this Storm Water Management Program (SWMP). Their countless hours devoted to this task are greatly appreciated and are reflected in this program.

Mission Statement

The Stormwater Committee reaffirmed the mission statement that can be utilized in directing and shaping the Storm Water Management Program:

> *"Our mission is to improve the quality of water in the Great Salt Lake and enhance wildlife habitat downstream of Clinton city by improving the quality of storm water discharge."*

As discussion was held trying to understand the nature of the problems and how to accomplish the mission statement, several potential pollutants were identified and discussed.

We reviewed information and studies performed in the Salt Lake Area which identified the biggest pollutants as:

- Total Suspended Solids
- Total Phosphorus
- BOD5
- Metals

Information reviewed from the Logan area identified the biggest pollutants as:

- Copper
- Phosphorus
- E. coli
- TDS

As discussion continued and with no sampling on our own system we determined these to be target pollutants, pollutants that the community could and should try to actively reduce. These pollutants include:

- Chemicals and other toxins (chlorides)
- Oil and grease (hydrocarbons)
- BOD5
- TSS (sediment)
- Phosphorus (nutrients)
- Pathogens (bacteria)
- Trash (debris, litter)
- Heavy metals

Pollutant	Source	Impacts
Sediment	Construction sites, vehicle/boat washing, agricultural sites, erosion	Destruction of aquatic habitat for fish and plants, transportation of attached oils, nutrients and other chemical contamination, increased flooding. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.
Nutrients (Phosphorus, Nitrogen Potassium, Ammonia)	Fertilizers from agricultural operations, lawns and gardens; livestock and pet waste, decaying vegetation, 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.
Hydrocarbons (Petroleum Products, Benzene, Toluene, Ethyl benzene, Xylene)	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.

Pollutant	Source	Impacts
Heavy Metals	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 storm water. Metals are of concern because they are toxic to all life at very low levels. Carcinogenic. Teratogenic
Toxic Chemicals (Chlorides)	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.
Debris/Litter/Trash	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.
Pathogens (Bacteria)	Livestock, human, and pet waste, sewer overflows and leaks, septic systems	Human health risks due to disease and toxic contamination of aquatic life.

A major portion of these identified pollutants stem from the people in the community. It was determined that the first and most important thing that needs to be done is educate the people. Being primarily a residential community with a little commercial and industrial development, most of the water quality problems lie with the individual residents and from construction sites. This program has been developed with a heavy emphasis on education and public involvement. It is anticipated that the effectiveness and participation levels in various programs will be greatly enhanced if the public is first made aware of the problems being faced.

The emphasis should be on the positive aspects of our community. Programs and education materials should give ideas of what people can do, not give long lists of things they can't do

Permit Requirements (2.3.2.4)

The chosen measurable goals, submitted in the Notice of Intent as a permit application, become the required storm water management program; however, the NPDES permitting authority can require changes in the mix of chosen BMPs and measurable goals if all or some of them are found to be inconsistent with the provisions of the Phase II Final Rule. Likewise, the permittee can change its mix of BMPs if it determines that the program is not effective as it could be.

Reports

Reports must be submitted annually. The reports must include:

- The status of compliance with permit conditions, including an assessment of the appropriateness of the selected BMPs and progress toward achieving the selected measurable goals for each minimum measure.
- Results of any information collected and analyzed, including monitoring data if any.
- A summary of the storm water activities planned for the next reporting cycle.
- A change in any identified BMP or measurable goals for any minimum measure; and

- Notice of relying on another governmental entity to satisfy some of the permit obligations (if applicable).

Record Keeping

Records required by the NPDES permitting authority must be kept for at least 5 years and made accessible to the public at reasonable times during regular business hours. Records need not be submitted to the NPDES permitting authority unless the permitee is requested to do so.

Deadlines

The current UPDES permit became effective on May 12, 2021. This permit requires that all MS4s have an updated SWMP submitted to the State of Utah by November 8, 2021. The permit further requires that each MS4 conduct an annual review of the SWMP and to reevaluate its effectiveness at least annually.

Penalties

The UPDES permit that the operator of a regulated small MS4 is required to obtain is enforceable at both the State level and at the federal level thus subjecting the permitee to potential enforcement actions and penalties by both the UPDES and NPDES permitting authorities if the permittee does not fully comply with application or permit requirements.

Modifications to City Ordinances (2.3.2.5)

This SWMP introduces several plans for the modification of City ordinances specifically, Title 21 Storm Drain Utility, and will be revised to fulfill permit requirements set forth by this SWMP.

Ordinances to address required items, including enforcement, Post Construction BMPs, New BMPs, IDDE, Low Impact Development, etc., are currently in process of development and some revision. In addition, proposals are being sent to city council and city management for approval. All new and or revised ordinances will be updated and documented within the Clinton City SWMP in the designated section. Older records will be kept in the designated appendix. *(See Goals section as reference for continual development of needed city ordinances.)*

Modified, updated, and new City ordinances are to be placed here, along with explanation, rational, and supporting documentation upon completion and approval.

Meeting the Requirements (2.3.2.6)

The description of how the Clinton City MS4 intends to meet these requirements are outlined and described with specific detail in section 4. See Section 4 (MCMs) as reference

DISCHARGES TO WATER QUALITY IMPAIRED WATERS (3.1)

Impaired Body Determination

According to the most recent 303 (d) lists, Clinton City does not specifically discharge into any impaired waters.

See Current Water Quality Report as sited Reference

http://www.deq.utah.gov/ProgramsServices/programs/water/wqmanagement/assessment/currentIR2016.htm

The following link provides information regarding the defined Beneficial Uses and Water Quality within Utah. https://surface-water-quality.ugrc.utah.gov/

Nitrogen and Phosphorus Reduction (3.2)

Nitrogen and Phosphorus Impacts (3.2.1)

Clinton City MS4 is currently working directly with the Davis County Storm Water Coalition as part of an inter local agreement aimed at collecting data and sampling analysis from the county to attribute information to a comprehensive plan. This plan is intended to enhance the efforts of the Clinton City MS4, as well as all other Davis County MS4s.

A subcommittee has been developed to begin addressing all related issues and bring before the main body, to approve needed implementation stages and help approval of Coalition funds that may be used.

The Clinton City MS4 has specifically collected samples from wet ponds from previous years to be added to address section 3.2.1 and to share with the County Coalition in a multi-faceted effort to reduce nitrogen (nutrients). See section 4 MCMs as reference to future goals on nitrogen and phosphorus reduction.

Collaborative Programs (3.2.1.1)

Clinton City MS4 participates and works directly with the Davis County Storm Water Coalition as a regional collaborative program.

Identifying Target Sources (3.2.1.2)

Clinton City MS4 is currently working directly with the Davis County Storm Water Coalition as part of an inter local agreement aimed at collecting data and sampling analysis from the county to attribute information to a comprehensive plan. This plan is intended to enhance the efforts of the Clinton City MS4, as well as all other Davis County MS4s.

A subcommittee has been developed to begin addressing all related issues and bring before the main body, so as to approve needed implementation stages and help approval of Coalition funds that may be used.

The Clinton City MS4 has specifically collected samples from wet ponds from previous years to be added to address section 3.2.1 and to share with the County Coalition in a multi-faceted effort to reduce nitrogen (nutrients). See section 4 MCMs as reference to future goals on nitrogen and phosphorus reduction, in addition to how Clinton City MS4 will proceed forward on targeting sources that are, or have, a high potential to contribute nitrogen and phosphorus to the waters receiving the discharge authorized under this Permit.

Prioritizing Target Sources (3.2.1.3)

Targeted sources for the reduction in nitrogen and phosphorus discharges are being evaluated and determined through the actions and participation of the Davis County Storm Water Coalition and designated subcommittee, of which the Clinton City MS4 is an active participant. The educational materials described in section 3.2.1.3, many of which have already been developed, will be distributed to the appropriate group and or target sources as available. Equivalent educational sources that are specific for Clinton City MS4 include active participation and educational booth display at the Clinton City Heritage Days Celebration, ongoing monthly / bi-weekly / quarterly utility billing mailers, and the City's Primary website. In addition, specific information and face-to-face advisory is provided during all new business license application processes and all new construction permit application processes.

Co-Permittees (3.1)

The Clinton City MS4 has no Co-Permitees.

STORM WATER MANAGEMENT PROGRAM (4.0)

Requirements for SWMP (4.1.1)

The Clinton City MS4 has held and maintained a SWMP designed to reduce the discharge of pollutants from the MS4, protect water quality, and satisfy the appropriate water quality requirements of the Utah Water Quality Act, since the inception of the Phase 2 regulations in Utah in 2003. Clinton City also participated in the MS4 SWMP revamp of 2010. This document in available both in hard copy print and electronically through the City's primary website (www.clintoncity.com).

Implementation of SWMP (4.1.1.1)

Clinton City has implemented BMPs to protect their storm water infrastructure and has been taking measures to protect water quality for many years. This SWMP will document a number of BMPs that are already in place, as well as present a schedule to implement additional measure to ensure compliance with UTR090000.

Ongoing Documentation of SWMP (4.1.2)

The City currently utilizes several BMPs, storm water design standards, and standard operating procedures to manage storm water quantity and quality throughout the City.

The documentation program will consist of Clinton City is moving toward a GIS based record keeping process. It will likely take a few years to fully implement this new system. All completed forms, reports, and documents will be added to the database and be searchable by location. Forms that are general in nature and don't apply to a specific location will be added to the database and linked to the Public Works Yard for location.

The City's existing crews will be responsible for completing the appropriate forms. The sewer and storm water crew will report applicable O&M activities and their location, date, etc. also street sweeping activities while water crews note flushing, repair and construction activities which could affect storm water quality. The storm water inspector will utilize the same system to complete facility inspections, dry weather screening, Illicit Discharge Detection and Elimination (IDDE) tracking the progress of post construction BMPs as well as construction inspections using the state form.

This database will serve as the digital archive for all storm water program activities. This documentation method will be periodically reevaluated to investigate improved method, expanded, and/or modified as needed to ensure compliance, efficiency, and ease of use for the crews.

The documentation program will document:

1. Pre-construction meetings
2. Construction site SWPPP reviews
3. Construction site Water Quality Report reviews
4. Storm drain cleaning activities
5. Street sweeping activities
6. Inspections of key city facilities
7. Participation with the County Storm Water Coalitions meetings
8. Newsletters
9. Storm water education materials and programs
10. Dry weather screening
11. Wet weather monitoring
12. Training
13. IDDE inspections
14. Enforcement actions
15. Spill Response Incidents
16. Construction site inspections
17. Inspections of Low Impact Development facilities during construction
18. Long-term Storm Water Management Facility inspections
19. Long-term Storm Water Management maintenance activities

Tracking of SWMP (4.1.2.1)

As noted in the Section 4.1.2, these activates will be reported electronically to a database. Some public education and public involvement activities are currently conducted by and tracked within the Davis County Storm Water Coalition system.

Annual Fiscal Analysis (4.1.2.2)

Responsibility for implementation of the storm water management program is divided between Clinton City and the Davis County Storm Water Coalition. For the City, most of the work is performed by the Public Works Department and other applicable Divisions and Departments; the administration of the entire program is done by the Public Works Division. The City currently participates and contributes financially to the Davis County Storm Water Coalition. The Coalition works together as a group to establish many of the aspects for educating the public and city employees. The Cities in the coalition meet monthly to share ideas, disseminate information, and help one another advance their various programs. Management and oversight of the City's responsibilities under the storm water management program is funded through the City's storm water utility.

As the program is implemented, adjustments to the storm water utility will be utilized to ensure sufficient resources remain dedicated to meet the program requirements. The revenue source for the work performed by the Davis County Storm Water Coalition is an assessment to the participating municipalities.

Most costs associated with the program are man-hours by City Staff. Reporting of financial analysis is reported annually through the Annual MS4 report that is Due October 1 of each year.

BMP Implementation (4.1.3)

This SWMP thoroughly discusses the detailed implementation of BMPs in the following sections for each of the minimum control measures. BMPs, as defined by Utah's Small MS4 General Permit, are the---"schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage."

The BMPs that are prevalent to several of the control measures established in this SWMP include, but are not limited to, establishing SOPs, good housekeeping practices, employee and public training, routine inspections, and preventative maintenance.

1. The various sections of this SWMP describe the BMPs, SOPs and city practices being implemented.

See Section 4 (MCMs) as reference of all BMPs, there specific use and pairing with MCM Goals, along with BMP fact sheet and reference codes.

Measurable Goals Summary of BMPs (4.1.3.1)

The following list identifies BMPs that may be utilized as part of the City's MS4 program. In addition, this list is supported by the indicated reference codes that also match the BMP Fact Sheet to provide specific details on each BMP. NOTE: This list does not specify other information (i.e., months and years in which the Permittee will undertake required actions, including interim milestones and the frequency of the actions).

Clinton City BMP Master List	
BMPs	**Abbr.**
1 – Public Education and Outreach	
Building and Grounds Maintenance	BGM
Classroom Education on Storm Water	CESW
Educational Materials	EM
Housekeeping Practice	HP
Materials Use	MU
Public Education / Participation	PEP
Storm Drain System Signs	SDSS
Used Oil Recycling	UOR
Using Media	UM
Watershed Organization	WO
2 – Public Participation/Involvement	
Community Cleanup	CC
Community Hotline	CH
Watershed Organization	WO
Service Group Participation	SGP
Storm Channel / Creek Maintenance	SCCM
Stream Cleanup and Monitoring	SCM
3 – Illicit Discharge Detection and Elimination	
Identify Illicit Connections	IIC
Aboveground Tank Lead & Spill Control	ATL
Illegal Dumping Controls	IDC
Illegal Solid Dumping Control	ISDC
Leaking Sanitary Sewer Control	LSSC
Map Storm Water Drains	MSWD
Non-Storm Water Discharge to Drains	NSWD
Ordinance Development	OD
Used Oil Recycling	UOR
4 – Construction Site Runoff Control	
Benching	BE
Brush or Rock Filter	BRF
Building, Repair, Remodeling & Construction	BRRC
Chemical Mulching	CM
Compaction	CP
Concrete Waste Management	CWM

Clinton City BMP Master List	
BMPs	**Abbr.**
Construction Road Stabilization	CR
Construction Sequencing	CS
Contaminated or Erodible Surface Areas	CESA
Contractor Certification and Inspector Training	CCIT
Diversion Dike	DD
Dust Controls	CD
Earth Berm Barrier	EB
Equipment and Vehicle Wash Down Area	EVWA
Erosion Control Blankets	ECB
Erosion Control Plan	ECP
Establish / Compile Design Standards	ECDS
Extended Detention Basins	EDB
Filter Strips	FS
Flotation Silt Curtain	FSC
Geotextiles and Mats	GM
Grassed Swales	GS
Infrastructure Planning	IPL
Inlet Protection	IP
Landscape & Irrigation Plan	LIP
Materials Storage	MS
Mulching	ML
Ordinance Development	OD
Outlet Protection	OP
Portable Toilets	PT
Preservation of Existing Vegetation	PEV
Riprap	RR
Rock Check Dams	CD
Sand Bag Barrier	SBB
Sediment Basin	SB
Sediment Trap	ST
Silt Fence	SF
Slope Drain	SD
Spill Clean-up	SCU
Stabilized Construction Entrance	SCE
Straw Bale Barrier	STB

Clinton City BMP Master List	
BMPs	**Abbr.**
Surface Roughening	SR
Temporary and Permanent Seeding	TPS
Temporary Drains and Swales	TDS
Temporary Stream Crossing	TSC
Vehicle and Equipment Cleaning	VEC
Vehicle and Equipment Fueling	VEF
Waste Disposal	WC
5 – Post-Construction Runoff Control	
Alternative Turnarounds	AT
Bioengineering	BIO
Biofilters	BF
Conservation Easements	CE
Constructed Wetlands	CW
Double Trench Sand Filter	DTSF
Extended Detention Basins	EDB
Filter Strips	FS
Floatable Skimmers	FS
Grassed Swales	GS
Hydromulching	HM
Infiltration	IN
Infrastructure Planning	IPL
In-line Storage	ILS
Land Use Planning / Management	LIP
Level Spreaders	LS
Map Storm Water Drains	MSWS
Media Filtration	MF
Minimizing DCIAs	DCIA
Oil/Water Separators & Water Q Inlets	OWS
Open Space Design	OSD
Ordinance Development	OD
Outlet Protection	OP
Peat-Sand Filter System	PSFS
Riprap	RR
Rock Check Dams	CD
Seeding and Planting	SP
Surface Sand Filter System	SSFS
Trench Sand Filter System	TSFS
Urban Forestry	UF
Wet Ponds	WP
Zoning	ZO
6 – Pollution Prevention/Good Housekeeping	
Above Tank Leak & Spill Control	ATL

Clinton City BMP Master List	
BMPs	**Abbr.**
Alternative Discharge of Chlorinated Water	ADCW
Alternative Products	AP
Animal Carcass Removal	ACR
Area Control Procedures	ACP
BMP Inspection and Maintenance	BMPIM
Building and Grounds Maintenance	BGM
Catch Basin Cleaning	CBC
Concrete Waste Management	CWM
Containment Dikes	CD
Covering	CO
Curbing	CU
De-Icing Chemical Use Storage	CDUS
Detention/Infiltration Device Maintenance	DIDM
Drip Plans	DP
Employee Training	ET
Establish/Compile Design Standards	ECDS
Gelling Agents	GA
Hazardous Waste Management	HWM
Housekeeping Practices	HP
Illegal Dumping Control	IDC
Infrastructure Planning	IPL
Long Term Operations & Maintenance	LTOM
Map Storm Water Drains	MSWD
Manure Composting Program	MCP
Outdoor Container Storage of Liquids	OCSL
Outdoor Loading / Unloading of Materials	OLUM
Outdoor Process Equipment Operations	OPE
Pest Control	PC
Portable Toilets	PT
Roadway / Bridge Maintenance	RBM
Sediment Basin	SB
Septic System Controls	SSC
Signs & Labels	SL
Sorbents	SO
Spill Clean-Up	SCU
Storm Drain Flushing	SDF
Street Cleaning	SC
Sumps	S
Used Oil Recycling	UOR
Vehicle and Equipment Cleaning	VEC
Vehicle/Equipment Maintenance & Repair	VEMR

Person Responsible (4.1.3.2)

Key Persons

Clinton City Public Works Department
1740 N 1750 W Clinton Utah 84015
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Dave Williams, Public Works Director
dwilliams@clintoncity.com

Kasey Jensen, Storm Water Supervisor
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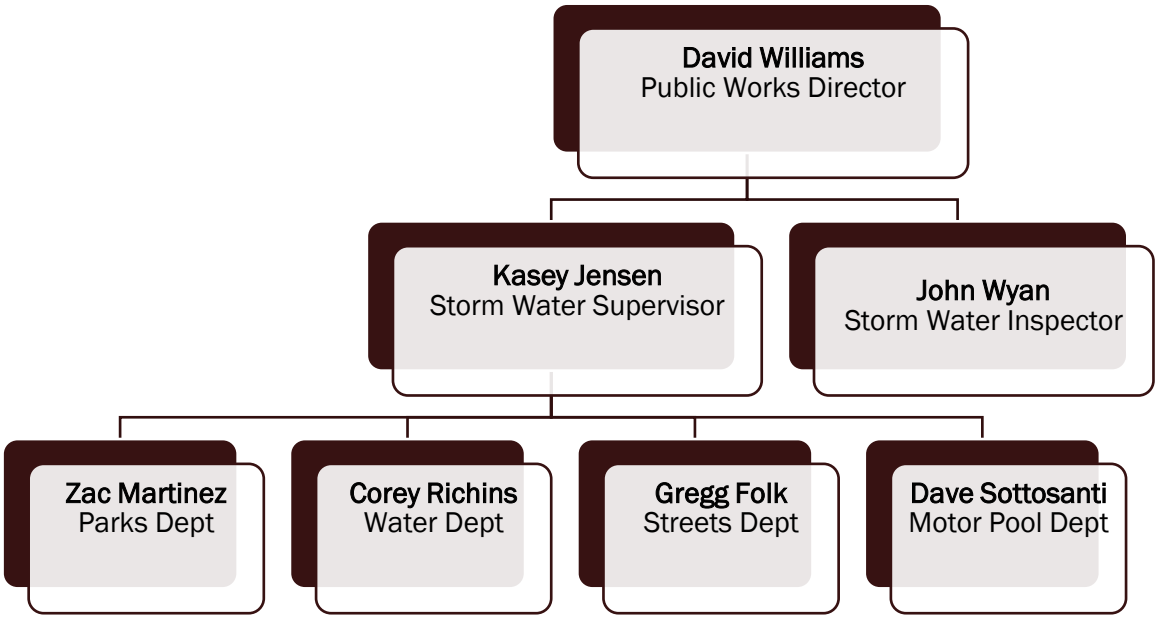
John Wyan, Storm Water Inspector
jwyan@clintoncity.com

Responsible Parties (4.1.3.3)

City staff needs to lead and teach by example. The following organizational chart shows how the plan will bring together individuals from many different areas within the city together – each doing his/her own part to implement a city-wide plan. Following the organizational chart are a few sections outlined specific delegated responsibilities for each department listed.

Clinton City Org Chart



Organization Chart Department Responsibilities

Public Works Director

- General coordination of the Storm Water Pollution Prevention Program
- Liaison with administration and City Council

Storm Water Supervisor

- Oversee SWMP program specifics and work with department Supervisors
- General coordination of the Storm Water Pollution Prevention Program

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

Storm Water Inspector

- Construction site Inspections
- Annual report
- Updating SWMP, SWPPP
- Tracking and documentation of activities and actions
- Storm drain mapping
- Regulate city, developers, and contractors to be in compliance with federal, state and local storm water regulations.

Parks Department Supervisor

- 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
- Equipment maintenance for parks dept. equipment
- Mowing program

Streets Department Supervisor

- Streets department work area
- Streets dept. equipment operation
- Equipment maintenance for streets dept.
- Training streets dept. personnel
- Chemicals storage in work area

- Snow plowing program
- Salt and materials storage stockpile areas

Motor Pool Department Supervisor

- Motor pool department maintenance work area
- Training fleet dept. personnel
- Chemicals, fluids, and oils in work area, waste oils/fluids
- Metal fabrication area

Davis County Health Department

- Investigate incidents involving spills, releases, or discharge of pollutants, contaminates, or wastes into waterways and drainage systems.
- Initiate appropriate enforcement actions to compel compliance with the regulations or pursue sanctions for violations as required by the UPDES discharge permit.
- Collect local penalties as part of the enforcement action at the request of the MS4
- Maintain a 24-hour incident hot line to provide an opportunity for the public to report spills and violations of the UPDES permit
- Coordinate responses to reported spills and violations of the UPDES permit with the MS4
- Provide annual summaries of reports, investigations and actions taken for spills and violations of the UPDES permit to the MS4

Davis County Public Works Department

- Responsible for flood control and maintenance of designated creeks and channels that traverse from the Wasatch mountains to the Great Salt Lake within the County limits. One of these channels flows through Clinton City.
- Davis County Ordinance 01-87 and 02-98 set forth the policy and procedures used by the County to provide this service.
- Permit coverage under UPDES program authorizes Clinton City to discharge storm water into this channel.

Davis County Storm Water Coalition

- Consists of representatives from 15 cities and Davis County that jointly perform the following responsibilities.
- Jointly purchase educational and training materials, as determined by the Coalition, for distribution to:
    - residents
    - businesses
    - developers/contractors
    - MS4's
    - Industrial facilities
- Use the coalition as a county wide committee to train personnel
- Create partnerships
- Obtain input and feedback from special interest groups

- Annually contribute updated storm drain system information for county wide mapping purposes.
- Jointly prepare and promote a model ordinance that addresses
    - Illicit discharges
    - Construction site storm water runoff
    - Long term storm water management
- Jointly arrange for and provide education about hydraulic methods and criteria for sizing post construction BMP's
- Jointly participate to develop Standard Operating Procedures

MINIMUM CONTROL MEASURES

Public Education and Outreach on Storm Water Impacts (4.2.1.)

The Public Education and Outreach measure is intended to increase public and professional awareness of storm water quality concerns and Best Management Practices (BMPs) that may be implemented to prevent storm water pollution. Clinton City will work on its own and will participate with The Davis County Storm Water Coalition (in cooperation with other entities in the County) to coordinate the Public Education and Outreach efforts County-wide to target the 4 groups identified.

Priorities

Priorities for this control measure were established in cooperation with the other entities participating with the Davis County Storm Water Coalition. Target pollutants with accompanying audiences have been identified by Coalition representatives. Activities (BMPs) were selected to reach out to these audiences, educating them about the pollutants and encouraging behavior that prevents pollution to receiving waters. Measurable goals were established. A summary of this information (including target pollutants, target audiences, activities, and measurable goals) is included

Priorities for this control measure were established in cooperation with the other entities participating with the Davis County Storm Water Coalition. Target pollutants with accompanying audiences have been identified by Coalition representatives. Activities (BMPs) were selected to reach out to these audiences, educating them about the pollutants and encouraging behavior that prevents pollution to receiving waters. Measurable goals were established. A summary of this information (including target pollutants, target audiences, activities, and measurable goals) is included.

Target Specific Pollutants and Sources (4.2.1.1)

Clinton City has determined that the targeted pollutants for each of the four audience groups described in the permit requirements are as follows:

Audience Group	Sediments	Nutrients	Heavy Metals	Trash & Debris	Oil & Grease	Bacteria & Viruses	Herbicides & Pesticides	Hazardous Waste
General Public	☑	☑		☑			☑	☑
Commercial Facilities	☑	☑		☑			☑	
Construction/Development	☑			☑				☑
MS4 Facilities & Operations	☑	☑	☑	☑	☑			

☑ = Targeted potential pollutant may be expected from the audience group

Education efforts for each audience group focus on that group's targeted pollutants. Messages promote good behavior and educate individuals how to avoid, minimize, reduce and/or eliminate the adverse impacts of storm water discharges.

The Clinton City Storm Water Steering Committee identified these pollutants, associated with the depicted audiences, based on visual identification from the Public Works Department. During routine and ongoing inspections and monitoring, City personnel both identified and based priority toward the mentioned pollutants.

Education and Outreach Audiences and Program (4.2.1.2, 4.2.1.3, 4.2.1.4, 4.2.1.5, 4.2.1.6)

	Audience	Suggested Topics
4.2.1.2	General Public	Septic Systems, lawn care, benefits of on-site infiltration, automotive care and car washes, swimming pool water discharge, pet waste
4.2.1.3	Institutions, industrial, and commercial facilities	Lawn maintenance, benefits of on-site infiltration, building and equipment maintenance, use of salt and deicing materials, materials storage, waste management and dumpsters, parking lot maintenance
4.2.1.4	Engineers, Construction	SWPPP development, impacts from runoff from

	Contractors, developers, development review staff, and land use planners	development sites
4.2.1.5	MS4 owned and operated facility staff	Equipment maintenance, materials storage, waste management and disposal, dumpster management, use of salt and deicing materials, benefits of onsite infiltration, parking lot maintenance
4.2.1.6	MS4 engineers, development and plan review staff, land use planners	Low Impact Development, green infrastructure, and long-term storm water control and best management practices

EDUCATION AND OUTREACH PROGRAM

There are many pieces and facets to the Education and Outreach program. Many of the materials and programs prepared for one target audience can be utilized for multiple audiences. To avoid redundancy, all aspects of the education and outreach program have been combined in this one section of the Storm Water Management Plan. This section describes the overall program. Near the end of this section, we will summarize what is being done specifically with the various target audiences.

The Education and Outreach Program includes developing focused messaging addressing different potential pollution sources. Most of these potential pollution sources are not unique to Clinton City. Most communities also have common target audiences. Because of these two reasons it makes a lot of sense to pool resources from neighboring communities and work together on a larger community outreach program. This allows for consistent messaging and avoids duplication of efforts. A large portion of the Education and Outreach Program has been developed by the Davis County Storm Water Coalition. The following paragraphs briefly describe the activities being implemented by the Coalition.

Participate in Davis County Storm Water Coalition

Required education and outreach program:

Elementary School Education Program: Teach 5th graders the fundamentals of storm water, receiving waters, and ways to prevent pollution to storm water from households

Educational Materials: Work together to develop and purchase educational materials, pamphlets, and promotional give-away items to aid in the educational program. These materials are used in various aspects of the education program and are dispersed at the discretion of each MS4.

Water Fair: Help organize and sponsor the transportation for school children and their adult chaperones to a fun event that educates them about storm water pollution prevention and other environmentally friendly topics

Junior High and High School Education Program: Sponsor a competition for Jr. High and High School age students to produce a video to be used as part of the education program. The competition includes some basic instruction on appropriate messaging. Cash prizes encourage students to learn about the issues and encourages them to educate others on steps that can be taken to protect/improve the quality of water in our rivers and streams. This annual competition results in several short videos that can be used in movie theaters, classrooms, and simply postings on the internet.

Trainings: Host training events related to storm water permit requirements for contractors, MS4 employees, industrial facility operators, or other groups. The last few years this training has been done in conjunction with the Golden Spike Coalition. Topics are selected from the lists provided in the permit and the coalition's assessment of current needs.

Training of Coalition Members: Provide training opportunities for coalition members to gain insight and information about storm water programs and challenges.

County Drainage Map: Help facilitate the assembly of a county-wide map for the purpose of protecting receiving waters in responding to spills and illegal dumping. This regional map helps educate neighboring communities of the other community's system. This allows MS4s to be aware of impacts they may be having on neighboring systems.

Spill Response Hotline: Each community has their own response hotline that is active during normal working hours. After hours, a common hotline is used for the County, ensuring that a hotline is available 24 hours a day. The coalition supports and advertises this common hotline. This hotline is utilized on some of the education and outreach products.

Standard Operating Procedures: Work together to develop model operating procedures that the member entities may use to implement in their jurisdictions. These standard operating procedures become the focal point of the employee education programs.

USWAC Meeting Attendance: Represent the DCSWC at Utah Storm Water Advisory Committee Meetings

Interlocal Agreements: Allow the coalition to function legally, in explicit agreement with each other

Model Ordinance: Work together to create model ordinances and encourage the adoption of similar ordinances by Coalition members

Education Topics

The following efforts have been made to address specific topics:

Effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers)

The Davis County Storm Coalition has developed a pamphlet for residents on this subject. TV ads have addressed this, and information can be found on the website.

Benefits of on-site infiltration of storm water

Weber Basin Water Conservancy in Layton and the Utah Botanical Center in Kaysville educates people regarding water conservative landscapes, wetland ecosystems, storm water management and other topics. Clinton City has provided links on the storm water page to these sources.

Effects of automotive work and car washing on water quality

The Davis County Storm Coalition has developed a pamphlet for residents on this subject.

Proper disposal of swimming pool water

The Davis County Storm Coalition has developed a pamphlet for residents on this subject. Pamphlets are distributed to pool owners.

Proper management of pet waste

Doggie bags are provided on all walking trails for pet waste.

Proper concrete waste disposal

The Davis County Storm Coalition has developed a pamphlet for residents on this subject. Pamphlets are distributed to concrete batching operations and contractors.

Storage and stockpiling of landscaping materials

The Davis County Storm Coalition has developed a pamphlet for residents on this subject. Pamphlets are distributed to landscaping contractors

Septic tank and drainfield care and maintenance

The Davis County Storm Coalition has developed a pamphlet for residents on this subject. Pamphlets are distributed to homeowners with septic tanks.

Household hazardous waste disposal

The Davis County Landfill has a household hazardous waste disposal location. This information is posted on the city website, a common topic in the community newsletter and is generally distributed when the question arises.

Low Impact Development Handbook

The city has developed a Low Impact Development Handbook. The purpose of the handbook is to provide information on what Low Impact Development is and how it can be implemented in Clinton City.

Education Methods

The education and outreach program is a multi-media program. The City utilizes ads in local theaters, flyers, mailers, the city's newsletter, the city's website, and live training programs to try and reach the target audiences. Many of the materials and information mentioned above utilize different and multiple formats for distribution. The following tools are different ways that the city tries to distribute its messaging:

Newsletter Articles

At least once per year, an article will be prepared for publication in the City newsletter. Articles will focus on reducing the pollution entering our streams. Focus will be placed on recommended topics.

Annual Long-term Maintenance Inspections

Annual inspections of long-term privately owned and operated facilities is a great opportunity to educate businesses on issues that they are specifically involved with. Teaching of proper maintenance techniques and frequency not only educates but helps with maintenance concerns.

Preconstruction Meetings

As part of the requirements for all new development or redevelopment projects, a pre- construction meeting is held wherein contractors and construction workers attend. Utility coordination, submittal requirements, SWPPP elements and other topics are discussed which influence the proposed construction.

This educational measure is part of the IDDE education program as required in Part 4.2.3.7 and 4.2.3.11. Additional requirements are set forth in Part 4.2.4.5 to educate the construction industry.

Business License Renewal

Annual business license renewal is another great opportunity to educate. The city has prepared handouts and packets specific to various businesses. Packets and information can be distributed when individuals or business apply for license renewals or permits. The city tracks who gets materials and what materials they receive. This will be included in the database.

Annual Contractor, Developer and MS4 Employee Training Program

The Davis Coalition, in conjunction with the Golden Spike Coalition, annually host a half day training program that focuses on timely topics and encourages open dialogue between the various target audiences. This training makes a big effort to foster a feeling of collaboration and working together towards one goal.

Construction Packet

Compile a "packet" of information to give to engineers, contractors, developers, planners, and staff for:

- Developing a SWPPP and construction site BMPs
- SWPPP review checklist
- LID opportunities review and encouragement
- Post-Construction preferred design standards
- Criteria for "Priority" construction sites
- List of inspections required and inspection form
- Project completion/close-out procedures
- Pre Construction outline

Reference: See Section 4 of MCM Goals to see further details on goal to include a "How to Build in Clinton City" section to the City's primary online website. This section is proposed to include the complete "Construction Packet", including Storm Water considerations and needs on this site. It will also include needed compliance forms and resources.

Movie Theater Ads

Annually, the Coalition has been running ads through the summer season in local movie theaters. They utilize videos made during their competition for Jr. High and High School students and select ones to run in movie theaters. Students are thrilled to see their work on display, which in turn generates excitement and interest.

The Stormwater Page on the City's Website

The City's website includes a copy of this Storm Water Management Plan. It also includes links to various resources where more can be learned. Contact information for reporting of illicit discharges is posted. A link to household hazardous waste disposal sites is also included. Printed media to be used as pamphlets, handouts and mailers and flyers

The coalition has produced numerous material that can be printed in various formats and distributed. Clinton City has copies of several of them that they keep at the front desk. As people come in to submit

business license applications, building permits, or conduct other city business, the appropriate materials are distributed.

Employee Training (4.2.1.5)

Employee Training takes a little different approach. Training is done separately by each department, so that training can be customized to the job responsibilities of that department. The training program is intended to include aspects of training that are required by this and the other control measures.

All employees will be trained on prohibitions against illicit discharges and water quality impacts. MS4 employees whose job duties may impact storm water will be trained in pollution prevention (especially as related to performing job duties/procedures), permit requirements, water quality concerns.

Specific staff members have been targeted for storm water training. Their responsibilities require specific involvement in storm water quality. Highlights of the employee training program include:

- Public Works Department (annually) – Entire staff are trained annually. All staff members are initially trained on expected job responsibilities during orientation including protection of storm water quality and identifying and reporting illicit discharges.
- Parks Department (annually) – Specific staff members with responsibility for park lawn maintenance and associated equipment maintenance
- Community and Economic Development Department (as needed) – Planners and reviewers involved with any development projects constructed in Clinton City which impact storm water quality, LID, SWPPP and BMP requirements.

Targeted training will be selected based on job responsibilities which cover a wide array of topics. Staff member training topics may include:

- IDDE hazards & prevention
- IDDE recognition, response & cleanup
- Proper dumpster & waste management
- Equipment inspection
- Various inspection procedures
- Storage of industrial materials
- Street & parking lot maintenance
- Plan review & permitting procedures
- Minimization of use of salt and other de-icing materials
- Violation enforcement measures
- Public outreach programs
- LID opportunities & infiltration methods
- Operation & maintenance requirements
- Long-term storm water management
- Job duties related to storm water
- SOP's and their implementation
- General SWMP education
- Proper SWPPP controls
- General storm water quality protection

This educational measure is in conjunction with the training requirements set forth in other minimum control measures including:

- Hazards associated with illicit discharges (Permit Section 4.2.3.7).
- IDDE recognition, procedures to stop and cleanup the discharge and prevention methods in their regular job duties (Permit Section 4.2.3.11.
- Protection of existing storm water systems from construction site runoff during construction (Permit Section 4.2.4.5).
- Long-term construction measures, including LID, that can be implemented to preserve storm water quality after construction projects are completed (Permit Part 4.2.5.6). Proper methods to complete job responsibilities without impairing the storm water quality (Permit Section 4.2.6.9).

All new employees will receive initial training within 60 days of their hire. Employees who are changing job responsibilities will also receive training on new responsibilities within 60 days of the change. Follow-up training will be completed to address changes in procedures, methods or staffing or when non- compliance issues are discovered.

LID Green Infrastructure and Post Construction Control Education (4.2.1.6)

Staff members from the Public Works Department annually attend the APWA Storm Water Conference. Various LID presentations are given which help educate about LID methods. Davis County Coalition provides training for engineers, development and plan review staff, Other LID trainings have been attended by staff members to gain additional insight to LID methods and opportunities. We will also look for training opportunities for plan review staff to expand their education about LID measures.

The City has also developed a new LID Manual. This manual is intended to assist new and redevelopment project is understanding the new requirements and how they are being implemented. This manual will be available both online and as a hard copy.

Education Program Evaluation (4.2.1.7)

Public opinion surveys are performed to evaluate the effectiveness of the public education program and evaluate BMPs selected. This occurs at least once per permit term.

BMP Selection Rationale (4.2.1.8)

General Public

The following BMPs have been implemented to educate the general public:

- 5th Grade Lessons: This BMP was selected because it helps teach children at an age they can understand the importance of water quality and how they can affect water quality.
- Water Fair: This BMP was selected because it helps teach children at an age they can understand the importance of water quality and how they can affect water quality.
- Educational Materials: This BMP was selected to focus and aid in focused message about water quality topics.

- **Media Ads**: Movie theater ads are targeted to summer months and holiday seasons when viewership is at its highest. These ads reach a larger population and provide good educational messages to encourage behavior changes. Highest frequency of pollutants can easily be targeted with campaign ads.
- **Spill response hotline:** Advertise and support the use of a common number for spill reporting and response.

Commercial Facilities

The following BMPs have been implemented to educate the businesses and institutions:

- **Storm Water Credits:** businesses may be eligible for a credit on their storm water utility fee for good housekeeping and system designs that promote water quality.
- **Annual Storm Water Inspections:** All businesses receive an annual inspection of structural controls. This provides an opportunity for our inspectors to educate the business about better storm water protection practices and ensure proper maintenance is being completed to minimize quality impacts in the storm water system.
- **Education:** Information delivered with business license renewal should target all businesses and can be tailored to the specific issues concerning that business.

Construction Industry

The following BMPs have been implemented to educate the construction industry:

- **Pre-Construction Meeting:** This BMP was selected because we can make a presentation directly with the on-site contractor and its employees about the importance of protecting storm water quality and how each worker can protect water quality and meet the requirements of the Permit.
- **Construction Packet:** Supplies information for designing, permitting and terminating permits and storm water controls.
- **Contractor Training:** Invite contractors working in our city to storm water specific training.
- **Storm Water Construction Permit Application Process:** Through this process, the SWPPP is reviewed to ensure proper protection will be in place during construction activities of storm water controls and educate them about the importance of on-site BMPs during construction activities.

MS4 Employees

The following BMPs have been implemented to educate select MS4 employees:

- **Annual Training**: This BMP allows an informal process to educate employees about IDDE, job duties relating to storm water quality and how they can prevent polluting the storm drains while completing their duties.
- **New Hire Training**: BMP chosen to target new employees to train about storm water and illicit discharges.
- **SOPs:** BMP for tasks associated with employees' jobs to instruct the proper way of protecting the storm water.
- **County Drainage Map:** Help facilitate the assembly of a county wide map of the purpose of protecting receiving waters in responding to spills and illegal dumping.

PUBLIC PARTICIPATION / INVOLVEMENT

Public Involvement/Participation (4.2.2)

This measure is intended to provide opportunities for the public to play an active role in both the development and implementation of the storm water management program. An active community is important to the success of the program.

The BMPs in this chapter not only serve to involve the public, but also serve to educate the public on storm water issues. The program includes:

- Program Description/Establishing Standard Operating Procedures (SOPs)
- Comment Opportunities
- Public Notice Compliance Requirements
- Public Participation

The Public Involvement/Participation Program section of this SWMP addresses the requirements of applicable State and Local public notice requirements. Community participation provides for broader public support, shorter implementation schedules, a broader base of expertise, and the development of important relationships with other community and government programs. The sections described in this chapter include opportunities for the public to play an active role in the development and implementation of the storm water management program. Such opportunities will include advisory panels and public hearings. Efforts to reach out and engage potentially affected stakeholder groups, which include but is not limited to, commercial and industrial businesses, trade associations, environmental groups, homeowner associations, and education organizations regarding the implementation of new storm water rules and regulations to foster public input. The Public Works Department will review the SWMP once a year.

Clinton City promotes public involvement and participation through community service projects, open houses about targeted projects affecting storm water quality and participation in local watershed councils.

Opportunities for public involvement include:

- Public notices and comment period about updates to the SWMP
- Storm water committee consisting of contractors, developers, city members and engineers was used in selecting the BMP's and developing the original SWMP for the city
- Boy Scout service projects
- Installing storm drain markers on catch basins
- delivering storm water information to residents in the same area that markers are installed
- Information includes the published hotline for community members to report illicit discharges.
- Community group service projects
- Projects are organized on a regular basis to clean detention basins and trails, creeks, ponds other areas within Clinton City to prevent non-storm water discharges.
- Projects to mulch areas to prevent erosion.
- Encouraged to keep gutters clean.
- Adopt a park program.

- Participation in the Davis County Storm water Coalition which generally has representation at local trainings and water fairs.
- The DCSWC will be utilized to give and receive input, feedback and recommendations for the storm water management programs in Davis County. We will participate with the DCSWC to facilitate communication with the public, contractors, developers, consultants, industrial representatives, and others affected by or interested in NPDES storm water issues
- Community clean-up dumpsters. The city provides 4 mobile dump trailers which are parked at resident's homes for a couple of days. Residents can use the dumpster for cleaning up their homes and yards. These dumpsters are provided free of charge twice a week between March and November.

Opportunities for Public Input (4.2.2.1)

Public Works will provide opportunities for public involvement in the constant development, updates and implementation of the storm water management program, including development and adoption ordinances through the implementation of a web-based system to accept comments about the storm water program.

Ordinances will be modified in accordance with Utah law, providing the public numerous opportunities to contribute and voice concerns.

Reference: See Section 4 of MCM Goals to see further details on goal to include a "Opportunities for Public Input" section to the City's primary online website. This section is proposed to include the online forum for the citizenry of Clinton City to comment on Storm Water issues. It is proposed that this method would allow for the tracking and documentation of all incoming comments, in addition to measure its effectiveness and level of participation.

SWMP Document for Public Review and Input (4.2.2.2, 4.2.2.3)

Public Works will provide opportunities for public involvement in the constant development, updates, and implementation of the storm water management program, including development and adoption ordinances through the development of a web-based system to accept and incorporate comments and suggestions about the storm water program.

Once the SWMP is completed, a current version will be made available online and at the Clinton City Public Works office. A forum will be provided for ongoing public comment.

ILLICIT DISCHARGE DETECTION AND ELIMINATION

Illicit Discharge Detection and Elimination (IDDE) 4.2.3

This measure is intended to minimize illicit discharges (discharges other than storm water) into the storm drain system. Storm drain systems are not typically designed to accept, convey, or discharge non-storm water flows. In Clinton City there is a prevailing high water table and many existing developments include a land drain system. Often, these land drain systems are connected to the storm drain system. The land drain systems are not considered to be illicit discharges even though they convey water that does not directly come from storm water runoff. Section 1.2.2.2 includes a list of allowable non-storm water discharges. This list includes rising ground water, uncontaminated ground water infiltration, uncontaminated pumped ground

water, foundation drains and footing drains. In Clinton City there is a strong need to balance infiltration with these land drain systems. A lot of time and energy has been expended considering this balance.

Eliminating illicit discharges helps prevent pollutants from entering receiving waters and maintain the infrastructure.

The program includes:

- Storm Drain System Map
- City Ordinances
- Dry Weather Screening Program
- Illicit Discharge Detection
- IDDE Education and Public Outreach

The Illicit Discharge Detection and Elimination (IDDE) section of this SWMP addresses non-storm water flows that are discharged into receiving waters through storm water conveyance systems. The program will implement BMPs and SOPs to assist in detection, the identification, and elimination of illicit discharges. This program will also focus on prevention of new illicit discharges to the storm water system by means of education, regulations, and a spill prevention and response program.

This program will also be integrated with the Public Education and Outreach program to promote awareness of the importance of protecting the storm water system from illicit discharges and their impact to receiving waters. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Illicit Discharges and Improper Disposal Program.

Storm Water System Map (4.2.3.1)

Clinton City maintains a GIS inventory which includes outfalls, pipes, structures, or other storm water system inventories located within its jurisdiction. Updates to the system are completed as the system is modified. The city has decided to utilize a GIS database map for organizing and administrating the storm water program, linking various activities and records to a geographic map to facilitate locating information and monitoring activities.

Storm Water Management Ordinance (4.2.3.2)

Non-storm water discharges are prohibited through Clinton City Code, Title 23. When such discharges occur, Clinton City Storm Water Inspector, and Davis County Health Department, have the authority to impose escalating enforcement options to stop a non-storm water discharge and impose appropriate measures to ensure compliance.

Escalating enforcement options by The City Storm Water Inspector include:

- **Verbal Warning:** Applicable where violator had no knowledge that their action was a violation of Clinton City Code.
- **Citation**: Enforcement of a minor violation as described in Clinton City Code Section. Assesses a penalty fee and requires corrective action. Citations may be on top of any criminal, civil or other legal remedy established by law to ensure the violation is remedied.

Citations are issued directly from the Clinton City Police Department.

- **Notice of Violation:** Enforcement of a major violation or if corrective action from an Administrative Citation is not completed. Additional fees may be assessed and additional requirements may be ordered

If impact includes any illicit discharge, The Davis County Health Department will issue the Notice of Violation.

- Failure to comply with a notice of violation within Ten days of service of the violation will be incurred and civil penalties shall be owed to Clinton City for each and every subsequent day of violation.
- The City may bring into compliance the violation and recuperate all costs incurred from the violator.

Clinton City operates a sanitary sewer system. If a SSO occurs, the plan outlined in the SSMP is followed

City ordinance prohibits illegal dumping into any sump, detention basin, storm drain, curb and gutter, drain inlet, storm drain ditch or other storm drainage structure that conveys storm water and/or non-storm water, any type of debris, petroleum product, chemical, paint, pesticide, herbicide, heavy metal, acid or base product, solid or liquid waste product, hazardous waste product, and/or human or animal waste.

Legal Authority to Enforce Non-Storm Water Discharges (4.2.3.2.1)

Authority to detect, eliminate and enforce against non-storm water discharges is authorized through City Code title 23. City has a Resolution with Davis County Health Department to investigate and enforce non storm water discharges.

Should any discharge be considered an illicit discharge, the Davis County Health Department will handle enforcement, along with the issuing of any Notice of Violations and associated fines. It should be noted that the Davis County Health Department regulates a scale factor fine system with a penalty scale chart and a severity assessment flow chart, which addresses the nature of each discharge / impact on a case-by-case basis, in addition to addressing repeat offenders.

Clinton City collaborates with the Davis County Health Department on all illicit discharge cases. Clinton City has the ability to levy additional fines on top of those issued by the County. This information and description of the relationship that exists between the Davis County Health Department and Clinton City can be found in Appendix C of the SWMP within the Adjudicative Hearing Procedures Policy Manual.

IDDE Detection and Mitigation Plan (4.2.3.3)

The detection and mitigation plan for spills, illicit connections, SSO's and illegal dumping are described herein. We rely on our trained employees who are out in the public regularly (i.e. street sweepers, storm drain maintenance operators, storm water inspectors) and public reported discharges to detect spills and illegal discharges. Our regular dry weather screening of all outfalls in the City may also detect these spills and discharges.

Another part of the IDDE program includes smoke testing lines and using our crawler camera to record conditions inside storm drain and land drain pipes. This method allows us to locate any illicit connections and require proper mitigation in order to prevent illegal discharges from entering into the storm drain system.

The specific procedures that are implemented by Clinton City MS4 are located within the SOP section of the SWMP. In addition, a procedural flow chart for Incident and Response is located in Appendix C of the SWMP.

Locating and Prioritizing Illicit Discharges (4.2.3.3.1)

Priority is given to the following areas:

- Areas with older infrastructure that are more likely to have illicit connections.
- Industrial, commercial, or mixed-use areas.
- Areas with a history of past illicit discharges.
- Areas with a history of illegal dumping.
- Areas with onsite sewage disposal systems.
- Areas with older sewer lines or with a history of sewer overflows or cross- connections.
- Areas upstream of sensitive waterbodies; and,
- Other areas the Permittee determines to be likely to have illicit discharges.

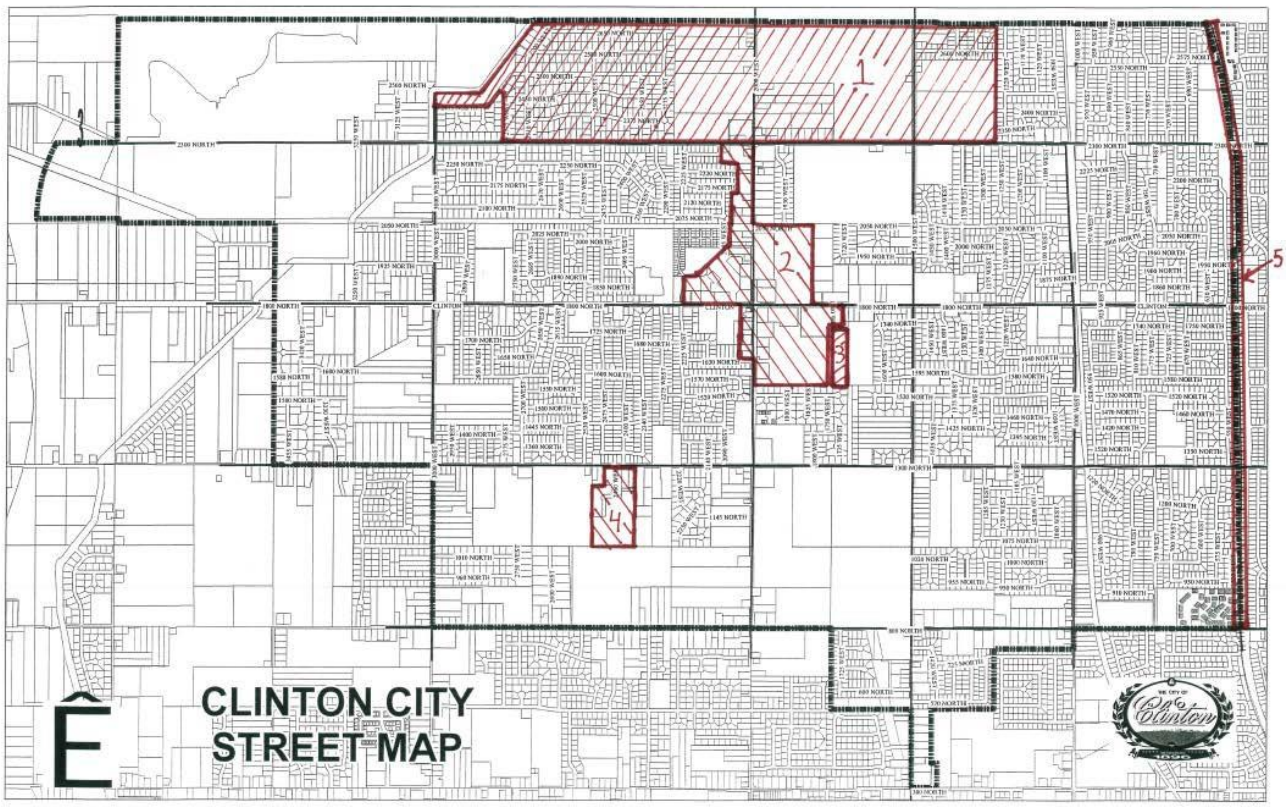
With the city's database, utilizing historical data to help establish priority areas will be easier. By simply turning on the layers that represent the factors listed for consideration, the city will be able to visually see patterns that may emerge.

"High Priority" Area List

Storm Water personnel reviewed a map of the city to determine areas that might affect storm water quality or potential for illicit discharges. Special attention is given to:

1. Areas where businesses with higher pollutant risks are located (i.e. salvage yards, trucking facilities, businesses with high use of chemicals or other pollutants which may get into the storm water system
2. Areas with a history of illicit discharges
3. Areas near water bodies
4. Older infrastructure areas
5. Areas with history of past illicit discharges

The following map of the Clinton City MS4 outlines and identifies the IDDE High Priority Areas within the MS4 boundaries and jurisdiction. These areas were selected based on the considerations and factors that have previously been presented.



NOTE: Numbers 1 – 5 represent the following areas.

1. Primary residential area that all drains to the Clinton City Wet Pond or Fish Pond
2. Clinton City Business Commercial District
3. Clinton City Public Works Facility
4. Clinton City Industrial District
5. Clinton City Railroad Tracks and access

Field Assessment Activities (4.2.3.3.2)

Clinton City MS4 conducts an annual inspection at all identified high priority areas.

Dry Weather Screening (4.2.3.3.3)

The Storm Water Inspector will conduct field assessment activities for the purpose of verifying outfall locations and detecting illicit discharges during the periods of dry weather. Visual inspections of all known outfalls will be inspected at least once every five years. Field assessment activities will be documented on an inspection form. All inspections will be recorded at the City's storm water data base.

Dry Weather Screening procedures for Clinton City are outlined in detail within the SOP section of the SWMP (Appendix I). Although the requirement for Dry weather screening allows for the assessment of 20% of out fall locations, Clinton City tries to perform monitoring on all 72 locations annually and provides documentation for each. Documentation has been made electronic and is housed on the Clinton City Public database.

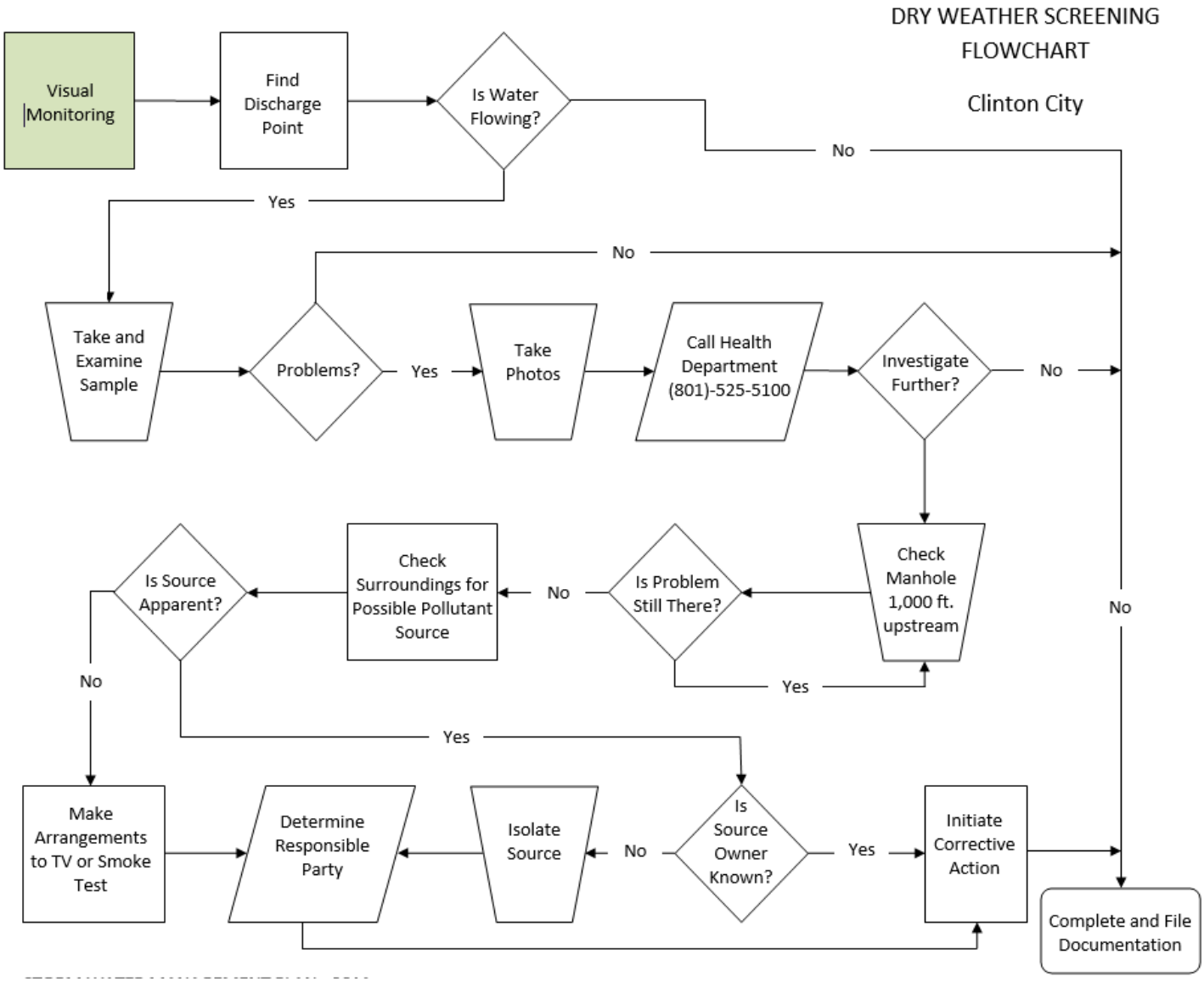
A copy of the form used is housed in the database.

Separate UPDES Permit Notification (4.2.3.3.4)

If a discharger is suspected to need a separate permit, both the discharger and the division will be notified. Based on assessment and need during a field inspection, commercial business application / license review, construction preview application process, or other, entities that need an Industrial Storm Water permit, Dewatering permit, or an individual UPDES permit will be made aware and expected to comply.

Tracing Illicit Discharge Source Procedures

SOPs are developed and followed for detecting and eliminating illicit discharges. When an illicit discharge is reported, the storm water inspector investigates on-site and locates the source of the discharge. The source is identified either by visual observation at the reported location of the incident or by following the storm drain system upstream to locate the source of the pollutant. The Davis County Health department is contacted to help in the investigation



Reference: SOP Specifics on tracing illicit discharge sources and procedures can be found in Appendix I

Characterize the Nature and/or Threat of the Illicit Discharge (4.2.3.5)

SOPs are developed and followed for characterizing the nature and/or threat of the illicit discharge. When an illicit discharge is reported, the storm water inspector investigates on-site and locates the source and type of discharge and attempts to mitigate the damage as much as possible until it can be cleaned up. The Davis County Health department is contacted to help in the investigation. Priorities of initial assessment include safety first, environment second, and property / equipment, etc. third. Clinton city implements spill containment and cleanup kits in all vehicles and accessible to all staff and operations. Annual ongoing training is also implemented on spill containment and cleanup to pertinent city employees and staff.

Upon finding the source Clinton City staff makes efforts to ceasing the discharge. This may include:

1. notifying the owner/operator and issuing a cease-and-desist order,

2. shutting off or plugging the source,
3. notifying the proper authorities as applicable,
4. getting assistance from the Health Department or other technical experts.
5. Conducting follow-up inspections to ensure that the problem has been resolved
6. Working with the Health Department and the offender in taking enforcement actions as appropriate.

An incident report is completed and filed on each incident. The following information is recorded in an inspection report:

- Date of initial report of discharge
- Date investigation was initiated
- Date discharge was observed
- Location of discharge
- Description of discharge
- Method of discovery
- Date of removal, repair or enforcement action
- Date and method of removal verification

The Davis County Health department is contacted to help in the investigation. They have the means and expertise if analytical monitoring is necessary to identify the potential source(s) and characterize the nature of the illicit discharge. The decision process for utilizing analytical monitoring will be fully documented in the inspection report. NOTE: It is a goal of the Clinton City MS4 to enhance the inspection form to include more detail on remediation and analytical monitoring procedures and guidelines.

Reference: SOP Specifics on Characterize the Nature and/or Threat of the Illicit Discharge can be found in Appendix I

Ceasing Illicit Discharges SOPs (4.2.3.6)

When responding to an illicit discharge or spill, a Storm Water inspector will respond and identify the source and require the violator to stop the discharge following the SOPs. In instances where the violator is not present, respondents take appropriate measures to cease the discharge at the source. Once the discharge has ceased, SOPs are followed to begin containment and cleanup activities

- Notification of appropriate authorities
- Notification of the property owners
- Technical assistance for removing/eliminating the source of the discharge
- Follow-up inspection
- Escalating enforcement and legal actions if the discharge is not eliminated

Education and Training programs are outlined in Section 4.2.1 above.

Household Hazardous Waste (4.2.3.8)

Proper household hazardous waste disposal site is located at Wasatch Integrated Waste facility in Layton Utah. The city encourages the use of this facility through newsletter articles its website and other public outreach programs.

Public Hotline (4.2.3.9)

A hotline is available which connects directly to Clinton City Public Works office. Clinton City has on-call personnel to respond to any spill 24/7. Davis County also has a 24/7 number for reporting. . The public may also call the Police or Fire Departments to report any activities.

When a discharge is reported, the investigation and findings are recorded in the Incident Report.

Spill/Dumping Response Procedure (4.2.3.9.1)

SOPs are developed including a flow chart for spills. Davis County Health Department will assist with all spills. When the Public Works Department receives notification of a spill, the storm water inspector responds to assess the situation. For minor spills of known substances, the responding personnel will have a spill kit and absorbents to clean up the spill. If the discharge is large in nature or of an unknown substance or highly hazardous, professional clean-up company will be called

The following document outlines a procedural flow chart of responding to a spill dumping incident.

Reference: SOP Specifics on spill / dumping response procedures can be found in Appendix I of the SWMP.

Program Evaluation and Assessment (4.2.3.10)

The IDDE Program is evaluated and assessed with the review of the SWMP document. Currently all response forms and other associated incident reports are housed on the Clinton City Public Works database. It is a goal for the new permit cycle to enhance tracking by developing a GIS mapping system to identify incidents and spills. This can be referenced in the goals section of the MCMs.

Annual Training of Employees (4.2.3.11)

All City staff that may come into contact with illicit discharges as part of their regular job duties or who may receive illicit discharge reports are trained about the IDDE program and their responsibilities within the IDDE program. Training is documented. All records of this training are held on the Clinton City Public database. See section 4.2.1 above.

Summary of Existing BMPs and Efforts (4.2.3)

Ordinances

Clinton City currently has an ordinance designed to specifically prohibit illicit discharges and illegal dumping. This ordinance was last updated in October 2010. A copy of the updated ordinance can be found in Appendix E.

Community Clean-up

Clinton City provides a cleanup day in which residents can bring their waste to the public works facility for free disposal. This cleanup day usually occurs in both the spring and the fall time.

Community Clean-up Dumpsters

The city provides 4 mobile dump trailers which are parked at resident's homes for a couple of days. Residents can use the dumpster for cleaning up their homes and yards. These dumpsters are provided free of charge twice a week between March and November.

Illicit Discharge Reporting

Reports of all spills are currently handled by Public Works, the Fire Department and the Davis County Health Department.

Mapping

The City has a storm drain map that locates all existing storm drain structures including locations of pipes, outfalls and detention basins.

Promote Disposal Site

Clinton City promotes Wasatch Integrated Waste Facility which accepts household hazardous waste by publishing the phone number on the city website.

Dry Weather Screening

The City has implemented a dry weather screening program. Each outfall is inspected at least once a year. A dry weather screening report form is filled out for each inspection.

Plan and Implementation Measures

To help meet the goals and objectives of this SWMP Clinton City has chosen to adopt the following BMPs for use within our city as applicable. Each BMP is cross referenced alphabetically by code to a fact sheet and specifications that describes the BMP, its applicability, its limitations, and its effectiveness in Appendix H.

BMP	Code
Illegal Dumping Controls	IDC
Identify Illicit Connection	IIC
Non-Storm Water Discharge to Drains	NSWD
Map Storm Water Drains	MSWD
Leaking Sanitary Sewer Control	LSSC
Dry Weather Screening	DWS
Illegal Solid Waste Dumping Control	ISDC
Ordinance Development	OD
Used Oil Recycling	UOR
Employee Training	ET

Public Education / Participation	PEP
Community Hotline	CH
Hazardous Waste Management	HWM
Above Ground Tank Leak & Spill Control	ATL

CONSTRUCTION SITE RUNOFF CONTROL

Construction Site Storm Water Runoff Control (4.2.4)

This measure is intended to minimize polluted storm water runoff from construction activities. Construction activities can contribute significant levels of sediment to storm water runoff if erosion and sediment controls are not implemented. The program includes:

- Program Description
- City Ordinances
- SWPPP
- UPDES Permitting
- Construction Site Inspections
- Enforcement Strategies
- Preconstruction reviews of Contractor Planning
- Receipt and Handling of public complaints
- Identify priority construction sites
- SOPs
- City Personnel Training
- Record Keeping of Permitted Sites

The City has developed and implemented a Construction Site Storm Water Runoff Control Program to reduce pollutants in any storm water runoff to the MS4 from sites with a land disturbance greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. Public and private projects, including projects proposed by the City's own departments and agencies will comply with these requirements. The city also requires storm water pollution prevention controls on sites that do not meet the description mentioned above.

UPDES Permitting (4.2.4.1)

All projects that disturb one acre or that are part of a larger common plan of development are required by ordinance to obtain a UPDES storm water general permit, as per the minimum requirement for associated projects. Before construction can begin proof of a Notice of Intent issued from the State is required before a permit will be issued. It is also required to keep the permit active until it is terminated. An online permitting process has been established at: https://deq.utah.gov/water-quality/general-construction-storm-water-updes-permits

In addition, the use of erosion and sediment control practices a required.

Require a SWPPP for Construction Projects (4.2.4.1.1)

All projects subject to a UPDES Construction Permit are required to prepare a SWPPP, the developers are referred to the State SWPPP template to assist in preparing the SWPPP.

Private Property Access for Inspections (4.2.4.1.3)

All projects on private property which have a Storm Water Construction Permit must provide right-of-way access to City personnel for inspections of storm water facilities.

Enforcement Strategy (4.2.4.2)

In order to ensure compliance of construction BMPs, an enforcement strategy has been developed.

1. Site plan review process to ensure that the approved set of plans contains the required BMPs, UPDES Permit, SWPPP, and all other required and necessary items.
2. Pre- construction meeting with the contractor to discuss the SWPPP to ensure that appropriate plans are in place to install appropriate BMPs, set expectations of standards and compliance.
3. Site inspections can verify that approved BMPs are in place and properly functioning.
4. When deficiencies exist, enforcement SOPs can be followed to bring a deficiency into compliance.

Reference: SOP specifics for enforcement strategy on construction site runoff is located in Appendix I of the SWMP.

The general enforcement strategy includes the following escalating steps:

- **Warning:** A written inspection report constitutes a warning with a specific amount of time given to the operator to correct the deficiency. Skip this step if the problems pose a serious threat to human safety or the environment. Inspect condition of BMPs, general site cleanliness, and compliance.
- **Notice of Violation:** When a written inspection report warning is not addressed within the designated time period, a Notice of Violation (NOV) is issued describing the violation to be corrected and additional time given to correct the deficiency. An enforcement fee is also issued at this point covering the cost to reinspect and providing some incentive to correct the problem.
- **Stop-Work Order:** When the NOV is not properly addressed in the given time period, a stop work order is issued. This can be verbal or in writing. All work must be stopped except for the activity needed to repair deficiency. At this point, an additional enforcement fee is issued to cover the additional cost to PW staff in dealing with the problem and to provide additional incentive to correct the problem.
- **Correct Problem and Bill Contractor*:** City to have deficiency repaired and billed to permit holder. City crews can be utilized as indicated in the consolidated fee schedule.
- **Criminal Charges:** coordinate with City Prosecutor for criminal charges

Documentation of all Enforcement Actions (4.2.4.2.2)

The storm water inspector will document and track all of the enforcement actions including site inspection reports, warnings, notes from site visits and any type of citation or orders issued to bring a site into compliance of requirements. Records will be stored in the data base (Public Drive) and on GIS.

Preconstruction SWPPP Review (4.2.4.3)

Clinton City requires that a SWPPP will be prepared and submitted to the City to review for compliance with State and Local regulations before the contractor can obtain approval. A checklist is utilized to ensure that all the required components of a SWPPP are included. The plan must include possible sources of storm water pollutants and Selection of Best Management Practices (BMPs) to reduce or eliminate pollutant impacts.

Pre-construction SWPPP reviews are conducted for all projects as per the SWPPP Review Procedure SOPs. This includes a review of design, operations, and construction BMPs for the project. Records of these projects are kept for five years or until construction is completed, whichever is longer

The following form contains the Pre-con review that is implemented by Clinton City. This form outlines the procedure and agenda that is used during this review meeting. In sufficient or non-compliance is expected to be corrected and brought to compliance prior to starting project.

Potential Water Quality Impacts Consideration (4.2.4.3.2)

In addition to reviewing the SWPPP, the overall project is reviewed with the use of a checklist to consider the potential of water quality impacts, both during construction and long-term after construction is completed. Procedures for this review includes ensuring that all the proper SWPPP BMPs and documentation is included on this document before any permit is issued. Potential to incorporate LID into the design is also considered. Consideration regarding construction location near sensitive and or high priority areas are also provided. A portion of this review includes a review of a Water Quality Report, prepared by the developer's engineer, evaluating the feasibility of doing on-site retention and/or installing long-term water quality measures.

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Identify Priority Construction Sites (4.2.4.3.3)

City will identify priority construction sites based

- Soil erosion potential.
- Site slope.

- Project size and type.
- Sensitivity of receiving waterbodies.
- Proximity to receiving waterbodies; and,
- Non-storm water discharges and past record of non-compliance by the operators of the construction site.

These “high priority” construction sites areas will be incorporated into the city’s database for easy reference. The SWPPP review check list will contain a box denoting if the project is classified as “high priority.”

Construction Site inspection and Enforcement (4.2.4.4)

The storm water inspector will be the person responsible for site inspections and enforcement of construction storm water pollution control measures. Inspection and enforcement SOP’s will be followed. Construction projects that require SWPPP’s will be determined in the project review phase and approved by the inspector.

The Clinton City MS4 inspector shall be state RSI Certified, or equivalently trained and certified by an accepted and recognized organization. Protocols for MS4 construction site inspections include:

- Inspecting all sites at least once a month
- Inspecting high priority sites at least twice a month
- Inspecting all projects before construction, during construction and after construction
- Using the State Compliance Inspection Form to document inspections
- Follow-up on all deficiencies and violations in a timely manner
- Complete all documentation including documenting enforcement actions in the City’s database
- Conducting an NOT inspection once the State has notified the City that the Contractor has requested a final inspection
- Utilize the State database to track project progress

Staff Training (4.2.4.5)

All staff members with responsibilities related to construction activities and plan review will receive regular training to implement the construction storm water program. Inspectors with RSI certification will meet the requirements to maintain Registered Storm water Inspector certification. Plan reviewers will complete Registered SWPPP Reviewer certification. Third party training events for inspectors and plan reviewer will be conducted through the Davis County Storm Water Coalition. Training records will include dates, course description and names and positions of staff in attendance and recorded Training records will be maintained in the data base Additional training details are included in Part 4.2.1.5.

Maintain Records (4.2.4.6)

All project records, including SWPPP’s, site plan reviews, inspections and enforcement actions, shall be maintained for 5 years or until construction is completed, whichever is greater. All records, monitoring reports, and documentation is kept on the Clinton City public drive.

POST CONSTRUCTION STORM WATER MANAGEMENT

Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management) (4.2.5)

This measure is intended to minimize the impact to storm water quality caused by development and redevelopment. The increase in impervious areas caused by development can cause an increase in the type and quantity of pollutants in runoff. Prior planning and design to minimize pollutants in runoff from these areas is an important component to storm water quality management. The program includes:

- Program Description
- City Ordinance Modifications
- Design Standards for Post-Construction Water Controls
- Review of Post-Construction Water Controls
- SOPs for Inspections and Enforcement
- City Personnel Training
- Post-Construction BMP Inventory

The City currently has many BMPs in place to ensure runoff control. The minimum performance measures established will promote the pre-development hydrology for new developments or improve the hydrology of a redeveloped site and reduce storm water discharge. Prior to issuance of a permit, a site plan review process evaluates storm water controls proposed for the site.

Long Term Storm Water Control General Approach

Clinton City's approach to Long Term Storm Water Controls is holistic and simple. Development (both new and redevelopment) will be asked to minimize impacts to the community by:

- Implementing non-structural BMPs when possible
- Retaining the 80th percentile storm when feasible
- Utilizing methods that mimic natural processes to treat storm water when runoff reduction does not meet target volumes
- Including maintenance requirements in the evaluation of BMP selection

More specifically, the Clinton City Long-Term Storm Water Program includes:

Revised Development Standards (4.2.5.1)

In conjunction with the new ordinances, the development standards have been updated. New development will be required to consider Low Impact Development when feasible. The standards define how and when on-site retention and infiltration can be safely done on an individual site. When on-site retention is not feasible, new development will be required to treat the Water Quality Volume before being allowed to discharge it into the City's system. The updated standards include:

1. A description the planning process and when LID practices need to be considered in the development of a project. This includes updated submittal requirements and coordination between the Planning Staff, the review staff, and the maintenance staff.
2. A requirement to complete a Water Quality Report for all new development projects.
   a. Determine the Water Quality Volume
   b. Report on existing site soil conditions
   c. Report on existing site water table levels
   d. Determine what portion of the Water Quality Volume can be retained on site
   e. Determine what portion of the Water Quality Volume will need to be treated
   f. Define the method of retention
   g. Define the method of treatment
3. Guidance on how "feasible" will be evaluated.
4. Guidance on how to select and size appropriate long-term storm water BMPs
5. Standard details for several preferred long-term storm water BMPs

Non-Structural BMPs (4.2.5.1.1)

Proposed new development and redevelopment projects will be required to consider and submit proposed non- structural BMPs for their development as part of their Storm Water Management Plan before receiving a permit to construct their development. Additional requirements will be investigated as part of the review and will include consideration of:

- Minimize development in areas susceptible to erosion and sediment loss
- Minimize disturbance of native soils and vegetation
- Preserve areas that provide important water quality benefits
- Implement measures for flood control
- Protect the integrity of natural resources and sensitive areas

Retention Requirement (4.2.5.1.2)

The new city ordinance requires the retention of the 80th percentile storm on all new developments, when it is feasible. The updated standards define a process to be used to determine feasibility technically. That process includes:

- Evaluating soils at the project site
- Investigating depth to water table
- Maximum requirements for surface ponding (to minimize potential health, safety and welfare concerns)
- Evaluating potential risk for flooding caused by increased infiltration
- Considering setbacks from various facilities and water bodies
- Considering potential geological hazards
- Proximity to existing and proposed land drains
- Consider drinking water source protection area boundaries

Retention for redevelopment projects is required when the impervious area of the redevelopment increases the existing impervious area by more than 10%. In this case the redevelopment is required to retain the net increase in expected runoff for the 80th percentile storm event.

In either case, if retention is not feasible, then alternative design criteria are implemented, targeted at reducing pollution in the runoff from the same 80th percentile storm event.

LID Implementation (4.2.5.1.3 & 4.3.5.1.4)

The City has developed a Low Impact Development (LID) manual and a process to evaluate and encourage an LID approach, which encourages the implementation of structural BMPs, where practicable, that infiltrate, evapotranspiration, or harvest and use storm water from the site to protect water quality. The LID manual guidance outlines these new standards and approach.

LID Implementation in Clinton will be challenging. A combination of existing soils conditions and high water table make it difficult to infiltrate. In Utah in general, infiltration is the primary means of utilizing retained storm water. Structural controls may include green infrastructure practices such as bioretention cells, tree boxes, and vegetated swales. The selection and design of post-construction controls should take into consideration; clogging or obstruction issues, freeze-thaw problems, effect on slope stability and groundwater, infiltration rates, capacity of existing soils to infiltrate and the ability to effectively maintain the control.

LID practices are intended for water quality only. They do not replace the existing flood control considerations. Flood control measures will need to be considered independently. If LID practices are proposed to be used on a site, the storm water inspector and engineer will review and evaluate the proposal to make sure it will perform adequately in the soil and terrain conditions for the particular site before approval.

Water Quality Report (4.2.5.1.4)

The new standards require the submittal of a Water Quality Report. Clinton City has adopted the State of Utah's template for the Water Quality Report with a few adjustments. The Water Quality Report documents LID considerations and identifies what long-term BMPs need to be incorporated as part of the project.

Ordinance Updates (4.2.5.2)

The city has recently updated its ordinances to include retention requirements and the implementation of LID practices on all new development projects. Redevelopment projects are being asked to also look at retention and LID practices although the requirements for redevelopment are not as stringent. (specific requirements and standards are detailed in following paragraphs).

Long Term Enforcement Strategy (4.2.5.2.1)

Long-term storm water protection measures will be installed prior to issuance of necessary permits. Site inspections are completed during construction which ensure that proposed long-term storm water protection measures are installed and perform their function properly. Enforcement procedures will be followed to ensure compliance. These procedures may include permit denial, citations, fees and/or requirements to correct deficiencies.

Sanctions for Violations (4.2.5.2.1)

The procedures and actions to gain compliance from violators are:

- BMP Inspection prior to accept of site improvements
- Maintenance easements must be properly recorded in the land record
- Maintenance arrangements with third parties will be arranged through appropriate legal means
- Periodic inspections of private and City owned or operated post-construction BMPs by the Storm Water Division Inspector
- If a third-party property is not maintained or repaired within the time allowed by the City, the City will perform the maintenance and repairs at its expense, and bill the same to the property owner
- Notification to owners of a problem location, specifying time of compliance
- Storm water credits can be revoked.
- Other actions include notice of violation, stop work orders, cease and desist orders, and citations

By ordinance, Clinton City has the authority to exercise enforcement, as outlined in previous sections. If the violation is illicit in nature, The Davis County Storm Water Coalition will be involved to provide investigation and enforcement as needed.

Expected Results (4.2.5.2.2)

New and redevelopment projects will be required to document:

- How long-term storm water BMPs were selected;
- The pollutant removal expected from the selected BMPs; and
- The technical basis which supports the performance claims for the selected BMPs.

Maintenance Agreements and Inspections of Long-Term Storm Water Controls (4.2.5.2.3)

During the platting process, developers are required to grant post construction access to MS4 employees to inspect storm water control measures constructed on private property. This is general done in the form of an easement. Developers are also required to enter into a maintenance agreement for privately owner facilities. The developer creates a document wherein they define the maintenance required for each long-term BMP. These maintenance agreements are required to be recorded with the property to ensure that these facilities are maintained even if ownership changes hands. The maintenance agreement also includes a provision that requires the owner to conduct maintenance inspections at least once every other year. MS4 inspectors conduct oversight inspections at least once every five years to make sure the owner is complying with the terms of the maintenance agreement. The maintenance agreement also includes a provision that allows the City to perform maintenance if the owner is not complying with the maintenance agreement and charge the owner for the cost of that maintenance. Both owner performed and MS4 performed inspections and maintenance activities are to be documented and filed in the city's database.

Construction Inspections of Long-Term Storm Water Controls (4.2.5.2.4)

All long-term storm water control measures are inspected during construction to make sure they are constructed according to plan. Developers are required to submit record drawings that verify the way various features were actually constructed.

City Post Construction BMP (SOPs) (4.2.5.2.5)

The city has SOPs for site inspection and enforcement of post- construction storm water control measures. These procedures will ensure adequate ongoing long-term operation and maintenance of approved private and City owned or operated storm water control measures. In summary this SOP requires:

- Post construction BMPs owner information, location, maintenance schedule and other pertinent information are entered on the post-construction facilities data base
- Inspections are conducted by City Personnel using the Post-Construction Facility Inspection Report
- After a site inspection or upon a violation to the post-construction BMP maintenance requirements is found, the same process is followed as described in Section 4.2.5.2.1

Procedures for Site Plan Review (Pre-Construction) (4.2.5.3.1)

Owner/developers are invited to a pre-development meeting to discuss new development and redevelopment projects. Long-term storm water management requirements are provided to the developer. Long-term management practices are discussed in the early stages of the design process, requiring long-term management BMPs to be considered and incorporated into the design. When plans are finalized and submitted staff reviews the plans considering water quality impacts that the proposed project may have on storm water quality. Plans are approved if proposed BMPs adequately address those impacts.

Review Post-Construction Plans (4.2.5.3.2)

Clinton City MS4 performs a plan review meeting, where all participants, representing development, utilities, and other key management positions, evaluate post construction plans to ensure that they are adequate for the project and will meet compliance standards, as well as meeting long term storm water management measures

Post Construction Structural Controls Inventory (4.2.5.4 & 4.2.5.4.1)

Clinton City maintains a spreadsheet which lists all sites public and private, which have post construction structural storm water controls. With the development of the city's new database, this information will ultimately be transferred over to the database. The database will include:

- Short description of each storm water control measure (type, number, design or performance specifications);
- Short description of maintenance requirements (frequency of required maintenance and inspections); and
- Inspection information (date, findings, follow up activities, prioritization of follow- up activities, compliance status).

Inventory Updates (4.2.5.4.2)

After annual inspections are completed for post-construction storm water control measures, updated information is recorded on the inspection form.

Amendments and changes will be made as needed, but at least on an annual basis and after SWMP and Inventory reviews.

- Proximity to waterbody
- Status of waterbody to improve impaired waterbodies and protect unimpaired waterbodies
- Hydrologic condition of the receiving waterbody
- Proximity to sensitive ecosystem or protected area
- Any upcoming sites that could be further enhanced by retrofitting storm water controls

Retrofit Existing Developed Sites

Existing developed sites which are adversely impacting water quality will be assessed and evaluated for retrofit opportunities to reduce the water quality impact. Sites will be ranked to help determine which sites are best suited for retrofits as well as those that could be considered later for retrofitting.

Staff Training (4.2.5.5)

Training shall be conducted as described in section 4.2.1.5 above. Training of staff will be tailored to specific job responsibilities.

POLLUTION PREVENTION / GOOD HOUSEKEEPING

This measure is intended to ensure a reduction in the amount and type of storm water pollutants by establishing routine activities in the operation and maintenance of municipal operations that affect storm water runoff.

Setting particular guidelines for source controls and materials management is an important component to storm water quality management. The Program includes:

- Operation and Maintenance Program Description/Establishing SOPs
- Facilities Inventory
- High Priority Facilities and Activities
- Inspection of Facilities
- City Personnel Training

The Pollution Prevention and Good Housekeeping Program of this SWMP addresses routine activities in the operation and maintenance of City owned facilities, drainage systems, roadways, parks and open spaces, and other municipal operations to reduce pollutants entering the storm drain system.

City owned facilities and City activities have standard operating procedures (SOPs) for the maintenance and proper operation of structural storm water controls along with training, the ultimate goal of preventing or reducing pollutant runoff from the City owned facilities and operations. All of the components of the O&M program will be included in this document. It will identify the department and the staff responsible for performing each activity described in this section.

City Owned or Operated Facilities and Storm Water Controls

The city has a list of all City-owned or operated facilities, parks, and storm water controls. This list will be

reviewed annually and updated as necessary. The list includes:

- Parks and open space
  - Meadows Park
  - Power Line Park
  - Kestrel Park
  - Veterans Park
  - Trailside Park
  - Pioneer Park
  - Pond Park
  - West Clinton
  - Clinton Nature Trail
  - Civic Center Park
  - Heritage Park
- Material storage yards
  - Public Works Shops
- Pesticide storage facilities
  - Public Works Shops
- Public buildings, including police stations, fire stations, municipal
  - City Hall
  - Police Department
  - Fire Station
  - Recreation Building
- Buildings, etc.
  - Civic Center Scorekeeper Building
  - West Clinton Scorekeeper Building
  - Recreation Storage #1, #2, Baseball Shed Civic Center
  - West Clinton Shed
  - Restrooms, Meadows, Veterans, Civic Center (2)
  - Pump House
  - Cranefield Lift Station
- Parking lots
  - Meadows Park
  - Cemetery
  - Civic Center
  - Power Line Park
  - Public Works Shop
  - West Clinton Park
  - Pond Park
  - Kestrel Park
- Public works yard
- Salt storage facility

- Street repair and maintenance sites
- Vehicle maintenance and storage yards
- Structural storm water controls
  - Meadows
  - Shoestring
  - Cemetery
  - Trailside
  - Power Line
  - Pond
  - Kestrel
  - Clinton Fields
  - 1300 N

Facilities covered under the General UPDES Permit for Storm Water Discharges Associated with Industrial Activities will maintain a Storm Water Pollution Prevention Plan (SWPPP).

Inventory Assessment (4.2.6.2)

City-owned facilities were assessed as to their risk for discharge potential. The majority of potential pollutants include sediments, nutrients, and hydrocarbons from petroleum products. These are a result from park maintenance activities, roadway maintenance activities, exterior building maintenance activities (lawn maintenance or other activities involving chemicals and nutrients), sediment and trash collected from our storm drains, and trash and hydrocarbons found in our parking lots. All these pollutants pose the highest risks of entering into our storm drain system from city-owned facilities. Clinton City has evaluated and assessed the potential risk at the above listed facilities.

"High Priority" Facilities (4.2.6.3)

The only "High priority" facility was determined to be the Public Works shops This was determined because of the nature of operations and the activities that may impact storm water quality The factors that were considered in giving a facility a high priority ranking was the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must be performed outside, proximity to water bodies, the state of housekeeping practices at the time of evaluation. There currently are no impaired water bodies that have been identified within Clinton City. Should any water bodies become impaired consideration will be given to facilities that may be contributing or have the potential to contribute to the impairment.

High Priority Facility SWPPPs (4.2.6.4)

A Storm Water Pollution Prevention Plan (SWPPP) has been developed for all high priority facilities. The State's template for industrial site SWPPPs was followed in preparing the SWPPPs. A site map is included in each SWPPP showing:

- The extents of the site
- Drainage patterns
- Key features, buildings and activity locations
- Control measures
- Outfall locations

- Historic problem areas
- Areas of high concern

Buildings and Facilities O&M

The City Hall, Police, and Fire Station have similar operations and maintenance activities.

Chemicals are used for cleaning the interior of the building and are stored inside the building away from any storm drain facilities. Exterior activities include landscape maintenance, sidewalk and parking lot maintenance.

The Public Works Shops building and maintenance yard activities include maintenance and regular trash cleanup, the yard for this building is deep cleaned in the spring and fall. The parking lot is swept every time the street sweeper is out sweeping. Storm Drain Boxes all have protection inside and are checked and cleaned regularly. Materials with a potential to spill are kept indoors.

Parking lot sweeping occurs for all City-owned facilities approximately 5 times per year. Tracking of when sweeping activities occur is maintained by the Storm Water Crew. Storm drain boxes found in the parking lots are also cleaned annually. For parking lot and exterior maintenance, the Pothole Patching, Remove & Replace Asphalt, Street Sweeping, Vac Operations and Storm Drain Cleaning and Lawn Mowing SOPs are followed.

Trash and debris collection occurs by appropriate staff members around each of the facilities weekly and trash collected is deposited into appropriate containers to prevent storm water pollution runoff.

Material Storage, Heavy Equipment Storage Areas and Maintenance Areas:

Chemicals are stored indoors or within containment areas with BMPs installed to prevent storm water pollution, unless otherwise addressed. Deicing materials are stored in a covered area which prevents salts from entering the storm water system. When deicing materials are loaded into trucks, sweeping activities are completed around the loading area to prevent any spilled material from entering the storm drain system.

When leaking vehicles are encountered in the fleet yard, absorbents and drip pans are placed immediately to prevent storm water contamination. Leaking vehicles are then brought into the shop for repairs as soon as possible to correct leaks. Maintenance at the fleet yard is completed indoors within a contained area, which is connected to the sanitary sewer.

Parks and Open Space O&M

The Parks Department maintains all City Parks Public Works maintains trails. All the chemicals are stored indoors, at the maintenance buildings or at the Public Works Shops building. Maintenance activities include fertilizers, mowing, herbicides, pesticides, and regular landscape maintenance. Each of these activities follows proper SOPs. Proper disposal of lawn clippings, trash, debris, used chemical containers and other vegetation is followed by discarding these items into garbage containers that are collected and taken to the local landfill. The Parks Department follows the public works SWPPP.

All storm drains located in parks or open space facilities are inventoried. Appropriate sediment and erosion control measures are in place (e.g. Curb & gutter, runoff into established areas for infiltration) to ensure stability and water quality protection. Pet waste stations are located along the trails and checked regularly.

Vehicle and Equipment O&M

All City-owned vehicles are maintained by Public Works. They are located inside the Public Works Shop. All maintenance activities are housed inside of the building. The maintenance area has drains located at the perimeter of the work area so that any spills or leaks which may occur during maintenance activities will be contained within the work area and cleaned up or will enter into these drains which are connected to the sanitary sewer system.

Chemicals and pollutants are stored properly indoors and do not pose a threat to the storm drain system. If there are any vehicles which leaks, they are either parked inside the maintenance building, or outside in the parking lot with containment measures in place to collect and/or absorb the leaking material until the vehicle is fixed and no longer leaks. The Public Works building #2 houses an indoor and outdoor car wash. All drains are connected to the sanitary sewer system SOPs are followed to reduce pollutants from entering the storm drain system.

The only fueling area is located at the Public Works Shops yard. Spill kits and signs are posted in the area.

Roads, Highways and Parking Lots O&M

City-owned roads and parking lots are maintained by the Public Works Crew. Maintenance activities include pothole repairs, sidewalk repairs, curb and gutter repairs, snow removal, street sweeping, roadway striping and mowing within the right-of- way along some major arterials. SOPs for each of these activities are available.

Street sweeping occurs approximately 5 times per year throughout the entire City. When City sweepers are sweeping streets in the vicinity of City-Owned parking lots, lots are also swept. Public Works facility is swept each day the sweeper is sweeping.

Snow hauling does not occur.

Storm Water Collection/Conveyance System O&M

All of the public storm water system owned by the City is maintained by Public Works personnel. Maintenance activities completed annually include cleaning out storm drain boxes with vac trucks, jet washing pipelines, maintaining storm water collection basins, and ditch cleaning. Priority areas where more silt and debris accumulates into the pipe system and areas where flooding may occur without proper cleaning are cleaned more frequent.

All catch basins are inspected annually Vac trucks clean out each storm drain catch basin as needed. The maintenance calendar has a list of higher priority storm drain structures which receive cleaning on a more frequent basis. These structures are higher priorities because there is a larger volume of pollutants which may enter the system at these locations and/or because the functionality of the structures has limitations (i.e. siphons) in their effectiveness and need to be cleaned more regularly to maintain the efficiency of the system.

City-owned structural BMPs such as swales, retention and detention basins and regional storm water control facilities are inspected frequently by Storm Water personnel.

When deficiencies exist, cleaning, dredging and other maintenance activities are performed by storm water personnel. Groups from the general public which want to perform service activities for their community also

sponsor service projects which remove trash and debris from storm water basins and allow for public involvement from these groups.

Pollutants collected from street sweeping, City-owned parking lot sweeping, and storm drain cleaning activities are deposited in the containment area in the Public Works Shops yard, where the waste is deposited into a settling basin. Water collected from the waste evaporates or is vacuumed out and drained into the sanitary sewer system. Remaining solid waste is then transported to the local landfill. Records of landfill loads are maintained in the data base. If waste materials to be disposed of require special handling other than dropping it off at the landfill, the city will contact an appropriate 3rd party specialized in handling and disposing such waste.

Inspections (4.2.6.5)

High priority facilities are more closely monitored to help reduce the potential for pollutant discharge.

Monthly Visual Inspections (4.2.6.5.1)

Monthly visual inspections are performed for all "high priority" facilities. Monthly inspections are completed by the Storm Water inspector utilizing the Monthly Inspection Checklist to minimize the potential for pollutant discharge. These inspections generally consist of a walk through all areas, taking note of any spills, clean-up or activities that are being conducted and not following defined standard operating procedures (SOPs) Any spill discovered will be documented and cleaned up immediately to prevent contact with precipitation or runoff.

Deficiencies and corrective actions are documented, and a log kept showing when monthly visual inspections were completed will be maintained in the data base

Semi-Annual Comprehensive Inspections (4.2.6.5.2)

Twice a year a more comprehensive inspection is completed at each high priority facility. During the "high priority" comprehensive facility inspection, specific attention will be given to:

- Waste storage areas
- Dumpsters
- Vehicle and equipment maintenance areas
- Fueling areas
- Material handling areas
- Pollutant-generating areas

These inspections involve more than just a walk-through of the site. They include opening storage areas, checking behind and around stored materials, looking for leaks and stains, and any other evidence that problems have occurred or may soon occur. These semi-annual inspections will be documented in the data base. Inspections will follow the SOP guidelines and recorded on an inspection form. The report will include identified deficiencies and the corrective actions taken to remedy the deficiencies.

Annual Visual Observations of Storm Water Discharges (4.2.6.5.3)

The storm water inspector will visually observe the quality of storm water discharges from "high priority" facilities which is identified as the public works facility at least annually. Any observed problems such as

color, foam, sheen, or turbidity that can be associated with pollutant sources or controls will be remedied to prevent discharge to the storm drain system. Visual observations will be documented, and records kept in the data base.

These visual monitoring events will be conducted during storm events that occur during normal business hours.

SOPs (4.2.6.6)

Standard Operating Procedures have been developed for many different activities conducted by MS4 employees and vendors. For ease of organization and training these SOPs have been grouped into several different categories. These categories include:

- Building and Facilities City facility SOPs include: City owned or operated offices, police and fire stations, parking lots.
- Materials Storage Areas. These areas are primarily located at the Public Works Yard where large quantities of materials are stored for ready use.
- Heavy Equipment storage and maintenance areas. This equipment is also primarily kept and maintained at the Public Works Yard.
- Parks and Open Space. This category includes storage and maintenance of equipment at the Public Works Yard, but also includes many activities that are conducted at various sites throughout the city.
- Vehicles and Equipment Fleet storage and maintenance generally occurs at the Public Works Yard. This category includes the fueling station.
- Roads, highways, and parking lots The streets department operates out of the Public Works Yard. Road maintenance and repair equipment is stored and serviced there. Work activities are scattered throughout the city.
- Storm water collection and conveyance systems The storm water department is also run out of the Public Works Yard. Activities take place where needed throughout the community.

Maintenance by Contract (4.2.6.7)

When the city hires a contractor to do maintenance within the city, it is usually because the city crews do not have the expertise, equipment, or time to do that work. When the contractor knows more about the activity and the details of the activity than city crews, it is best to have the contractor provide his SOPs. The city requests that contractor to submit their SOPs. The city reviews the SOPs to make sure they comply with city standards.

SOP Practices (4.2.6.6.1)

In general, SOPs address the following practices:

- Chemical use, storage, and disposal
- Materials storage including but not limited to salt, sand, gravel, landscaping materials
- Waste and trash management
- Cleaning, washing, painting and maintenance activities
- Sweeping roads and parking lots
- Application, storage and disposal of fertilizers, pesticides, and herbicides

- Lawn maintenance including disposal of clippings and leaves
- Green waste disposal
- Pet wastes disposal
- Vehicle and equipment maintenance and repair
- Vehicle and equipment storage
- Road and Parking lot maintenance and repair
- Cold weather operations including plowing, sanding, deicing materials application and snow storage
- Right-of-way maintenance
- Managing and cleaning up after municipal sponsored events
- Storm water conveyance system maintenance
- Graffiti removal

Maintenance Schedules (4.2.6.6.2)

Maintenance schedules are prepared and programed for things like parking lot and road sweeping. Pipe and catch basin inspections and cleaning are also scheduled. Schedules are prepared based on system priority. Priorities are established after considering areas that get the highest use and have the largest maintenance concerns.

Proper Waste Disposal (4.2.6.6.3)

Cleaning and maintaining facilities can generate a large amount of potential pollutants. The City collects this waste and hauls it to the Davis County Landfill or has it hauled by a third-party contractor.

Liquid Waste Disposal (4.2.6.6.4)

Liquid waste disposal is generally handled in two separate categories. Hazardous liquid wastes include things like spent oil and hydraulic fluids, paints, and other hazardous liquid wastes. These are either recycled when possible or taken to the hazardous waste facility in Davis County. Non-hazardous liquid wastes include things like wash water and floor drains are collected and disposed of in the sanitary sewer.

Spill Prevention Plan (4.2.6.6.5)

The city has a spill prevention SOP. This plan includes avoiding spills as much as possible and containing and collecting spills using absorbent materials and dry cleaning methods to the extent possible.

Floor Drains (4.2.6.6.6)

Floor drains for all city owned and operated facilities have all been located and their discharge points verified.

Contract O&M Services (4.2.6.7)

When the City contracts with a third party to perform maintenance activities, the contractor is provided with copies of the appropriate city SOPs and required to train employees on the Clinton City protocols before work can begin.

Water Quality Impacts of New Structural Controls (4.2.6.8)

During the construction plan review process, assessment is made regarding the water quality impacts in the design of all new flood management structural controls that are associated with Clinton City MS4 or that discharge to the MS4. Consideration is given to controls that can be used to minimize the impacts to site water quality and hydrology while still meeting project objectives. These assessments and considerations are agreed upon by the review committee.

Assessment of Existing Structural Controls (4.2.6.8.1)

Existing storm water facilities will be reviewed annually as part of the SWMP review in conjunction with the long-term storm water facility inspections. Retrofit opportunities may present themselves after each review.

Retrofit Plan (4.2.6.9)

Several years ago, the city adopted a regional stormwater storage approach. Rather than have many small local storage facilities, the decision was made to construct fewer large regional detention basins. The idea was to reduce the number of facilities needing maintenance and attention. Now that the city is mostly built out, this same general approach is being adopted relative to water quality. The city has compiled a list of water quality projects that can be implemented on a regional basis and prepared a capital improvements list including these projects. As money becomes available this plan will be systematically implemented.

In most cases this plan will focus on treatment rather than infiltration. Most the city's existing detention basins have been built only a couple of feet above the water table. As a matter of fact, the design of some of the basins had to be modified because groundwater was encountered during construction. All facilities include areas where the storm water runs across vegetated areas allowing for some infiltration and some filtering of the water.

Employee Training (4.2.6.10)

Public Works Department personnel are trained annually regarding storm water quality as it relates to their job responsibilities. More specific information pertaining to employee training can be found in Section 4.2.1.5 of this document.

NOTE: Training records and all associated and supporting documentation is housed on the Clinton City Public drive and can be viewed upon request.

STANDARD OPERATING PROCEDURES

GENERAL – Chemical Application Pesticides, Herbicides, Fertilizers

1. Preparation
    a. Make sure your state Chemical Handling Certification is complete and up-to-date before handling any restricted chemicals.
    b. Wear proper PPE
    c. Calibrate fertilizer and pesticide application equipment to avoid excessive application.
    d. Use pesticides only if there is an actual pest problem and periodically test soils for determining proper fertilizer use
    e. Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendation for best results ("Read the Label").
    f. Know the weather conditions. Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).
2. 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 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.
3. Clean-up
    a. Sweep or blow off pavements or sidewalks where fertilizers or other solid chemicals have fallen, 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")
4. Documentation
    a. Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
    b. Record pesticide application activities: including date individual who did the application, amount of product used and approximate area covered.

GENERAL– Concrete Work

1. Preparation
    a. Train employees and contractors in proper concrete waste management.
    b. Store dry 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 (usually shop yard)

2. Process
   a. Install inlet protection as needed.
   b. Moisten sub base just prior to placing new concrete. This helps keep the soil from wicking moisture out of the concrete into the ground.
   c. Place new concrete in forms.
   d. Consolidate new concrete
   e. Screed off surface
   f. Let concrete obtain its initial set
   g. Apply appropriate surface finish
   h. Remove forms when concrete will not slump.
3. Clean-up
   a. Perform washout of concrete trucks and equipment in designated areas only
   b. Do not washout concrete trucks or equipment into storm drains, open ditches, streets or streams
   c. Concrete trailers: dump excess in concrete bin fill trailer with water and dump into evaporation pit.
   d. Cement and concrete dust from grinding activities is swept up and removed from the site.
   e. Remove dirt or debris from street and gutter.

GENERAL—Concrete U-Cart Concrete Wash Out

1. Preparation
   a. After concrete poured from the U-Cart, raise the hopper.
   b. Drive to shop yard for debris dumping.
2. Process
   a. Dump any extra concrete into bin marked “concrete”
   b. Go to wash out pad behind building #2 and fill hopper with rinse water
   c. Drive trailer to wash out bin and dump water cement mix
   d. Go back to washout pad behind building #2 and spray, scrub, washout excess concrete and rocks from inside and outside of hopper and entire unit, drains are plumbed to sand traps and sewer.
3. Clean-up
   a. Do a walk around inspection of U-Cart.
   b. Take U-Cart back

GENERAL – Dumpsters and Garbage Storage

1. Preparation
   a. Small dumpster located by shop #1 with lid and serviced weekly by Robinson Waste.
   b. Large dumpster provided in shop yard next to garbage bin serviced as needed by Robinson Waste.
   c. Bins provided in yard for different types of debris: concrete, asphalt, green waste, metals, sweepings, wash out, garbage, mixed soil waste.
   d. Training is provided to employees to dispose of materials in proper place.
2. Process
   a. Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.

b. Locate dumpsters on a flat surface that does not slope or drain directly into the storm drain system.
c. Keep lids (if equipped) closed when not actively filling dumpster.
d. Keep bins pushed up or empty and in good shape.
e. Install berms, curbing, vegetation strips or adequate grading around storage areas to control water entering/leaving storage areas.

3. Clean-up
   a. Keep areas around dumpsters and bins clean of all garbage.
   b. Have dumpsters and garbage bins empted as often as needed to keep from overfilling.
   c. Have bins or dumpsters replaced as needed to keep odors from becoming a problem.
   d. If cans or bins need to be washed, wash out behind or inside building #2

GENERAL – Fueling

1. Preparation
   a. Train employees on proper fueling methods and spill cleanup techniques.
   b. Maintain 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 (located in fuel shed) and on mobile fueling vehicles and shall be disposed of properly after use.
2. Process
   a. Shut off the engine.
   b. Ensure that the fuel is the proper type of fuel for the vehicle. North tank is diesel south is regular gas.
   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 storm drains and water bodies.
   h. Make sure fueling equipment is in good order, notify shop foreman if attention is needed to equipment.
3. Clean-up
   a. Immediately clean up spills using dry absorbent located in gas shed or shop, sweep up absorbent material and properly dispose of contaminated clean up materials.
   b. Large spills shall be contained as best as possible and follow guidelines set forth in shop SWPPP and or SPCC plan.
4. Records
   a. Comply with above ground storage tank records and monitoring requirements.
   b. Document training of employees.

GENERAL – Parking Lot Maintenance

1. 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.

2. Process.
   a. Sweep parking areas, as needed, or as directed by the city's responsible official. Shop yard is to be swept every time the sweeper is out.
   b. Hand sweep sections of gutter if soil and debris accumulate.
   c. Pick-up litter as required to keep parking areas clean and orderly.
3. Clean-up.
   a. Dispose of sweepings into the bin at city shop labeled "sweeper"
   b. Street sweeper to be cleaned out in a manner as instructed by the manufacturer behind shop #2 and in a manner that swept materials cannot be introduced into a storm drain.
4. Documentation.
   a. Keep accurate logs to track swept parking areas and approximate quantities.
   b. Document training of employees.

GENERAL – Pet Waste

1. Preparation
   a. Adopt and enforce ordinances that require pet owners to clean up pet wastes.
   b. Dispensers for pet waste bags and disposal containers along with signs with instructions for proper cleanup and disposal are provided at locations such as trail heads or parks where pets are allowed. (power line park/trail, rail trail, Clinton trail).
2. Process
   a. Check parks and trails for pet waste problems as needed.
   b. Check public open space for pet waste prior to mowing and watering.
   c. Provide ordinance enforcement as needed.
   d. Maintain dispensers and keep stocked with waste bags.
3. Clean up
   e. 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.
4. Documentation
   f. Document problem areas for possible increased enforcement and/or public education signs.

GENERAL – Storm Drain Inlet Protection

1. Preparation:
   a. Identify all inlets that are within the construction area and a minimum of one up and two storm drain inlets downstream from the work location.
   b. Do visual inspection on outside of grate.
   c. Make sure nothing needs to be cleaned before installing the inlet protection.
   d. Identify what type of inlet protection will be necessary. (Filter fabric, gravel bags, or drop in sediment trap bags.)
2. Process

a. Clean the top of the inlet if necessary.
b. Use the type of inlet protection that has been determined to be appropriate, and protect all sediment from entering the storm drain system.
c. Inspect the inlet protection periodically to assure that it is working properly.
d. Clean any sediment that may build up as needed.

3. Clean-up
   a. When all construction is complete and stabilized remove the inlet protection and clean all sediment that has been trapped.
   b. If needed have the vacuum truck clean the storm drain inlet box.
   c. All sediment that has been removed will be taken to the local landfill for disposal.
4. Documentation
   a. Keep logs of number of catch basins protected and cleaned.
   b. Record the amount of waste collected.
   c. Keep any notes or comments of any problems.

GENERAL – Transporting Dry Excavated Materials & Spoils

1. Preparation
   a. Utilize truck with proper containment of materials
   b. Determine disposal site of excavated materials
   c. Perform pre-trip inspection of vehicle
2. Process
   a. Load
   b. Check truck after loading for possible spillage
   c. Cover load if possible
   d. Transport in manner to eliminate spillage & tracking
   e. Utilize one route for transporting
3. Clean-up
   a. Clean loading area
   b. Clean transporting route
   c. Wash off truck and other equipment behind building #2 if needed

GENERAL – Transporting Equipment

1. Preparation
   a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.
   b. Conduct pre- trip inspection of equipment and vehicles
2. Process
   a. Load and secure equipment on trailer or truck
3. Clean-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 SOP for Cleaning Equipment SOP
e. Clean off trailer

4. Documentation
   a. Trip inspection report if attention needed to equipment

GENERAL – Transporting Soil and Gravel

1. Preparation
   a. Dry out wet materials before transporting if possible.
   b. Make sure you know and understand the SWPPP requirements for the site you will be working at.
   c. Truck and other equipment will be cleaned afterwards behind building #2.
   d. Perform pre –trip inspection on truck before use.
2. 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 if possible.
   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.
   e. Drivers responsibility to clean spilled material on truck before trip.
3. Clean up
   a. Use sweeper to clean up any materials tracked out on the roads from site.
   b. Wash out truck and other equipment when needed behind building #2.
4. 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 and what the weather conditions were at the time.

GENERAL – Transporting Wet Excavated Materials & Spoils

1. Preparation
   a. Utilize truck with containment for material
   b. Determine disposal site of excavated material
   c. Perform pre-trip inspection on vehicle
2. Process
   a. Load and Transport in manner to minimize spillage & tracking of material
   b. Check truck for spillage
   c. Utilize one route of transport
3. Clean-up
   a. Clean route of transport to provide cleaning of any spilled material
   b. Wash out truck and other equipment behind building #2 if needed

GENERAL – Vehicle and Equipment Storage

1. Preparation

a. Inspect parking areas for stains/leaks on a regular basis.
b. Drip pans or adsorbents for leaking vehicles are provided in building #1 & #2

2. Process
   a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer system.
   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 to collect the drip. And vehicle will be scheduled for repairs.
   e. The location to empty and store drip pans is in shop #1.
   f. Never store leaking vehicles over a storm drain.
   g. Clean up all spills using dry methods.
3. Clean 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 time the sweeper is out, weather permitting.

GENERAL – Washing

1. Preparation
   a. The wash area for vehicles and equipment is inside maintenance building #2 that has a drain system which is attached to the sanitary sewer system or on the outside wash pad back side of building #2 that has a drain system which is attached to the sanitary sewer system.
   b. No vehicle washing will be done where the drain system is connected to the storm sewer system.
2. Process
   a. Minimize water and soap use when washing vehicles.
   b. Use hoses with automatic shut off nozzles to minimize water usage if possible.
   c. When washing outside the building, it is the operators' responsibility to make sure all wash water is contained on the wash pad and does not have access to the storm drain.
   d. Never wash vehicles over a storm drain.
3. Clean Up
   a. Sweep wash areas after every washing to collect what solids can be collected to prevent them from washing down the drain system, dispose of solids in garbage.
   b. Clean solids from the settling pits on an as needed basis.
   c. Street sweeper will sweep wash pad every day it's sweeping the streets.

IDDE - Call-in Inspections

1. Preparation
   a. Have a system in place to receive phone calls and collect information regarding suspected illicit discharges.
   b. Davis county spill # 801-525-5100 or 24hour on call # 801-807-8872

c. Clinton City public works office 801-614-0870 Davis county dispatch 801-451- 4151

2. Process
   a. Use the Incident Tracking Sheet to collect the appropriate information from the caller. Then, transfer the Incident Tracking Sheet to storm water specialist.
   b. Promptly investigate reported incidents.
   c. If an illicit discharge of unknown source is confirmed, follow the procedure of SOP IDDE - Tracing Illicit Discharges.
   d. If an illicit discharge known source is confirmed, follow the procedure of SOP IDDE - Removing Illicit Discharges.
3. Clean up
   a. Clean catch basin, clean storm drain, or initiate spill response, as applicable. Follow relevant SOPs.
4. Documentation
   a. File all completed forms (i.e. incident tracking, catch basins cleaning, storm drain cleaning.
   b. Document any further action taken.
   c. Review incidents reported by citizens on an annual basis to look for patterns of illicit discharges and to evaluate the call-in inspection program.

IDDE - Opportunistic Illicit Discharge Observation

1. Preparation
   a. Be alert for potential illicit discharges to the municipal storm water system while going about normal work activities and inspections.
2. Process
   a. Call the storm water specialist if you see evidence of an illicit discharge.
   b. Notify Davis County Health Department 801-8078872
   c. Assess the general area of the illicit discharge to see if you can identify its source.
   d. Whenever possible, take photographs of the suspected illicit discharge.
   e. Responding stormwater department personnel will complete the following:
      i. Use the IDDE Incident Tracking Sheet to document observations.
      ii. Obtain sample for visual observation and complete an Outfall Inspection Form, if applicable.
      iii. Follow the procedure of SOP IDDE - Tracing Illicit Discharges.
3. Clean-up
   a. Clean catch basin, clean storm drain, or initiate spill response, as needed. Follow relevant SOPs.
4. Documentation
   a. File all completed forms (ie. Incident Tracking Form, Outfall Inspection Form, Catch Basin Cleaning Form, and Storm Drain Cleaning Log).
   b. Document any further action taken.

IDDE - Outfall Inspections

1. Preparation:
   a. Know the past and present weather conditions. Conduct inspections during dry weather periods.

b. Gather all necessary equipment including: tape measure, clear container, tablet with necessary forms, flashlight, and camera (optional).
c. Obtain maps showing outfall locations and identifiers.
d. Obtain outfall description and observations from previous inspections, so the outfall can be accurately identified and observations compared.

2. Process
   a. Perform an inspection of each outfall at least once per year. Whenever, possible use the same personnel for consistency in observations.
   b. Identify each outfall with a consistent and unique number. Use maps and previous inspection reports to confirm the outfall identity and location.
   c. If dry weather flow is present at the outfall, then document and evaluate the discharge by completing the following steps:
   d. Collect field samples for visual observations in a clean, clear container and in a manner that avoids stirring up sediment that might distort the observation.
   e. Characterize and record observations on basic sensory and physical indicators (e.g., outfall condition, flow, odor, color, oil sheen) on the Outfall
   f. Inspection Form.
   g. Compare observations to previous inspections.
   h. If the flow does not appear to be an obvious illicit discharge (e.g., flow is clear, odorless, etc.), attempt to identify the source of the flow (groundwater, intermittent stream, etc.)
   i. If an illicit discharge (such as raw sewage, petroleum products, paint, etc.) is encountered or suspected, follow the procedure of SOP IDDE - Tracing Illicit Discharges.
3. Cleanup - as necessary
4. Documentation
   a. File completed outfall inspection forms.
   b. Update maps if new outfalls are observed and inspected.

IDDE – Outfall/Discharge Inspection and Characterization

1. Preparation
   a. Make sure you have the following supplies for the field work:
      i. Camera, flashlight, nitrile gloves, waterproof boots or waders, tape measure, phone, watch (with stopwatch), GPS, and map(s) showing drainage system and outfalls in the area you plan to screen
      ii. pH and ammonia testers, thermometer, clear sample bottle(s), ziplock bags, and caulk or plumbers' putty
   b. Notify private property owners whose property you'll need to be crossing
2. Process
   a. Upon arrival at each outfall/discharge, take photo(s), and gather information
   b. Use the data observed, collected and recorded on Field Sheet and guidelines on Field Sheet to characterize the outfall/discharge as an "unlikely," "potential," "suspect," or "obvious" point of illicit discharge

i. if outfall is non-flowing and characterized as “obvious,” “suspect,” or “potential,” place a caulk dam and schedule a return visit to attempt to collect a sample
ii. if characterized as “obvious,” follow spill incident response and reporting procedures and assist responders in containing the discharge. Then initiate SOP – IDDE Tracing Source of Discharges
iii. if outfall is flowing and characterized as suspect, initiate SOP – IDDE Tracing Source of Discharges within two working days.

3. Clean-up
   a. Place used gloves and other waste in bag and carry-out for disposal into waste bin.
   b. If any hazardous waste is produced (eg. used detergent/surfactant reagent), carry out and arrange for delivery to a hazardous waste facility
      i. Contact: Veolia Environmental Services 709 N. Taylor Way Suite 1
      North Salt Lake, UT 84054, US (801) 232-0976
4. Documentation
   a. Record any further actions taken for potential, suspect, and obvious illicit discharges
   b. Note any discrepancies in the storm drain system maps from what is found in the field. Make sure that the maps get updated to correctly reflect actual conditions

IDDE - Removing Illicit Discharges

1. Preparation
   a. Notify Davis County Health Department 801-807-8872
   b. Obtain available property ownership information for the source of the illicit discharge.
2. Process
   a. Assist Davis County Health Department to determine who is financially responsible; and follow associated procedures as given below.

      For Private Property
      Owner: Contact Owner,
      Issue Notice of Violation for violations of the municipal ordinance, and Determine schedule for removal.

      For Municipal Facility:
      Notify appropriate municipal authority or department head, Schedule removal, and Remove illicit connection.

   b. Suspend access to storm drain if threats of serious physical harm to humans or the environment are possible.
   c. Direct responsible party to initiate repairs/corrections/cleanup. Coordinate with enforcement official for escalating penalties in accordance with the municipal ordinance.
   d. Repair/correct cause of discharge if municipality is responsible. Schedule the work through the appropriate supervisor.
   e. Seek technical assistance from the Davis County Health Department
3. Clean up

a. Confirm illicit discharge is removed or eliminated by follow-up inspection.

4. Documentation
   a. Maintain records of notice of violation and penalties.
   b. Document repairs, corrections, and any other actions required.

IDDE – Removing Illicit Discharges (not associated with construction activity)

1. Preparation
   a. Make sure reporting has been done according to SOP spill incident response and reporting procedures
   b. Begin completing a SOP Discharge/Spill Inspection Report
2. Process
   a. If the discharge is due to a sewer cross connection:
      i. Determine the responsible party for the discharge
      ii. Issue a Notice of Violation to the violator requiring the problem to be corrected within three days to avoid further enforcement action
   b. For other discharges contact the Davis County Health Department - Environmental Division for removing the discharge and bringing enforcement action to violator
      i. Assist county personnel as needed in determining the responsible party, providing utility information and providing other screening or investigation information gathered regarding the discharge
      ii. Offer technical assistance to the violator; help them understand how to go about correcting the problem
      iii. Follow-up as needed to ensure that the discharge has been removed. If violator fails to remove the discharge bring criminal enforcement action.
      iv. If unable to immediately contain and/or cease the discharge, record the circumstances and submit a written rationale to the Division of Water Quality (see 2010 MS4 permit 4.2.3.6)
3. Documentation
   a. Complete Discharge/Spill Inspection Report and/or obtain a copy of the discharge report from the Davis County Health Department - Environmental Division
   b. If unable to immediately contain and cease the discharge, write a rationale describing the circumstances and submit it to the Utah Division of Water Quality (e.g. for failing septic system).

IDDE - Tracing Illicit Discharges

1. Preparation
   a. Review / consider information collected when illicit discharge was initially identified and document using Incident Tracking Form or Outfall Inspection Form.
   b. Obtain storm drain mapping for the area of the reported illicit discharge.
   c. Gather all necessary equipment including: tape measure, clear container, tablet with necessary forms, flashlight, and camera (optional).
2. Process
   a. Survey the general area / surrounding properties to identify potential sources of the illicit discharge as a first step.

b. Trace illicit discharges using visual inspections of upstream points as a second step. Use available mapping to identify tributary pipes, catch basins, etc.
c. If the source of the illicit discharge cannot be determined by a survey of the area or observation of the storm drain system, then consider the following additional steps:
    1. Use weirs, sandbags, dams, or optical brightener monitoring traps to collect or pool intermittent discharges during dry weather.
    2. Smoke test or televise the storm drain system to trace high priority, difficult to detect illicit discharges.
    3. Dye test individual discharge points within suspected buildings.
    4. Consider collecting bacterial samples of flowing discharges to confirm/refute illicit discharge.
d. If the source is located, follow SOP IDDE - Removing Illicit Discharges.
e. If the source cannot be found, add the location to a future inspection program.

3. Clean up
    a. Clean catch basin, clean storm drain, or initiate spill response, as applicable. Follow relevant SOPs.
4. Documentation
    a. Document tracing results for future reference.

IDDE – Tracing Source of Discharges

1. Preparation
    a. Review map(s) showing drainage system and area contributing to location of the discharge
    b. Bring traffic control devices and safety equipment for entering manholes and inlet boxes
    c. Bring water-quality screening equipment and sample containers
2. Process
    a. Drive around the streets of the area contributing to the discharge point and look for anything that may help reveal the source of the discharge (if the source is found, skip to step c.)
    b. From the point of discharge, check the nearest up-stream manhole or inlet box for a similar discharge.
        i. Put on safety equipment and set up traffic controls according to MUTCD, part 6
        ii. Remove manhole or box cover (if necessary). Make an observation of any flow present. Use water-quality screening equipment and sample containers, if needed, to determine whether the discharge is similar in nature to the discharge present below.
        iii. Progress up the system, repeating the previous step until the source of the discharge is found or the segment of the drainage system where the discharge enters the system is isolated
        iv. If the source is not found, yet the segment of the drainage system where the discharge enters is isolated, make arrangements to get a video with distance measurements of that segment of the drainage system to trace the source.
        v. If further investigation is needed, consider using smoke tests, dye testing, sampling for additional water quality parameters, and requesting assistance from the Davis County Health Department

vi. Determine whether the source is an illicit discharge and if so, report according to *Spill Incident Response and Reporting Procedures and implement SOP – IDDE Removing Illicit Discharges*

3. Documentation
   a. Add relevant information to Discharge/Spill Inspection Report
      i. Note any discrepancies in the storm drain system maps from what is found in the field.
      ii. Make sure that the maps get updated to correctly reflect actual conditions

INSPECTION/ENFORCEMENT – Enforcing Construction Site Requirements

1. Preparation
   a. Make sure that any problems needing corrective action have been documented
   b. Review previous inspections, warnings given, and other enforcement actions taken
   c. Process
   d. Use these escalating enforcement actions:
      i. Warning: give the contractor a warning to correct problems with a reasonable deadline to complete corrections. Skip this step if the problems pose a serious threat to human safety or the environment. Inspect condition of BMPs, general site cleanliness, and compliance.
      ii. Issue a NOV
      iii. Stop-Work Order: if problems are not corrected by the deadline, of if the problem is re-occurring, issue a stop-work order (with supervisor's approval). Also provide another deadline before pursuing additional enforcement action.
      iv. Correct Problem and Bill Contractor*: city crews can be utilized at $500/hr (one hour minimum)
      v. Criminal Charges: coordinate with City Prosecutor for criminal charges
2. Follow-Up
   a. Return to check corrective action items after the deadline given to the contractor.
   b. Take photos
   c. Implement further escalating enforcement action as needed to ensure compliance
3. Documentation
   a. File photos and inspection reports
   b. Document enforcement actions taken

* Normally this action is to be used for projects where the city has leverage to collect the expenses, such projects needing final approval from the city and projects for which a storm water bond has been posted

INSPECTION/ENFORCEMENT – Enforcing Long-Term Control Requirements

1. Preparation
   a. Make sure that any problems needing corrective action have been documented
   b. Review maintenance agreement, previous inspections, warnings given, and other enforcement actions taken
2. Process
   a. Use these escalating enforcement actions:

i. Warning: give the owner a warning to correct problems with a reasonable deadline to complete corrections. Skip this step if the problems pose a serious threat to human safety or the environment.
ii. Notice of Deficiency: if problems are not corrected by the deadline, of if the problem is re-occurring, issue a Notice of Deficiency by certified mail or hand delivery (with supervisor's approval). Also provide another reasonable deadline before pursuing additional enforcement action.
iii. Correct Problem and Bill Owner: city crews can be utilized at $500/hr (one hour minimum)
iv. Collection of Charges: coordinate with City Prosecutor for collection of charges

3. Follow-Up
   a. Return to check corrective action items shortly after any deadline given to the owner.
   b. Take photos
   c. Implement further escalating enforcement action as needed to ensure compliance
4. Documentation
   a. File photos and inspection reports
   b. Document enforcement actions taken

INSPECTION/ENFORCEMENT – Inspecting Construction Sites

1. Preparation
   a. Plan to inspect sites once per month (bi-weekly for hi-priority sites)
   b. Normal Inspection time is the last week of the month.
   c. Review information about SWPPP and previous inspections that are on-file
2. Process
   a. Use the State Inspection Form to conduct the inspection
   b. Upon arrival at site, locate the SWPPP and review it to determine site requirements
   c. Inspect condition of BMPs, general site cleanliness, and compliance
   d. Take photos
   e. Complete and certify the report; note any corrective actions needed for compliance and give the contractor a deadline for the corrective action items.
   f. Email a copy of the completed inspection report to the contractor
3. Follow-Up
   a. Return to check that corrective action items have been completed the following work day after the deadline given to the contractor
   b. Implement SOP: INSPECTION/ENFORCEMENT – Enforcing Construction Site Requirements as needed to ensure compliance
4. Documentation
   a. File photos and inspection reports
   b. Document enforcement actions taken

INSPECTION/ENFORCEMENT – Inspecting Long-Term Controls (public)

1. Preparation

a. Check Records; review information about the design and function of the control, and previous inspections that are on-file
b. Schedule the inspection; plan to inspect each city-owned long-term structural control, as part of our weekly checklist

2. Process
   a. Use the weekly checklist to insure all structures are inspected.
   b. Complete the report; note any corrective actions needed and schedule these to be completed within a reasonable time.
   c. Additional complete inspection to be preformed with yearly post construction inspection.
   d. Follow-Up
      i. Return to complete any action items on check list if not able to fix at time of inspection
      ii. Note any corrective actions performed
   e. Documentation
   f. File inspection reports and notes on corrective actions performed

INSPECTION/ENFORCEMENT – Inspecting Long-Term Controls (private)

1. Preparation
   a. The City will inspect annually, however it is the responsibility of the owner to inspect and maintain their BMP's. Check Records; review terms of maintenance agreement (if any), information about the design and function of the control, and previous inspections that are on-file
   b. Schedule the inspection; plan to inspect each control annually
   c. Notify the owner of the inspection and schedule a time when owner (or owner's representative) will be there if feasible
2. Process
   a. Use the Long-Term Control Inspection Form as appropriate for the type of control to be inspected
   b. Inspect condition of control according to the inspection form (whether adequately maintained, operating as designed, etc.)
   c. Take photos
   d. Complete the inspection report; note any corrective actions needed for compliance and give the owner a deadline for the corrective action items. If owner (or owner's representative) is available, request that they sign the report.
   e. Email a copy of the completed inspection report to owner
3. Follow-Up
   a. Return to check corrective action items shortly after any deadline given to the owner
   b. Implement SOP: INSPECTION/ENFORCEMENT – Enforcing Long-Term Control Requirements as needed to ensure compliance
4. Documentation
   a. File inspection reports, photos, and notes on corrective actions performed
   b. Document enforcement actions taken

INSPECTION/ENFORCEMENT – Project Termination

1. Preparation

a. Notify owner/operator of items required for project termination including as-built drawings, certification and/or maintenance agreement for long-term structural storm water controls and filing of Notice of Termination with Utah DWQ. Make sure that all of these documents have been submitted and are acceptable.
b. Keep an incentive in place (such as a bond or hold on occupancy) to motivate the owner or contractor to complete requirements for project termination and schedule the inspection
c. Review information about SWPPP, outstanding violations, fees, and plans for permanent structural storm water controls
d. If termination is for a transfer of responsibility:
    i. Review documents to check that responsibility has been transferred and accepted by another party, a SWPPP is complete, and a NOI has been filed. Skip to item 3.b. below.

2. Process
    a. Use the State Inspection Form to conduct the site inspection
    b. Determine whether all requirements have been met
    c. Take Photos
    d. Complete and certify the report; note any corrective actions needed. Request that owner/contractor sign the report.
    e. Email a copy of the completed inspection report to the owner/contractor
3. Follow-up
    a. When requirements have not been meet:
        i. Return to check corrective action items
        ii. Implement SOP: INSPECTION/ENFORCEMENT – Enforcing Construction Site Requirements as needed to ensure compliance
    b. When requirements have been met
        i. Log on to the State of Utah Online Storm Water Permit System using an municipal administrative login and change the permit status to “Confirmed Termination”
4. Documentation
    a. File photos, inspection report, and other records
    b. Document enforcement actions taken

INSPECTION/ENFORCEMENT -SWPPP - Preconstruction Review

1. Preparation
    a. Assemble submitted documents from applicant
    b. Permit Application
    c. SWPPP Documents
    d. Other site specific documents
2. Process
    a. Use SWPPP Review Checklist
    b. Review submitted information
    c. Confirm information is understandable and specific for site being reviewed
    d. Highlight – mark – note missing or non submitted information
    e. Determine site priority for inspections

3. Documentation
    a. If submittal is incomplete
        i. Note missing information
        ii. Prepare memo to request any missing information as needed
        iii. Notify applicant requesting needed additional information
        iv. Review re-submittals for compliance
    b. If submittal is complete
        i. Notify Community Development that SWPPP is complete

MS4—DISCHARGE/SPILL INSPECTION REPORT

REPORTED INFORMATION

Reported by_____ Date _____

Location of Discharge _____

Description of Discharge _____

_____

Amount of Discharge (estimated)_____ Report Taken by _____

INVESTIGATION INFORMATION
Complete and attach ***Field Sheet***

Any Discharge to Storm Drain? □ Yes □ No

Was Source of Discharge Found? □ Yes □ No

Date Investigation Began _____

Method(s) Used to Discover Source of Discharge

_____

_____

_____

Agencies Discharge was Reported To: _____ Date _____

ILLICIT DISCHARGE REMOVAL INFORMATION

Description of Actions Taken to Remove the Discharge

_____

_____

_____

Has Illicit Discharge Been Eliminated? □ Yes Date_____□ No

ENFORCEMENT INFORMATION

List Enforcement Action(s) Taken

Date:_____Enforcement Action _____

Date:_____Enforcement Action _____

MS4 —Using the State Storm Water Permits Website

1. Preparation
    a. Create an online account at: https://secure.utah.gov/stormwater-admin
    b. Log-in to the online account at: https://secure.utah.gov/stormwater-admin
        i. The First time you log in here a screen will come up to Request Access. Select the Municipality option then the Request Access button.
        ii. You will need to wait for approval from the Division of Water Quality before gaining access to the Municipal-Administrative functionality which gives you the right to edit some of the information for the permits
2. Process
    a. Log-in to your online account at: https://secure.utah.gov/stormwater-admin
    b. For listing and/or finding information about permits that meet certain criteria, click the "Permits Lookup" link and then search by Permit Type, and other search options if desired.
        i. The table with search results may be sorted by any field by clicking on the field name at the top of the column; clicking twice will sort the results in reverse order
        ii. Using this feature along with sorting by the date can give useful information for managing and reporting on storm water projects in your jurisdiction
    c. Clicking on the permit number for any listed permit will bring up a Permit Details with more information about that permit
        i. Permit Status (and some other information about the permit) may be edited by clicking the edit button at the bottom of the screen. Here, the status of a permit may be changed from Unconfirmed Termination to Confirmed Termination.
    d. For running a report of permits that have Unconfirmed Termination status, click the "Reports" link. Each resulting permit listed will have a corresponding "Confirmed Termination" button for which you may change the status of the permit from Unconfirmed Termination to Confirmed Termination.
3. Follow-up
    a. Guidance Documents for using the database and for municipal-administrative use of the database area available at http://www.waterquality.utah.gov/UPDES/stormwater.htm

For help with gaining municipal-administrative access and/or changing inaccurate information regarding permits, contact the Utah Division of Water Quality at 801-536-4300

PARKS - Athletic Field Painting

1. Preparation
    a. Calculate the amount of paint required for the job and use water based paints.
    b. Store painting material under a covered storage area.
    c. Determine whether the wastes will be hazardous or not and the required proper disposal of said wastes
    d. Calibrate painters to minimize amount of material used and still be effective

e. Train employees in spill cleanup procedures and proper handling and storage of painting materials

2. Process
   a. Mix paints in a controlled area away from storm drains.
   b. Keep lids tight on containers until used.
   c. Secure containers when transporting.
   d. Have available absorbent material and other BMP's ready for an accidental paint spill.
   e. Load material into equipment on the turf or a drop cloth carefully to minimize spillage.
3. Clean-up
   a. Put excess paint back into the containers prior to cleaning equipment. Left-over paint should be stored for later use or dried out.
   b. Rinse water-based paint equipment in approved area. Never pour excess paint or wastewater from cleanup of paint in the storm drain.
   c. Store paint and equipment indoors.
4. Documentation
   a. Write-up/report of any discharges into storm drain system

PARKS – Chemical Application Pesticides, Herbicides, Fertilizers

1. Preparation
   a. Make sure your state Chemical Handling Certification is complete and up-to-date before handling any restricted 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 recommendation 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).
2. 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 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.
3. Clean-up
   a. Sweep or blow off pavements or sidewalks where fertilizers or other solid chemicals have fallen, 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")

4. 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.

PARKS – Mowing and Trimming

1. Preparation
   a. Process overview with all employees
   b. Check the oil and fuel levels of the mowers and other equipment; fill if needed in an approved area.
2. Process
   a. Put on eye and hearing protection as recommended by the manufacture.
   b. Mow and trim the lawn
   c. Sweep or blow clippings to grass areas
3. Clean-up
   a. Mowers are to be scraped and brushed at shop in garbage bin area – dry spoils are disposed of.
   b. Wash equipment behind building #2
   c. Clean up wash station after use

PARKS – Open Space Management

1. Preparation
   a. Provide a regular observation and maintenance of parks, and other pubic open spaces.
   b. Identify public open spaces that are used for stormwater detention and verify that detention areas are included on the storm drain system mapping, inspection schedules, and maintenance schedules.
2. 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 detention 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.
3. Clean 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.
4. Documentation

a. Document any observed deficiencies for correction or repair.

PARKS – Planting Vegetation (Seeds)

1. Preparation
   a. Call the Blue Stakes Center of Utah at least 2 working days before any digging will be done, to reveal the location of any underground utilities.

      i. Dial 811 or 1-800-662-4111
   b. Decide on the application rate, method, water source, and ensure adequate materials are on hand.
   c. Grade and prepare the soil to receive the seed. Place any extra soil in a convenient location to collect.
2. Process
   a. Place the seed and any cover using the pre-determined application method (and rate).
   b. Lightly moisten the seed.
3. Clean-up
   a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is a likelihood that some of the dirt would be lost through openings in the bed.
   b. Sweep dirt, seed, and any cover material from surrounding pavement(s) into the planter area
   c. Transport spoils to their designated fill or disposal area.

PARKS – Mulch and/or Bark (Installation)

1. Preparation:
   a. Identify types of products to be applied.
   b. Locate proper placement of material.
   c. Pervious surface is preferred, if not available or practical.
   d. Identify all Storm Drain inlets in area.
   e. Choose the best BMP to protect inlets.
   f. Choose protection to be placed around material.
2. Process:
   a. Protection for all inlets shall be installed. (Gravel Bags)
   b. Haul in material
   c. Install containment around material. (Gravel Bags, Straw Waddle etc)
   d. Protection around material may be moved to gain access to material, and shall be reinstalled after the work day has been completed.
3. Clean-up:
   a. Sweep the area to clean up material off of surface.
   b. Remove any leftover material.
   c. Remove all inlet protection, and pile containment.

SEWER – Aquatech Truck Waste Disposal

1. Preparation
    a. After picking up waste, make sure equipment is put away and properly secured.
    b. Decant water into SEWER manhole to separate solids from water.
    c. Go to North Davis Sewer District plant.
    d. Check in at front office and state purpose.
    e. Back into assigned area for waste disposal.
    f. Make sure you have PPE on (i.e., boots, gloves, etc).
    g. Slowly open debris tank and drain excess water.
    h. Take a measurement with a tape measure, or weigh-in on a scale. – Jot down measurement or weight.
2. Clean-up
    a. Raise debris tank and flush.
    b. Spray tank down (inside and out).
    c. Wash tires to prevent track out (if necessary, pull forward).
    d. Lower debris tank.
3. Documentation
    a. Document weight or measurement and complete proper form(s).
    b. Drop off form at sewer plant office.

SEWER – Sewer Overflow/ Spill

1. Preparation
    a. Determine Cause of overflow or spill.
    b. Take immediate steps to stop overflow.
    c. Notify Davis County Health Department.
2. Process
    a. Take immediate steps to contain the overflow to protect storm drain inlets and entrances to waterways from the overflow material, e.g., block or bag storm drains, divert to downstream manhole, use of vacuum truck.
    b. Protect public from area
    c. Immediately begin collecting overflow material with vacuum truck
3. Cleanup
    a. Wash down impacted area, collecting all wash water and disposing into sanitary sewer
    b. Solids and debris are to be flushed, swept, vacuumed, raked, picked up and transported for proper disposal
    c. Disinfect the overflow site with a bleach solution.
    d. Wash equipment with bleach solution.
4. Documentation
    a. Document and report spill according to Clinton City Sewer Management Plan.

STORM DRAIN – Aquatec Truck Debris Disposal

1. Preparation

a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.
b. Perform preventative maintenance and services on Aquatec truck to increase and maintain their efficiency.
c. Dump location is in the shop yard labeled wash out.

2. Process
   a. Operate the Aquatec truck in a manner that meets the manufacturer specifications.
   b. Measures should be taken at the downstream manhole to prevent debris from continuing further down the storm drain system.
3. Clean-up

   a. Aquatec truck is to be cleaned out in an approved area that will not allow liquids or debris to enter the storm drain system which is identified as the wash out bin.
   b. Aquatec truck cleaning area shall separate the liquids from the solids.
   c. Once solids have dried out they shall be taken to the local land fill for disposal.
   d. Decant water is to be collected and let it evaporate or is vacuumed up and discharged into the drain behind building #2 which is connected to the sewer.
4. Documentation
   a. Keep accurate logs to track storm drain lines that have been cleaned and those still require cleaning.
   b. Keep notes or comments.

STORM DRAIN – Catch Basin Cleaning

1. Preparation:
   a. Clean sediment and trash off 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.
2. Process
   a. Clean out box using hand tools and load into truck if possible.
   b. Clean using a high powered vacuum truck to start sucking out standing water and sediment if needed.
   c. Use a high pressure washer to clean any remaining material out of catch basin, while capturing the slurry with the vacuum if needed.
   d. After catch basin is clean, send the flusher hose of the vacuum truck downstream to clean pipe and pull back sediment that might have gotten down stream of pipe.
   e. Move truck downstream of pipe to next catch basin.
3. Clean-up
   a. Unload truck in garbage bin for landfill.
   b. When vacuum truck is full of sediment take it to the wash out pit in the shop yard to dump all the sediment out of truck.
   c. When it evaporates, clean it up with a backhoe, and take it to the landfill.
4. 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.

STORM DRAIN – Creek Management

1. Preparation
   a. Monitor streams on a regular monthly basis.
   b. Check culverts and crossings after every storm.
   c. Remove immediate threats immediately.
   d. Maintain access to stream channels wherever possible.
   e. Identify areas requiring maintenance and notify Davis County if needed.
   f. Determine what manpower or equipment will be required.
   g. Identify access and easements to area requiring maintenance.
   h. Determine method of maintenance that will be least damaging to the channel.
2. Process
   a. Remove unwanted material (debris, branches, soil) from the creek channel and place it in a truck to be hauled away
   b. Clean-up
   c. Stabilize all disturbed soils.
   d. Remove all tracking from paved surfaces near maintenance site, if applicable.
   e. Haul all debris or sediment removed from area to approved dumping site.
3. 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.

STORM DRAIN – Detention Pond Cleaning

1. 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, boxes, and pipes are in good working order. Remove manhole covers and grates as necessary for inspecting.
2. 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 may require use of a vacuum truck. If so use the same procedures described for cleaning catch basins.

f. For grassy swells full of sediment remove the sod and sediment and replace with new sod.

3. Clean-up
   a. After cleaning basins, clean off the concrete pads using dry methods (sweeping and shoveling).
   b. Take the material that was removed to the landfill for final disposal.
4. Documentation
   a. Keep a log of each detention 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.

STORM DRAIN – Ditch Management

1. Preparation
   a. Monitor ditches weekly and after storms.
   b. Maintain access to ditch channels wherever possible.
   c. Contact affected property owners and utility owners.
2. Process
   a. Identify areas requiring maintenance
   b. Determine what manpower or equipment will be required.
   c. Identify access and easements to area requiring maintenance.
   d. Determine method of maintenance that will be least damaging to the channel and adjacent properties or utilities and the most effective.
3. Clean-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.
4. 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.

STORM DRAIN – Street Sweeping

1. Preparation
   a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.
   b. Increase sweeping frequency just before the rainy season and in the fall unless sweeping occurs continuously throughout the year.
   c. Perform preventative maintenance and services on sweepers to increase and maintain their efficiency
   d. Streets are to be swept as needed or specified by the city. Street maps are used to ensure all streets are swept at a specified interval.
2. Process

a. Drive street sweeper safely and pickup debris
b. When full, take the sweeper to an approved street sweeper dump site which is at the shop yard in the bin labeled sweeper.

3. Clean-up
   a. Street sweepers are to be cleaned out on wash pad behind shop 2.
   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 Wasatch integrated waste landfill.
4. Documentation
   a. Keep accurate logs to track streets swept and streets still requiring sweeping.
   b. Log the amount of debris collected and hauled off.

STREETS– Chip Seal

1. 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.
2. 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.
3. Clean-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.
4. Documentation
   a. Record location and date on the maintenance database and map

STREETS – Curb Painting

1. Preparation
   a. Calculate the amount of paint required for the job and use water based paints if possible.
   b. Determine whether the wastes will be hazardous or not and the required proper disposal of said wastes

c. Determine locations of storm drain inlets and sewer inlets that may need to be protected
d. Prepare surfaces to be painted by sandblasting and/or scraping. Thoroughly sweep up all sand, blastings, and/or paint scrapings
e. If paint stripping is needed, use a citrus-based paint remover whenever possible.
f. If wastewater will be generated, use curb, dyke, etc. around the activity to collect the filter and collect the debris.

2. Process
   a. Paint curb. Prevent over-spraying of paints and/or excessive sandblasting
   b. Use drip pans and drop clothes in areas of mixing paints and painting
   c. Have available absorbent material and other BMP's ready for an accidental paint spill.
3. Clean-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 or dried out (do not place these liquids in the garbage).
   f. Sprayer clean-up: Run xylene through sprayer and spray into container and let dry. Let paint cans dry out before disposal.
4. Documentation
   a. Write-up/report of any discharges into storm drain system

STREETS – Overlays and Patching

1. Preparation
   a. Measure and mark locations of manholes and valves on the curb
   b. Manholes and catch basins are covered as needed to prevent oil and materials from getting inside the structures or system.
   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 at all inlets and at least one down stream.
2. 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.

3. Clean-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.
4. Documentation
   a. Record location and date on the maintenance GIS map

STREETS – Secondary Road Maintenance

1. Preparation
   a. Determine length amount and type of road base or gravel that will be needed.
   b. Determine proper equipment to be used and or any safety hazards.
   c. Drainage: slopes, berms etc.
2. Process
   a. Have truck drivers follow a designated route for hauling in the soil (See SOP for transporting Soil and Gravel).
   b. If soil is 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.
3. Clean-up
   a. Clean up equipment according to the SOP for Cleaning Equipment.
   b. Clean up any debris on traveled roads, and dispose of it in the landfill.
4. Documentation
   a. Turn in load tickets

STREETS – Shouldering

1. Preparation
   a. Set up temporary traffic control devices according to part VI of the MUTCD.
2. Process
   a. Place import material as needed and perform grading to achieve proper drainage.
   b. Mulch clippings.
   c. Clean off road way by sweeping or blowing off.
3. Clean-up
   a. Clean any loose material off asphalt or gutter.
4. Documentation
   a. Record location and date on the maintenance GIS map

STREETS– Slurry Seal

1. Preparation
   a. Remove weeds from the roads. Sweep areas where materials are to be applied, and allow to dry, if necessary. Verify that existing pavement has been inspected for detrimental effects of poor drainage.

b. Cover/protect catch basins and manholes.
c. Notify public 48 hours before starting work.

2. Process
   a. Apply materials in a smooth and uniform manner. Slurry material should not run onto adjacent pavement surface, curb and gutter or waterways.
   b. Clean-up
   c. If loose aggregate is remaining in street or curb, sweep it up and check again within a month.
   d. 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.
   e. Remove covers/protection from catch basins and manholes, and valves.
3. Documentation
   a. Record location and date on the maintenance GIS map

STREETS– Snow De-icing material handling

1. Preparation
   a. Store de-icing material under a covered storage area inside building #3.
   b. Above ground storage tanks must have secondary containment and is located inside building #2.
   c. Sweep loading area frequently to keep runoff away from storm drain inlets.
   d. Wash out vehicles behind building #2 on the washout area before and after snow removal.
   e. Calibrate sprayers to minimize amount of de-icing material used and still be effective
   f. Train employees in spill cleanup procedures and proper handling and storage of de-icing materials
2. Process
3. Load material into brine maker carefully to minimize spillage. Do not over fill.
   a. Load Material into trucks carefully to minimize spillage loading is done behind building
   b. #2
   c. Do not leave loading unattended while filling
   d. Periodically sweep loading area to reduce the amount of de-icing materials exposed to runoff
   e. Distribute the minimum amount of de-icing material to be effective on roads
   f. Do not allow sprayers to idle while distributing de-icing materials
   g. Park trucks loaded with de-icing material inside when possible
4. Cleanup
   a. Sweep up all spilled de-icing material around loading area
   b. Clean out trucks after snow removal duty behind building #2 in the washout area
   c. Provide maintenance for vehicles in covered area
   d. Do not dispose of surplus brine in storm drain

STREETS – Snow Equipment Storage

Plows

1. Preparation
   a. Spray off plow inside or behind building #2.
   b. Locate an area out of the way equipment can be stored until the next snow season.
   c. Storage area for plows is on the asphalt next to sanders and concrete pad end of building
2. Process
   a. Drop plow blade.
   b. Safely secure plow with blocks of wood, bricks or use hand crank if provided.
   c. In order to match the vehicle with the correct plow, place vehicle unit # on back side of plow.
   d. Inspect or check for any leaks.
   e. Grease couplers and place hydraulic caps on both the plow and truck.
   f. Tarp plow if it is not powder coated.

Sanders

1. Preparation
   a. Back into salt shed and remove excess salt from sander.
   b. Drive the truck and sander to wash pad behind building #2.
   c. Thoroughly spray off truck and sander while spreader is spinning.
   d. Storage location is out of the way and on the asphalt.
2. Process
   a. Back into designated area, between racks so that you're level with sander.
   b. Chain up both sides on the back end of sander.
   c. Raise the bed approximately 2', using caution not to hit spreader.
   d. Chain up front 2 sides.
   e. Slowly lower the bed.
   f. Proceed to drive forward.
   g. As the sander is now hanging; grease zerks, hydraulic couplers and place caps on both the sander and truck.
   h. Tarp sander if it is not powder coated.

STREETS – Snow Removal and De-icing

1. Preparation
   a. Store de-icing material under a covered storage area inside building #3.
   b. Sweep loading area frequently to keep runoff away from storm drain inlets.
   c. Wash out vehicles behind building #2 on the washout pad before and after snow removal.
   d. Calibrate spreaders to minimize amount of de-icing material used and still be effective
   e. Train employees in spill cleanup procedures and proper handling and storage of de-icing materials

2. Process
    a. Load material into trucks carefully to minimize spillage
    b. Periodically 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 roads
    d. Do not allow spreaders to idle while distributing de-icing materials.
    e. Park trucks loaded with de-icing material inside when possible
3. Cleanup
    a. Sweep up all spilled de-icing material around loading area
    b. Clean out trucks after snow removal duty in approved washout area behind building #2
    c. Provide maintenance for vehicles in covered area

WATER – Chemical Handling/Transporting and Spill Response

1. 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
2. Process
    a. Begin transfer process
    b. Discontinue operations if spill levels occurs
    c. Disconnect and store handling equipment
    d. Clean-up
    e. Clean up spills with proper material
    f. Dispose of contaminated material at appropriate facility
3. Documentation
    a. Report spills to Davis County
       5 gallons of hydro fluoride acid Work hours
       801-870-8872
       After hours 801-451-4151 Davis County dispatch

WATER – Planned Waterline Excavation Repair/Replacement

1. Preparation
    a. Determine where discharge flow will go
    b. Place inlet protection at nearest downstream storm drain inlet
    c. Clean Gutters leading to inlet
    d. Isolate waterline to be worked on
2. 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
3. Clean up
    a. Clear gutter/waterway where water flowed

b. Clean up all areas around excavation
c. Clean up travel path of trucked material

4. Documentation
   a. Complete paperwork

WATER – Unplanned Waterline Excavation Repair/Replacement

1. Preparation
   a. Have on hand or access to wattles, gravel bags, or other materials for inlet protection.
2. Process
   a. Slow the discharge.
   b. Inspect flow path of discharged water
   c. Protect water inlet areas
   d. Follow planned repair procedures.(AWWA Standards)
   e. Haul off spoils of excavation (see appropriate SOP)
   f. Consider use of silt filter bags on pumps or use vac truck
3. Clean-up
   a. Repair eroded areas as needed
   b. Follow planned repair procedures
   c. Clean up the travel path of trucked excavated material

WATER – Waterline Flushing for Routine Maintenance

1. Preparation
   a. Determine flow path of discharge to inlet of waterway.
2. Process
   a. Clean flow path if needed
   b. Protect inlet structures if needed.
   c. Use diffuser to dissipate pressure to reduce erosion possibilities if needed.
3. Clean-up
   a. Clean flow path
   b. Remove inlet protection.
4. Documentation
   a. Record

WATER – Waterline Flushing after Construction/System Disinfection with Discharge to Storm Drain

1. Preparation
   a. Determine chlorine content of discharged water, and select if de-chlorination equipment is to be used.
   b. Determine flow path of discharge.
2. Process
   a. Protect inlets in flow path
   b. Install de-chlorination equipment if needed

c. Check flow path.
d. Use diffuser to reduce velocities

3. Clean-up
   a. Pick up inlet protection
   b. Clean flow paths
   c. Remove equipment from flush point
4. Documentation
   a. Residual test of discharged water

WATER – Waterline Flushing after Construction/System Disinfection with Discharge with Haul Off (Used for Dust Control/Compaction)

1. Preparation
   a. Determine chlorine content of discharged water
   b. Determine appropriate construction activity for treatment
2. Process
   a. Flush to tanker for disposal on unpaved construction activity for dust control or compaction
   b. Conform that application of water is in appropriate location
3. Clean-up
   a. Remove equipment from flush point
4. Documentation
   a. Residual test of discharged water
   b. Location of water discharged

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

MCM	1
Measurable Goal	Support Davis County Storm Water Coalition Efforts (e.g., water fair, T.V. Ads, annual contractor/developer training, purchase supplies for 5th grade teacher curriculum, curb markers, gas stations, other handouts, develop pamphlets for selected pollutants and selected businesses or individuals, etc.), See DCSWC Goal Sheet as reference.
Pollutant(s)	(All pollutants) - pet waste, sediment, fertilizer, hydrocarbons, auto fluids, swimming pool water, wash water, household hazardous waste, landscaping materials, grass clippings, and ecoli
Audience(s)	Residents, Businesses, Developers, Contractors, and MS4's, Engineers, Youth Educational Target (5th Graders)
Desired Result	4.2.1.1 To educate audiences about impacts from storm water discharge and help encourage a change in behavior. To educate audiences on ways to avoid, minimize, and reduce impacts of storm water discharge. To educate audiences on actions individuals can take to improve water quality.
Milestone Date	Ongoing (Some programs are annual, seasonal, monthly, etc.) Coalition participation is monthly, but program initiatives are by individual occurrence.
Associated BMPs (See Reference Code)	PEP, ET, CESW, EM, and UM
Measure of Success (Effectiveness)	Ads continue to run and survey supports increase in public awareness, water fair participation continues to increase, along with awareness, Youth educational program (5th graders) continues participation growth and awareness. Participation success and awareness continues to grow for contractor and developer training...supported by survey results.

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

MCM	1, 2, 3, 4, 5, 6
Measurable Goal	Enhance educational and informative resources for the MCMs 1, 2, 3, 4, and 5.
Pollutant(s)	(All pollutants) - pet waste, sediment, fertilizer, hydrocarbons, auto fluids, swimming pool water, wash water, household hazardous waste, landscaping materials, grass clippings, nutrients and ecoli
Audience(s)	Residents, Businesses, Developers / Contractors, and MS4's (City Personnel, Engineers, Planners, Inspectors, all Key Department Representatives, etc.)
Desired Result	Develop and or enhance needed educational, informative, and participatory resources, including: 1) Continue to use Clinton City Heritage Days Celebration to educated public 2) Continue to use website to disperse information for: a) Building process & order of operations for contractors b) Electronic version of Coalition pamphlets (eg Handling Hazardous Waste) c) Online public comment forum for SWMP review, comment, participation, etc. d) Spill response hotline info and comment forum for SWPPP issues e) Maintain link to current SWMP 3) Enhance printed materials / mailers / newsletter information for: a) City wide newsletters for residents in Utility billing b) Advisory notices for business that are applying or renewing business licenses
Milestone Date	Ongoing as required to meet city required schedules. Annual heritage days, business license renewals, newsletter schedules, etc. Update as required for changes in city administration for processes and procedures
Associated BMPs (See Reference Code)	PEP, ET, SDSS , EM, WO, UM, CH, SCCM, MU, HP
Measure of Success (Effectiveness)	Success is to be measured by the completion of the goal, the verification of the level of participation, and the verification of the level of awareness / effectiveness. 1) Education materials are displayed, witness of participation at Heritage Days, and monitor awareness. 2) Completion of goal / tasks is measured by participation in events and supplying educational materials 3) Monitor online comment forms and communications to city.

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

MCM	5
Measurable Goal	Implement City MS4 LID program and standards
Pollutant(s)	(All pollutants) - pet waste, sediment, fertilizer, hydrocarbons, auto fluids, swimming pool water, wash water, household hazardous waste, landscaping materials, grass clippings, nutrients, phosphorus, and ecoli
Audience(s)	Residents, Businesses, Developers / Contractors, and MS4's (City Personnel, Engineers, Planners, Inspectors, all Key Department Representatives, etc.)
Desired Result	Implement City MS4 LID program and standards, including: 1) Implement LID Review in development review process 2) Create checklist to aid in LID review process 3) Distribute LID handbook to developers and contractors 4) Review and update structural and non-structural BMP standards (LID) as needed
Milestone Date	1) LID Manual adopted by City Council January 2022 2) Distribute to developers beginning February 2022 3) Develop checklist by June 2022 4) Annual review of LID BMPs
Associated BMPs (See Reference Code)	See BMP's in LID Handbook
Measure of Success (Effectiveness)	Success is to be measured by the completion of the goal, by the implementation of the LID program, continued monitoring of new standards, education, and program oversight.

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

MCM	1, 2, 3, 4, 5, 6
Measurable Goal	Continue to implement and enhance Clinton City MS4 storm water ordinances
Pollutant(s)	(All pollutants) - pet waste, sediment, fertilizer, hydrocarbons, auto fluids, swimming pool water, wash water, household hazardous waste, landscaping materials, grass clippings, nutrients, phosphorus, and ecoli
Audience(s)	Residents, Businesses, Developers / Contractors, and MS4's (City Personnel, Engineers, Planners, Inspectors, all Key Department Representatives, etc.)
Desired Result	1) Develop a spill / incident map through GIS program 2) Evaluate the MS4 spill response form 3) Develop pamphlet / educational flyer and implement training program for city personnel to make available, along with educational advisory, as needed to City residents conditional upon incident or potential impact (e.g., illegal dumping, emptying pool down storm drain, blowing yard waste into streets, etc.)
Milestone Date	1) Updated ordinances to be adopted by City Council January 2022 2) Develop pamphlet / educational flyer by January 2023 3) GIS program tracking for spill by January 2023 4) Ongoing monitoring of effectiveness of MS4 storm water ordinances
Associated BMPs (See Reference Code)	ET, EM, PEP, UM, IDC,
Measure of Success (Effectiveness)	Success is to be measured by the completion of the goal, by the development of handout materials and training of key city personnel. It is the hope of the Clinton City MS4 that this goal will be a proactive effort to help raise awareness and change behaviors. Effectiveness may be measured through online city storm water forum comment pages.

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

MCM	6
Measurable Goal	To observe and verify if the Clinton City MS4 program is making positive difference in water quality
Pollutant(s)	sediment, ecoli, nutrients, phosphorus, TSS, Oil & Grease NOTE: Potential for other pollutants to be added.
Audience(s)	MS4's (City Personnel, Engineers, Planners, Inspectors, all Key Department Representatives, etc.)
Desired Result	To observe and verify if the Clinton City MS4 program is making a positive difference in water quality through sampling designated locations. 1) To test where incoming stormwater enters the city at the city border (Clinton / Sunset Border @ 2300 N 500 W) 2) To test before and after the city's business district 3) To test at the Clinton city pond 4) To test before and at the end of the Davis County settling ponds prior to entering the Howard Slough - To establish a baseline to observe and draw conclusions as to the effectiveness of the Clinton City MS4 Storm Water Program
Milestone Date	Every 5 years. In testing years, perform tests in June during secondary water and in November after secondary water shuts off.
Associated BMPs (See Reference Code)	LTOM
Measure of Success (Effectiveness)	It is the hope of the Clinton City MS4 to establish a baseline from which to evaluate future sample results. This goal would be considered a success or effective if future results demonstrated a decrease in identified pollutants. It would also be considered a success if results demonstrated an increase in identified pollutants to better provide direction to the MS4, with regard to enhancing program development.

Davis County Storm Water Coalition Documentation Plan

Activity	Target Pollutants	Target Audiences	Measurable Goal	Document/Data/Proof of Completion	Document Location	Responsible Person/Party
TV Advertisements	1-17	1-4	Purchase annually	Invoice	Coalition Documentation Binder	Coalition Chairman
Monthly Coalition Meeting	1-17	1-4	Meet 10 times annually	Agenda, Minutes, Attendance List	Binder	Coalition Chairman
5th Grade Lessons	1-7,15	1	Teach all public 5th grade classes annually	Invoice, Teacher's report	Binder	Coalition Chairman
Purchase Education Materials						
Booklets & Balls	1-7,15	1	Purchase enough for all 5th grade classes annually	Invoice	Binder	Coalition Chairman
BMP Manual	3,8	3,4	Review annually	Finished document	Binder	Coalition Chairman
Pamphlets	2,3,6,9-14,16	1-4	Develop 1 pamphlet annually	Invoice, finished document	Binder	Coalition Chairman
Stickers (gas station)	17	1,2	Purchase when supply is depleted	Invoice, finished products	Binder	Coalition Chairman
Pencils & Magnets	1-17	1	Have continually available	Invoice, finished products	Binder	Coalition Chairman
Water Fair	1-7,15	1	Hold one event annually	Invoices	Binder	Coalition Chairman
Trainings	1-17	3,4	Hold one training annually	Invoice, Invitation, Agenda, ,Attendance List	Binder	Coalition Chairman
County Drainage Map	15	4	Request updates annually	Minutes of Coalition meeting	Binder	Coalition Chairman
Spill Report Hotline	15	1	Get reports semi-annually	Report on calls received	Binder	Coalition Chairman
Standard Operating Procedures	1-17	4	Review & update annually	Finished document	Binder	Coalition Chairman
StormCon Conference	1-17	4	Send 3 coalition members Annually	Invoices	Binder	Coalition Chairman
SWAC Meeting Attendance	1-17	4	Have 1 voting member and 1alternate assigned and present 90%	Attendance sheet, minutes	Binder	Coalition Chairman
Interlocal Agreement	1-17	1-4	Execute once per permit cycle	Executed document	Binder	Coalition Chairman
Model Ordinance	1-17	1-4	Have available by July 2011	Finished document,subcommitee minutes	Binder	Coalition Chairman

Target Pollutant Sources		
	1	e. coli
	2	Pet Waste
	3	Sediment
	4	Grass
	5	Oil
	6	Fertilizer
	7	Trash
	8	Construction site waste
	9	Septic Waste
	10	Hydrocarbons
	11	Automotive Fluids
	12	Swimming Pool Water
	13	Wash Water
	14	Household Hazardous Waste
	15	Illicit Discharges
	16	landscaping materials
	17	Fuels
Target Audiences		
	1	Residents
	2	Businesses, institutions, and commercial facilities
	3	Developers and construction contractors
	4	MS4 industrial facilities