

IVINS CITY

STORM WATER MANAGEMENT PLAN

UPDES STORM WATER DISCHARGE PERMIT NO. UTR090049

Submitted to:

State of Utah
Department of Environmental Quality

Division of Water Quality

Submitted by:

Ivins City, Public Works Department

Last Updated Date: June 23, 2016

IVINS CITY

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FORWARD

The Ivins City Storm Water Management Program as presented in this document is intended to indicate to the public and other affected stakeholders the manner in which Ivins City plans to comply with the storm water protection provisions of the Clean Water Act as enacted by the federal government in accordance with our UPDES (Utah Pollutant Discharge Elimination System) storm water discharge permit No. UTR090049.

This document, as directed by the State, is considered to be a living document that will need constant revision and updates as changes occur due to the needs of the City arising from experience in enforcing these provisions and direction from State and Federal regulators. The State permit indicates that the plan should be updated at least annually. The City Council's adoption of this plan is a legislative approval of the basic best management practices and the identified activities within each practice thereby providing an approved direction for staff to proceed with the program. The administrative details of the program, in particular the appendices, will need to be under constant flux and may be altered by City staff to address immediate needs and concerns without a legislative action.

As a means to keep an open process and allow for public and stakeholder input and participation, this document will remain current on the City's website at www.ivins.com as means to allow all interested parties to have immediate access and allow for public and stakeholder input and participation. Newsletter articles will encourage citizens to review the plan and provide input. Guidance materials provided to contractors, engineers, and developers will also encourage input into the plan.

Copies will be provided at City Hall for \$10.00 (not including appendices) each to cover reproduction expenses.

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GLOSSARY OF ACRONYMS

SWMP:	Storm Water Management Plan
SWPPP:	Storm Water Pollution Prevention Plan
MS4:	Municipal Separate Storm Sewer Systems
DWQ:	State of Utah Division of Water Quality
ICSS:	Ivins City Standard Specifications for Design and Construction
LID:	Low Impact Development

PROGRAM OVERVIEW

BACKGROUND

Polluted storm water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local rivers and streams without treatment. Common pollutants include oil and grease from roadways, pesticides and fertilizers from lawns, sediment from construction sites, and carelessly discarded trash and yard waste. 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 2002 Ivins City, although a community of less than 10,000, was linked into the EPA's Storm Water Phase II Rules due to its close proximity to St. George City and is considered part of the St. George Metropolitan area along with Washington City and the City of Santa Clara.

As a result Ivins is required to obtain a UPDES (Utah Pollutant Discharge Elimination System) permit from the State of Utah Division of Water Quality, Permit no. UTR090049. This permit provides authority to Ivins City to discharge storm water to the local washes and rivers. As a condition of this permit, Ivins City must comply with the requirements of the General Permit for Storm Water Discharges from Small MS4s, Permit No. UTR090000. To review these requirements, a copy of this general permit is available on the State of Utah Division of Water Quality website:

<http://www.waterquality.utah.gov/UPDES/stormwatermun.htm>

IVINS CITY CHARACTERISTICS

The current population of Ivins is approximately 9,000 with 2,800 households and a corporate boundary encompassing 10.2 square miles. Ivins is located in Washington County, northwest of St. George, in the southwest corner of the State of Utah, approximately 266 miles southwest of Salt Lake City at an elevation of approximately 3,000 feet above sea level. Ivins is a bedroom community to St. George as it transitions from a rural/agricultural area to suburban area.

The climate is arid desert with an annual precipitation of 8.27 inches. Storm water discharging from Ivins enters natural drainages and washes and eventually flows into the Santa Clara River approximately 5 miles upstream of the confluence with the Virgin River.

The Ivins City storm water system consists of open ditches and swales in older areas of the city with curb, gutter and piping in newer developments. The ditches, swales, and piping all flow generally to the south and eventually drain into normally dry washes and natural drainages before emptying into the Santa Clara River. There are four main dry washes into which storm water from Ivins runs. They include the Kayenta Dry Wash; the Grave Yard Wash; the Tuacahn Wash; and the Sand Hollow Wash. Approximately 90 percent of the city is served by a sanitary sewer system that is treated in St. George City. There are some existing septic tank systems in the city, but new development is phasing these systems out.

LOCAL WATER QUALITY CONCERNS

The water quality in the Virgin River Watershed has been scrutinized for several years. Both the Santa Clara River and the Virgin River are on the 303(d) list, which lists water quality impaired bodies of water, and are listed for high levels of total dissolved solids (TDS). The Santa Clara River is also listed for high levels of selenium. A TMDL study was prepared by the State and approved in 2004. The study identified stream bank and land erosion as primary contributors to the impairments as well as irrigation return flows and storm water/dry-weather flows as secondary contributors.

Based on the TMDL studies, erosion control is the most important concern to limit storm water pollution in Washington County. In Ivins City, being a desert community, a mature high to medium dense residential or commercial development will actually reduce sediment in storm water discharges since maintained landscaping with grasses, desert plantings, and rock mulches will generally stabilize the soils beyond the natural desert conditions. These developments, however, bring a different pollution concern from fertilizers, pesticides, yard waste materials, oils, grease, and improper disposal of household chemicals and waste materials.

Ivins City can reduce storm water pollution most effectively by stabilizing erosion in ditches and swales, controlling erosion from construction sites and new developments, and maintaining post-construction structures designed to capture pollutants while fully reaching out to the public to first inform, involve, educate, and if necessary, enforce the clean water laws.

MINIMUM CONTROL MEASURES

This SWMP has been developed to meet the terms of the UPDES permit and consists of the six minimum control measures. Implementation of these control measures is expected to result in reductions of pollutants discharged into receiving waters. These six control measures are addressed in separate sections of this plan.

- Section 1. Public Education and Outreach
- Section 2. Public Participation and Involvement
- Section 3. Illicit Discharge Detection and Elimination
- Section 4. Construction Site Runoff Control
- Section 5. Post-Construction Storm Water Management
- Section 6. Pollution Prevention and Good Housekeeping for Ivins City Operations

IVINS CITY PROGRAM

SUMMARY OF SELECTED BMPS

Thirteen Best Management Practices (BMPs) have been selected to ensure that Ivins City is adequately addressing each minimum control measure. These BMPs are listed as follows:

- BMP 1A: General Public Outreach and Education
- BMP 1B: Business/Commercial Outreach and Education
- BMP 1C: Developer/Engineer/Contractor Outreach and Education
- BMP 1D: Municipal Employee Training
- BMP 2A: Public Involvement and Participation
- BMP 3A: Storm Drain System Mapping
- BMP 3B: Illicit Discharge Controls
- BMP 4A: Pre-Construction Site Plan Review
- BMP 4B: Construction Site Inspection
- BMP 5A: Site Plan Review for Post-Construction Storm Water Controls
- BMP 5B: Inspection, Maintenance and Enforcement of Existing Developments
- BMP 6A: Facility Operation and Maintenance Program
- BMP 6B: Facility Inspections

Each BMP has been given a number corresponding to the minimum control measure followed by a letter to distinguish it from BMPs under the same minimum control measure. Furthermore, in the following sections of this SWMP where each BMP is described in detail, there are specific activities identified by Ivins City that are either fully implemented and ongoing or are under development for future implementation with projected date of implementation. Each activity is listed with an activity ID code for referencing and also a reference to the appendix for the supporting documentation. The six appendices F, G, H, I, J and K each respectively include the documentation for each of the six minimum control measures.

TARGETED POLLUTANTS

In this management plan, two tiers of targeted pollutants are established as shown in Figure 1. The first tier includes one pollutant which is sediment. Sediment is considered to be the most important of the targeted pollutants because of its potential to contribute to the prolonged impairment of the Santa Clara and Virgin Rivers. The second tier of targeted pollutants is less of concern but still considered an area where municipal efforts may improve the water quality of downstream bodies of water due to the nature of municipal storm water discharges.

Figure 1. Targeted Pollutants

Pollutant	Typical Municipal Sources	Reason for selection as a targeted pollutant
Tier 1		
Sediment	Land Disturbance, Unlined Drainage Ditches and Washes	Potentially contributes to impairment of the Santa Clara River due to high levels of selenium and total dissolved solids.
Tier 2		
Oil & Grease	Parking Lots, Streets, Vehicles, Residential, Commercial and Industrial Activities	Common pollutant for municipal storm water discharges
Industrial & Household Chemicals	Residential, Commercial and Industrial activities	Common pollutant for municipal storm water discharges
Trash & Debris	Residential, Commercial and Industrial activities	Common pollutant for municipal storm water discharges

ORGANIZATIONAL RESPONSIBILITY

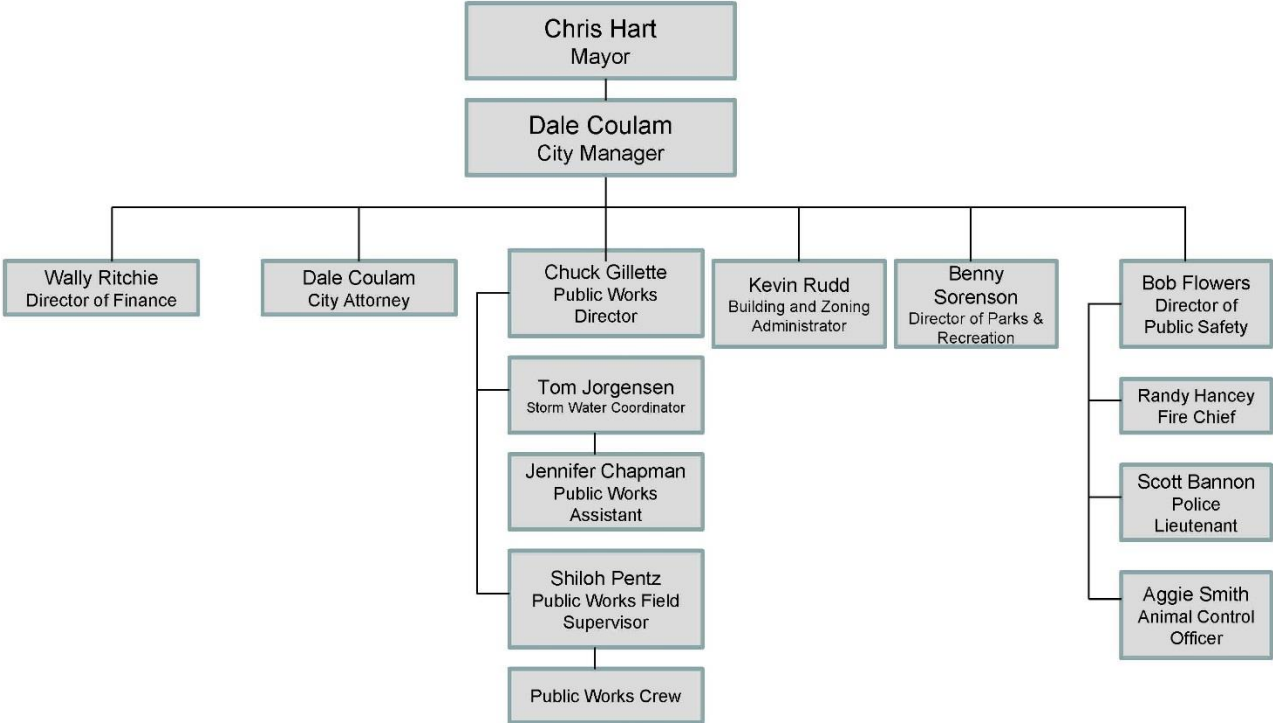
Ivins City is a small city with a limited staff. Figure 2 as follows shows the division of responsibilities among staff to coordinate storm water program.

Figure 2. Storm Water Responsibilities

Title	Name	Responsibilities in Storm Water Program
City Manager	Dale Coulam	<ul style="list-style-type: none"> Oversee and manage all City operations.
Director of Finance	Wally Ritchie	<ul style="list-style-type: none"> Conduct the annual financial analyses of the storm water utility.
City Attorney	Dale Coulam	<ul style="list-style-type: none"> Ensure that administrative staff is trained for spill response procedures and other assigned duties. Pursue enforcement of fines when notice of violations are issued.
Public Works Director	Chuck Gillette	<ul style="list-style-type: none"> Oversee and manage all public works operations to ensure that work is completed in accordance with the SWMP. Approve any modifications to the program. Coordinate with the Southern Utah Storm Water Coalition.
Assistant Public Works Director, Storm Water Coordinator	Thomas Jorgensen	<ul style="list-style-type: none"> Coordinate with Southern Utah Storm Water Coalition. Submit annual reports. Coordinate inspections. Coordinate public education. Coordinate public involvement. Coordinate training. Coordinate construction. Review SWPPP documents. Conduct or delegate inspections. Review construction plans for post-construction measures. Investigate potential and enforce against illicit discharges. Coordinate inspections on post-construction measures. Coordinate modifications to the Storm Water Program. Coordinate storm drain system mapping.
Public Works Assistant	Jennifer Chapman	<ul style="list-style-type: none"> Update website. Maintain database on training. Maintain database on street sweeping. Maintain database on catch basin cleaning. Maintain database on inspections. Manage public works calendar to track timing of weekly, monthly, quarterly and annual inspections.
Public Works Field Supervisor	Shiloh Pentz	<ul style="list-style-type: none"> Ensure all public works field activities are in accordance with the SWMP. Good Housekeeping/Pollution Prevention Be watchful of illicit discharges.

Title	Name	Responsibilities in Storm Water Program
Building and Zoning Administrator	Kevin Rudd	<ul style="list-style-type: none"> • Coordinate with building contractors on small site SWPPPs. • Conduct (or delegate) storm water inspections on small construction sites. • Be watchful of illicit discharges.
Director of Parks & Recreation	Benny Sorensen	<ul style="list-style-type: none"> • Ensure all parks and recreation operations are in accordance with the SWMP.
Parks Field Supervisor	Dalan Briggs	<ul style="list-style-type: none"> • Ensure all parks and recreation field activities are in accordance with the SWMP. • Good Housekeeping/Pollution Prevention of Parks Facilities.
Director of Public Safety	Bob Flowers	<ul style="list-style-type: none"> • Ensure all public safety operations are in accordance with the SWMP. • Ensure staff is trained on illicit discharge detection and general pollution prevention BMPs.
Police Captain	Scott Bannon	<ul style="list-style-type: none"> • Ensure all police operations are in accordance with the SWMP. • Good Housekeeping/Pollution Prevention of Police Station. • Be watchful of illicit discharges.
Animal Control Officer	Aggie Smith	<ul style="list-style-type: none"> • Ensure all animal control operations are in accordance with the SWMP. • Good Housekeeping/Pollution Prevention of Animal Shelter.
Fire Chief	Nick Hallman	<ul style="list-style-type: none"> • Ensure all fire and EMS are in accordance with the SWMP. • Good Housekeeping/Pollution Prevention of Fire Stations and Equipment. • Be watchful of illicit discharges. • Respond and clear hazardous spills.

Figure 3. Ivins City Organizational Chart



STORM WATER POLLUTION PREVENTION ORDINANCE

Prior to 2016, Ivins City has had multiple sections of the code address the concerns of storm water pollution prevention. Staff is in the process of drafting a new consolidated ordinance to ensure that the ordinance is in complete compliance with the new permit requirements. A draft of this ordinance will be prepared by September 1st, 2016 and will be included in Appendix A of this document. When adopted by the City Council, Appendix A will be replaced with the final version. It is anticipated that the Council will adopt the ordinance in September or October of 2016.

STORM DRAIN SYSTEM MAPPING

Ivins City has developed GIS mapping as a method of keeping an inventory of all storm water facilities. This mapping is maintained and kept up to date using an ArcGIS database system. A copy of this mapping is included in Appendix B.

TRACKING AND DOCUMENTATION

In an effort to improve tracking and documentation of the City's efforts in the Storm Water Program, the City will be developing a tracking and documentation process which will be included in Appendix C.

ANALYSIS OF STORM WATER SYSTEM EXPENSES

In the past, as the City has submitted annual reports to the Division of Water Quality reporting Storm Water System Expenses, these expenses have not been analyzed to the fullest extent possible. In 2017, Ivins City will conduct a more detailed analysis of this information which will be included in Appendix D.

REPORTING

Reports will be submitted annually to the Utah Division of Water Quality. These reports that have been submitted in the past are included in Appendix M. As future reports are submitted they will be incorporated into the SWMP.

SOUTHERN UTAH STORM WATER COALITION

Ivins City has joined the Southern Utah Storm Water Coalition (SUSWC) along with the City of St. George, Washington City, and City of Santa Clara. Monthly meetings are held on the second Tuesday of each month and correlate with the conference call by the Utah Storm Water Advisory Committee (SWAC) which meets on the same date as the SUSWC participates with the conference call following the meeting that would cover local issues. The Southern Utah Home Builders Association is also participating in the SUSWC meetings. The agendas and minutes from these meeting are included in Appendix N.

**SECTION 1
PUBLIC EDUCATION AND OUTREACH
BEST MANAGEMENT PRACTICES**

BMP 1A: GENERAL PUBLIC OUTREACH AND EDUCATION

SUMMARY

Provide information to the general public regarding the prohibitions against and the water quality impacts associated with illicit discharges and improper disposal of waste. The following topics are to be covered with (*) on those topics considered to be highest priority issues for Ivins City:

- Disposal of household chemicals;*
- Control of erosion and sediments;*
- Benefits of litter control and clean-up activities;*
- Maintenance of septic systems;
- Effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers);*
- Benefits of on-site infiltration or reuse of storm water;
- Effects of automotive work and car washing on water quality;
- Proper disposal of swimming pool water; and
- Proper management of pet waste.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
1A-1	Newsletter Articles	Annual	2006	Appendix F1	Public Works
1A-2	Internet posting of information on proper disposal of household chemicals and waste	Continuous	2006	Appendix F1	Public Works
1A-3	Internet posting of Storm Water Management Plan	Continuous	2009	Appendix F1	Public Works
1A-4	Storm Water Brochures Set in Lobby of City Hall	Continuous	2010	Appendix F1	Public Works
1A-5	Participation with Southern Utah Storm Water Coalition	Monthly	2010	Appendix N	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
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1A-6	Develop information and provide training to engineers, development and plan review staff, and land use planners to learn about LID practices.	Annual	0%	September, 2016	Public Works
1A-7	Participate with Southern Utah Storm Water Coalition Public Education Efforts	TBD	0%	TBD	Southern Utah Storm Water Coalition
1A-8	Install "No Dumping" markers and ID tags on Storm Drain Inlets. Markers and tags have been purchased.	n/a	25%	2020	Public Works
1A-9	Develop method to assess effectiveness of communication efforts with general public	TBD	0	2018	Southern Utah Storm Water Coalition
1A-10	Start assessing effectiveness of communication efforts with general public	TBD	0	2019	Southern Utah Storm Water Coalition

OBJECTIVE

Change the awareness and behavior of the general public in regards to protecting storm water quality.

MEASURABLE GOALS

- Fully implement activities in development
- To be determined with development of activities 1A-9 and 1A-10

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.1.2 and 4.2.1.7.
- The newsletter and Internet website have the greatest potential to target Ivins City residents for delivering the message to the broadest possible group. This is our primary means of education to our population.
- Brochures handed out in the lobby are not as broadly distributed but provide opportunities for face to face contact.

BMP 1B: BUSINESS/COMMERCIAL OUTREACH AND EDUCATION

SUMMARY

Provide information to businesses and institutions regarding the prohibition against and the water quality impacts associated with illicit discharges and improper disposal of waste. The following topics are to be covered with (*) on those topics considered to be highest priority issues for Ivins City:

- Control of erosion and sediments;*
- Disposal of industrial chemicals and hazardous wastes;*
- Proper lawn maintenance (use of pesticides, herbicides and fertilizer);
- Benefits of appropriate on-site infiltration of storm water;
- Building and equipment maintenance (proper management of waste water);
- Proper storage of materials (emphasize pollution prevention);
- Proper management of waste materials and dumpsters (cover and pollution prevention); and
- Proper management of parking lot surfaces (sweeping).

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
1B-1	Continue participation with Southern Utah Storm Water Coalition	Monthly	2010	Appendix L	Public Works
1B-2	Developed guidance for mobile power washing companies	One-time	2010	Appendix F2	Southern Utah Storm Water Coalition

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
1B-3	Develop storm water protection fact sheet for businesses and other commercial activities	n/a	0%	2017	Public Works
1B-4	Include fact sheet in license renewal packages mailed on an annual basis	Annual	0%	2017	Administration
1B-5	Incorporate mobile washing BMP (as developed by Washington City) into business licensing requirements.	n/a	50%	2017	Public Works

1B-6	Develop method to assess effectiveness of communication efforts with businesses and commercial entities	TBD	0	2018	Public Works
1B-7	Start assessing effectiveness of communication efforts with businesses and commercial entities	TBD	0	2019	Public Works

OBJECTIVE

Change the awareness and behavior of the businesses and commercial entities in regards to protecting storm water quality.

MEASURABLE GOALS

- Fully implement activities in development.
- To be determined with development of activities 1B-6 and 1B-7.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.1.3 and 4.2.1.7.
- Ivins City has only a handful of commercial establishments being more a bedroom community. This BMP has less priority than other BMPs due to the relative impact.

BMP 1C: DEVELOPER/ENGINEER/CONTRACTOR OUTREACH AND EDUCATION

SUMMARY

Provide information to engineers, construction contractors, developers, development review staff, and land use planners concerning the development of storm water pollution prevention plans (SWPPPs) and BMPs for reducing adverse impacts from storm water runoff from development sites.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
1C-1	Erosion control standards developed in recently updated Ivins City Standard Specifications for Design and Construction	n/a	2010	Appendix F3	Public Works
4A-1	SWPPP Process Description for Developers/Contractors/Engineers/Builders	One-time	2010	Appendix I-1	Public Works
1C-2	Continue participation with Southern Utah Storm Water Coalition	Monthly	2010	Appendix L	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
1C-3	Develop more detailed erosion control SWPPP standards in accordance with provisions of UPDES Permit and to be consistent with Utah Storm Water Coalition Members.	n/a	25%	2018	Southern Utah Storm Water Coalition

OBJECTIVE

Improve the quality of SWPPP documents and better encourage construction contractors and developers to protect storm water quality by adhering to the requirements.

MEASURABLE GOALS

- Fully implement activities in development.

- As part of activity 1C-3, the Southern Utah Storm Water Coalition will also develop a method to evaluate the effectiveness of the training program and thenceforth establish measurable goals.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.1.4 and 4.2.1.7.

BMP 1D: MUNICIPAL EMPLOYEE TRAINING

SUMMARY

Provide information and training to employees of Ivins City concerning the prohibition against and the water quality impacts associated with illicit discharges and improper disposal of waste. The following topics are to be covered with (*) on those topics considered to be highest priority issues for Ivins City:

- Control of erosion and sediments;*
- Disposal of industrial chemicals and hazardous wastes;*
- Vehicle washing;
- Equipment inspection to ensure timely maintenance;
- Proper storage of industrial materials (emphasize pollution prevention);
- Proper management and disposal of wastes;
- Proper management of dumpsters;
- Benefits of appropriate on-site infiltration (areas with low exposure to industrial materials such as roofs or employee parking); and
- Proper maintenance of parking lot surfaces (sweeping).

Also, provide information and training to MS4 engineers, development and plan review staff, land use planners, and other parties as applicable to learn about Low Impact Development (LID) practices, green infrastructure practices, and to communicate the specific requirements for post-construction control and the associated Best Management Practices (BMPs) chosen within the SWMP.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
1D-1	Continue participation with Southern Utah Storm Water Coalition	Monthly	2010	Appendix L	Public Works
1D-2	Developed Training Program and Schedule	One Time	2010	Appendix F4	Public Works
1D-3	Tracking Employee Training	Continuous	2010	Appendix F4	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Freq- uency	% Comp- lete	Date to be Imple- mented	Entity Responsible
1D-4	Purchase training videos for all annual training requirements	Once	50%	2017	Southern Utah Storm Water Coalition

OBJECTIVE

To ensure that all municipal employees are aware of the requirements of the SWMP and are contributing to the reduction of pollution in the storm water.

MEASURABLE GOALS

- Fully implement activities in development.
- As part of activity 1D-2, the Southern Utah Storm Water Coalition will also develop a method to evaluate the effectiveness of the training program and thenceforth establish measurable goals.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.1.5 through 4.2.1.7.

**SECTION 2
PUBLIC PARTICIPATION AND INVOLVEMENT
BEST MANAGEMENT PRACTICES**

BMP 2A: PUBLIC INVOLVEMENT AND PARTICIPATION

SUMMARY

Implement a program that complies with applicable State and Local public notice requirements. Include ongoing opportunities for public involvement and participation such as advisory panels, public hearings, watershed committees, stewardship programs, environmental activities, other volunteer opportunities, or other similar activities. Involve potentially affected stakeholder groups, which include but are not limited to, commercial and industrial businesses, trade associations, environmental groups, homeowners associations, and education organizations.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
2A-1	Community Cleanup Days – Ivins City provides garbage dumpsters in a central location of the City for proper disposal of household and yard waste.	Monthly	Before 2003	Appendix G1	Public Works
2A-2	Compost Program – St George and Washington County Landfill both provide for Ivins residents to deliver organic waste to composting area near the waste-water treatment plant.	Continuous	Before 2003	Appendix G1	Public Works
2A-3	Adopt-a-Block – Service groups, individuals, families, neighbors are encouraged to sign up and take care of street sections.	Continuous	Before 2003	Appendix G1	Public Works
2A-4	Recycling Program – Washington County has implemented a curb-side recycling program. Ivins City has adopted the program for its residents making it mandatory for everyone.	Continuous	2016	Appendix G1	Washington County
2A-5	Ivins City SWMP is continuously available for review and input on website.	Continuous	2009	Appendix F1	Public Works

ACTIVITIES IN DEVELOPMENT

None.

OBJECTIVE

Provide opportunities for public involvement and participation in the development and implementation of the storm water management program.

MEASURABLE GOALS

- Fully implement activities in development.
- Improve advertising and promotion of community clean up days to encourage higher participation. Especially in the Spring and Fall when dumpsters are provided on two dates during the month.
- Develop procedures and forms for the Adopt-a-block program and start advertising the adopt-a-block program in the newsletter to achieve better participation.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.2.

**SECTION 3
ILLICIT DISCHARGE DETECTION AND ELIMINATION
BEST MANAGEMENT PRACTICES**

BMP 3A: STORM DRAIN SYSTEM MAPPING

SUMMARY

Maintain a current storm sewer system map of the MS4, showing the location of all municipal storm sewer outfalls with the names and location of all State waters that receive discharges from those outfalls, storm drain pipe and other storm water conveyance structures within the MS4.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
3A-1	Base mapping converted to a GIS database system	n/a	2006	Appendix B	Public Works
3A-2	Document all discharges from outfalls to State waters	n/a	2009	Appendix B	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
3A-3	Keep mapping up to date as new developments expand the system	Continuously	90%	n/a	Public Works

OBJECTIVE

Make current storm drain system maps available for all City employees responsible for the storm drain system.

MEASURABLE GOALS

- The City has currently achieved a level of detail acceptable as demonstrated in Appendix B to meet the needs and requirements of the Storm Water Program, other than to continue to update the map as necessary.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.3.1.

BMP 3B: ILLICIT DISCHARGE CONTROLS

SUMMARY

Effectively prohibit through an ordinance non-storm water discharges to the MS4, including spills, illicit connections, illegal dumping and sanitary sewer overflows (“SSOs”) into the storm sewer system, and implement appropriate enforcement procedures and actions. Provide adequate legal authority to detect, investigate, eliminate and enforce against non-storm water discharges, including illegal dumping, into the MS4.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
3B-1	Pass ordinance to meet UPDES permit requirements	One time	2010	Appendix A	City Council
3B-2	Promote services for collection of household wastes	Continually on web	2010	Appendix F1	Public Works
3B-3	Citizen hotline written procedures	One time	2010	Appendix H1	Public Works
3B-4	Dry weather screening written procedures	One time	2010	Appendix H1	Public Works
3B-5	Written IDDE Program with necessary procedures and forms	One time	2010	Appendix H1	Public Works
3B-6	Written spill/discharge procedures, flow chart and forms	One time	2010	Appendix H1	Public Works
3B-8	Promote Citizen Hotline in newsletter and on website	Continually on web and in newsletter	2016	See website and newsletter	Public Works
3B-10	Promote collection dates for household hazardous waste in newsletter	Twice Annually	2011	See newsletter history	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
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3B-7	Adapt IDDE Program to Ivins specific needs	n/a	0%	2018	Public Works
3B-9	Prioritize areas likely to have illicit discharges	One time	0%	2017	Public Works
3B-11	Develop system to track locations of illicit discharges and enforcement actions in a database displayable within GIS mapping for program evaluation and assesement.	One time	0%	2019	Public Works
3B-13	Provide educational information to general public as per Ivins BMP 1A.	n/a	60%	2020	Public Works
3B-14	Provide educational information to businesses as per Ivins BMP 1B	n/a	25%	2020	Public Works
3B-12	Start training of employees involved in program as per BMP 1D.	Annual	0%	2017	Public Works

OBJECTIVE

Eliminate illicit discharges into the storm drain.

MEASURABLE GOALS

- Fully implement activities in development.
- Once activity 3B-11 is developed, it will be possible to make measurable goals regarding results of the tracking program.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.3.

**SECTION 4
CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
BEST MANAGEMENT PRACTICES**

BMP 4A: PRE-CONSTRUCTION SITE PLAN REVIEW

SUMMARY

Develop and implement procedures for pre-construction site plan reviews including the review of Storm Water Pollution Prevention Plans (SWPPPs) and the review of site plans for long-term permanent storm water management best management practices.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
4A-1	SWPPP Process Description for Developers/Contractors/Engineers/Builders	One-time	2010	Appendix I-1	Public Works
4A-2	SWPPP Review Procedures developed	One-time	2010	Appendix I-1	Public Works
4A-3	SWPPP Review Checklist developed	One-time	2010	Appendix I-1	Public Works
4A-4	Individual Lot SWPPP Forms Developed	One-time	2010	Appendix I-1	Southern Utah Storm Water Coalition
4A-5	Keep records of all plans for a period of five years.	Continuous	Before 2003	Ivins City Archives	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
4A-6	Develop site plan review procedures for post-construction storm water management.	n/a	25%	2018	Public Works
4A-7	Develop site plan review checklist for post-construction storm water management	n/a	0%	2018	Public Works

OBJECTIVE

Reduce pollutants in any storm water runoff to the MS4 system from construction sites and fully developed sites.

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.4.3 and Part 4.2.5.4.

BMP 4B: CONSTRUCTION SITE INSPECTION

SUMMARY

Develop and implement procedures and checklists for the inspection of construction sites. Document ongoing construction site inspections and track enforcement of storm water controls.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
4B-1	Construction Site Inspection Procedures developed	One-time	2010	Appendix I2	Public Works
4B-2	Construction Site Inspection Checklist from DWQ adopted for use	One-time	2010	Appendix I2	Public Works
4B-3	Develop written site construction enforcement procedures	One-time	2010	Appendix I2	Public Works/Legal
4B-4	Inspecting Sites for Storm Water Controls and maintaining documentation	Monthly	2010	Appendix L	Public Works
4B-5	Maintain at least one employee with Storm Water Inspector certification	Continuous	2012	N.A.	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
4B-6	Develop system to track all enforcement actions	n/a	0%	2018	Public Works
4B-7	Develop forms for issuing enforcement action letters.	n/a	0%	2019	Public Works/Legal
4B-8	Develop characteristics of priority construction sites	n/a	0%	2018	Public Works
4B-9	Develop procedure for being notified by construction operators/owners of completion of active construction.	n/a	0%	2018	Public Works

OBJECTIVE

Reduce pollutants in any storm water runoff to the MS4 system from construction sites.

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.4.2.

**SECTION 5
POST-CONSTRUCTION STORM WATER MANAGEMENT
BEST MANAGEMENT PRACTICES**

BMP 5A: SITE PLAN REVIEW FOR POST-CONSTRUCTION STORM WATER CONTROLS

SUMMARY

Consider storm water quality impacts in reviewing plans for construction and development. Require implementation of structural and non-structural BMPs for long-term storm water development (post-construction) that will prevent or minimize impacts to the water quality. Identify opportunities and encourage new development to consider low impact development (LID) approaches.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
5A-1	Adopted sensitive lands ordinance to minimize/limit development of steep slopes, flood plains, wildlife habitat, rock outcroppings, wetlands, and geologic hazard areas.	One-time	2005	Ivins City Code Title 16, Ch 8, Part 2 (Appendix J1)	Building and Zoning
5A-2	Ivins City Standard Specifications for Design and Construction (ICSS) Section 2.3.16 provides guidance on Post Construction Pollution Prevention.	One-time	2010	ICSS Section 2.3.16 (Appendix F3)	Engineering
5A-3	Prepared draft ordinance, status of review, and anticipated approval dates for LID and 90% Retention requirement.	One-time	2016	Appendix J1.2	Engineering

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
5A-4	Develop written procedures for site-plan review that includes water quality considerations.	n/a	0%	2012	Public Works
5A-5	Expand ICSS Section 2.3.16 to be compliant with new permit requirements. Provide documentation on technical basis of selection of preferred BMPs.	n/a	0%	2014	Public Works
5A-6	Develop and define specific hydrologic methods for sizing structural BMPs.	n/a	0%	2014	Southern Utah Storm Water Coalition

5A-7	Develop preferred design specifications for different development types such as industrial parks, commercial strip malls, gas stations, restaurants, parking lots, auto shops, and street construction.	n/a	0%	2015	Public Works
5A-8	Develop program and process which requires developers to evaluate LID approach.	n/a	25%	September, 2016	Public Works

OBJECTIVE

To protect water quality long-term by requiring permanent best management practices on new development.

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.5.

BMP 5B: INSPECTION, MAINTENANCE & ENFORCEMENT OF EXISTING DEVELOPMENT

SUMMARY

Develop a program for the inspection, maintenance and enforcement of existing structural best management practices (i.e. detention basins, etc.).

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
5B-1	Ordinance adopted for inspection and enforcement of post-construction storm water control measures.	One time	2010	Appendix A	City Council
5B-2	Inspect permanent structural BMPs at least once during installation	Once each BMP	Before 2005	Appendix L	Public Works
5B-3	Inventory of post-construction storm water control measures started	On-going	2006	Appendix J2	Public Works

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
5B-4	Continue to improve and complete post-construction structural storm water control inventory in GIS	On-going	75%	Update continually	Public Works
5B-5	Identify if existing developed sites are adversely impacting water quality and develop a plan to retrofit each site.	One time	0%	2015	Public Works
5B-6	Develop program for annual inspection of all existing structural BMPs by either Ivins City or through maintenance agreement with property owner(s).	n/a	0%	2013	Public Works
5B-7	Train all employees involved in post-construction management program	One time	0%	2012	Public Works

OBJECTIVE

To minimize or prevent pollution of storm water quality from developed properties

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.5.

**SECTION 6
POLLUTION PREVENTION/GOOD HOUSEKEEPING
BEST MANAGEMENT PRACTICES**

BMP 6A: FACILITY OPERATION AND MAINTENANCE PROGRAM

SUMMARY

Keep a current inventory all City owned and operated facilities. Assess each facility and identify high priority sites. For high priority sites implement a facility specific operations and maintenance program by developing standard operating procedures for the multiple tasks that might impact water quality.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
6A-1	List of Ivins City owned and operated facilities kept current	Annual	2009	Appendix K1	Public Works
6A-2	Water quality assessment and prioritization of Ivins City owned and operated facilities completed	Annual	2010	Appendix K1	Public Works
6A-3	Developed 14 Operation and Maintenance SOPs for Public Works, Parks, and Public Safety	One Time	2010	Appendix K1	Public Works, Parks and Public Safety
6A-4	Trained all employees on 11/2/2010. Watched "Storm Watch" video with discussions prior and after.	One Time	2010	Appendix F4	Public Works, Southern Utah Storm Water Coalition

ACTIVITIES IN DEVELOPMENT

Activity ID	Activity Description	Frequency	% Complete	Date to be Implemented	Entity Responsible
6A-4	Customize and review the SOPs to our specific practices.	Annual	0	2011	Public Works, Parks and Public Safety
6A-5	Inventory of all floor drains	One Time	75%	2011	Public Works
6A-6	Provide followup employee training as needed to address changes in procedures, methods or staffing.	On-going	0%	n/a	Public Works

OBJECTIVE

To minimize or eliminate pollutants from City owned facilities through implementation of SOPs and BMPs.

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.6.

BMP 6B: FACILITY INSPECTIONS

SUMMARY

Inspect “high priority” city owned facilities visually on a weekly basis, comprehensively on a quarterly basis, and observe storm water discharges during/after storm events quarterly.

FULLY IMPLEMENTED ONGOING ACTIVITIES

Activity ID	Activity Description	Frequency	Date Implemented	Doc Ref	Entity Responsible
6B-1	Developed procedures and form for weekly visual inspections for high priority sites	One Time	2010	Appendix K2	Public Works
6B-2	Developed procedures and form for quarterly comprehensive inspection of high priority sites.	One Time	2010	Appendix K2	Public Works
6B-3	Develop procedures and form for quarterly visual inspections of storm discharges for high priority sites.	One Time	2010	Appendix K2	Public Works

ACTIVITIES IN DEVELOPMENT

None.

OBJECTIVE

To assess facilities continually, identify deficiencies and take corrective actions to prevent or minimize storm water pollution.

MEASURABLE GOALS

- Fully implement activities in development.

BMP RATIONALE

- This BMP is designed to meet the requirements of UPDES permit, Part 4.2.6.6.