MAIN SWMP

MAPLETON CITY

2012 SWMP UPDATE SECTION BY SECTION CHECKLIST

Main SWMP Book

- Priorities and Concerns
- Minimum Control Measures 1-6
- Measurable Goals (Specific details)
- Statement of Basis
- Effectiveness Evaluation Criteria
- Controlling Regulated Pollutants (TMDLs)
- Budget
- Responsible Parties (Organization Chart)
- Delegation of Authority (if any)
- Impaired Waters
- Shared Responsibilities

MAPLETON CITY

STORM WATER MANAGEMENT PROGRAM

Table of Contents

Introduction

City of Mapleton

Mapleton City is located on the east side of Utah Valley on a bench between Hobble Creek and Spanish Fork Canyons with Springville City to the north and Spanish Fork City to the west. The area was first settled in 1850, and for a time was known as Union Bench. It started out as an agricultural extension of Springville. Mapleton was finally incorporated in 1948.

Legal action between residents of Springville and what became Mapleton, largely over water rights, allowed Mapleton to chart its own course beginning in 1901 with a population of 584 and doubling by 1950 to 1,175. Mapleton then grew at a rate of less than 1,000 every 10 years, from 1950 to 1990 to a population of 3,572. From 1990 to 2000 Mapleton's population grew to 2,237 and experienced phenomenal growth from 2000 to 2010 to 7,979 (2010 Census) in population. The population is projected to increase to approximately 30,000 at build out. The City currently encompasses 8,125 acres with a density of 630 people per square mile.

Mapleton is still somewhat a rural area, but is rapidly suburbanizing in the wake of development. This development has slowed significantly since 2008. None of the City is adjacent to Interstate 15, which has kept the city more rural than neighboring Springville and Spanish Fork. The Main artery through the town is U.S. Route 89 with State Route 147 looping through on 1600 South, South Main and West Maple streets to U.S. Route 89.

General Permit for Discharges From Small Municipal Storm Sewer Systems (MS4s)

The Environmental Protection Agency (EPA) published the Storm Water Phase II Rule on December 8, 1999. The Utah Department of Environmental Quality acts as the administrator of the program for the EPA in the State of Utah. To comply with the requirements of the Phase II Rule, municipalities must obtain an "Authorization to Discharge Municipal Storm Water under Utah Pollutant Discharge Elimination System" (UPDES) from the State of Utah.

The Storm Water Phase II Rule requires municipalities in the urbanized areas to develop and implement a Storm Water Management Program (SWMP). The SWMP is the most substantial part of the UPDES Permit. The SWMP must address six minimum control measures:

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

Municipalities must develop best management practices (BMPs) to address the requirements of each of these six minimum control measures. They must also establish measureable goals for the BMPs. Municipalities must conduct a review of the effectiveness of the SWMP, and submit a corresponding report to the State annually. The SWMP must be updated every 5 years.

The Mapleton City Storm Water Management Program was first developed in March of 2003 in response to the EPA Storm Water Phase II Rule. It consists of practices intended to reduce storm water runoff quantity and quality in Mapleton.

Mapleton City Storm Water Management Program Update

The Mapleton City Storm Water Management Plan Program Update was prepared to renew the previous 2003 UPDES Permit and continue Mapleton City's coverage under Small MS4 General UPDES Permit No. UTR90000 issued on August 1, 2010. The Permit Update is intended to reduce the discharge of pollutants from Mapleton City, protect water quality, and satisfy the appropriate water quality requirements of the Utah Water Quality Act. The Storm Water Management Program (SWMP) is the majority of the update. The SWMP addresses the six minimum control measures described in Part 4.2 of the Permit.

The SWMP has implemented a documentation process for gathering, maintaining, and using information to conduct planning, set priorities, track the development and implementation of the SWMP, evaluate Permit compliance / non-compliance, and evaluate the effectiveness of the SWMP implementation. The Minimum Control Measures (MCM) List was created to specify the planning and priorities of the program and documentation, tracking, and maintenance of records and organized in the Appendix.

The SWMP includes a schedule in the MCM list that implements the six minimum control measures as described in the Permit. The SWMP document utilizes the MCM List and Appendix to organize the BMPs and measureable goals that will be implemented in each of the storm water minimum control measures. The MCM List indentifies target pollutants and audiences, desired results, measureable goals with milestones, associated BMPs and measure of success. The BMPs are located in the appropriate Appendix. The SWMP Appendices contain the documents to track the number of inspections performed, official enforcement action taken and types of public education activities implemented as required for each SWMP components. Some of the items listed below will be developed during the 5 year term of the Permit. Appendices are organized as follows:

APPENDIX A – Supplemental Guide to Storm Water Management for Contractors
This Appendix A is intended to be part of the SWMP, yet removable for Contractors, Developers and Engineers.

APPENDIX B – Supplemental Guide to Storm Water Management for Public Works and Parks and Recreation
This Appendix B is intended to be part of the SWMP, yet removable for Public Works and Parks Personnel.

APPENDIX C – IDDE Program
This Appendix C includes IDDE Procedures / SOP's, Flow charts for Spill Response Procedure and Telephone call-in Response Procedure, IDDE BMP Fact Sheets and the Inspection Report Inventory.

APPENDIX D – Documentation
This Appendix D includes Inspection Forms (Construction and Public Facilities), Enforcement Actions, Training Schedule, Training Log, Visual Monitoring Forms, Maintenance Records, Annual Reports, Budget, Public Education Activities and Justification for changes.

APPENDIX E – City Ordinances
This Appendix E includes the city ordinances that will be reviewed and modified if necessary to implement the Permit provisions for General Storm water, Construction and Post Construction.

APPENDIX F – State / City Permits

APPENDIX G - Maps / Map Book
This Appendix D includes Collection System, Floor Drains, Facility Storm Drain Maps, City Owned Facilities Inventory, Post Construction BMPs, Outfalls Inventory, Active Construction Sites Inventory, Spills, Enforcement Action Log and Monitoring Locations Inventory.

The following organization chart was established to identify the persons responsible for implementing or coordinating the BMPs contained within the SWMP document. See Figure 2. The Organization Chart Department Responsibilities explain the duties each member of the organization has been assigned to accomplish the goals of the SWMP.

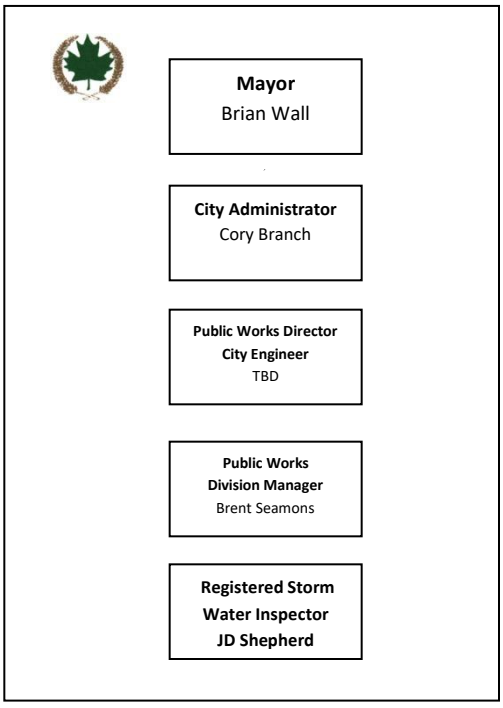

Figure 1 – Mapleton City SWMP Organization

Organization Chart Department Responsibilities

Mayor

- Coordinate efforts with City Administrator and City Council

City Administrator

- Liaison with Mayor and City Council

City Engineer / Public Works Director

- Liaison with administrator and City Council
- Oversee SWMP program specifics and work with department heads

Public Works Operations Director

- Annual report
- Updating SWMP
- Tracking and documentation of activities and actions
- Database updates
- Storm drain mapping
- New/post Construction inspections
- Tracking and documentation of activities and actions
- Training personnel
- Database updates
- Engineering support
- Help with all reporting
- Review plans for storm water compliance (NOI Requirements)

Public Works and Parks Superintendents

- Fleet dept. maintenance work area
- Chemicals, fluids, and oils in work area, waste oils /fluids
- Metal fabrication Area
- Department maintenance work areas
- Pesticide, herbicide, and fertilizer (PHF) program
- Street sweeping program
- Chemical and fertilizer storage in work area
- Snow plowing program
- Sanitary Sewer Overflow Program (SSO)
- Parks department equipment operation
- Equipment maintenance for departments
- Responsible for 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

Statement of Basis

Permittee: City of Mapleton
Permit Number: UTR090052
Location of MS4: 125 West 400 North, Mapleton, Utah 84664
Longitude 111”49’,18”W / Latitude 40”08’00.77 N

Submitted with this permit is the following:

- A map of the MS4 location.
- Information regarding the overall quality concerns, priorities, and measureable goals specific to the Permittee that were considered in the development and/or revisions to the SWMP document.
- A description of the program elements that will be implemented in each of the six minimum control measures.
- A description of any modifications to ordinances or long-term /ongoing processes implemented in accordance with the previous MS4 general permit for each of the six minimum control measures.
- A description of how the Permittee intends to meet the Permit requirements as described in Part 4.0 by either referencing existing program areas that already meet the Permit requirements or a description and relevant measurable goals that include, as appropriate, the year by which the Permittee will achieve required actions, including interim milestones.
- If applicable indication of joint submittal of Co-Permittees and the associated responsibility in meeting requirements of the SWMP.

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

_____ _____

Authorized Signature Date

Impaired Water / Controlling Regulated Pollutants (TMDLS)

Part 3.1 of the Permit requires the Permittee to determine whether storm water discharge from any part of the MS4 contributes to a 303(d) listed (i.e., impaired)water –body. If the Permittee has "303(d)" discharges described above, the Permittee must also determine whether a Total Maximum Daily Load (TMDL) has been developed by the Division and approved by EOA for the listed water-body. If there is an approved TMDL, the Permittee must comply with all requirements associated with the TMDL as well as the requirements of Part 3.1.2. If no TMDL has been approved, the Permittee must comply with Part 3.1.2 and any TMDL requirements once it has been approved. Part 3.1.2 of the Permit states that if the Permittee discharges to an impaired water-body, the Permittee must include in its SWMP document a description of how the Permittee will control the discharge of the pollutants of concern. This description must identify the measures and BMPs that will collectively control the discharge of the pollutants of concern. The measures should be presented in the order of priority with respect to controlling the pollutants of concern.

The storm drain system is Mapleton City discharges to Dry Creek, eventually discharging into Utah Lake. Utah Lake is listed on Utah's 2004 §303(d) list for exceedances of state criteria for total phosphorus (TP) and total dissolved solids (TDS) concentrations. A Total Maximum Daily Load (TMDL) has not been developed by the Division and approved by EPA for Utah Lake. Primary sources for TDS in receiving waters are agricultural and residential runoff, leaching of soil contamination and point source water pollution discharge from industrial or sewage treatment plants. The most common chemical constituents are calcium, phosphates, nitrates, sodium, potassium and chloride, which are found in nutrient runoff, general storm water runoff and runoff from snowy climates where road deicing salts are applied. The Mapleton City Storm Water Management Program will address the total phosphorus (TP) and total dissolved solids (TDS) concentrations through the measurable goals listed in the MCM List. The Program will reduce total phosphorus (TP) and total dissolved solids (TDS) concentrations by:

- Implementing and enforcing the IDDE program to systematically find and eliminate sources of non-storm water discharges from the City and to implement defined procedures to prevent illicit connections.
- Developing, implementing and enforcing a program to reduce pollutants in any storm water runoff to the City storm drain system from construction.
- Developing, implementing and enforcing a program to address post-construction storm water runoff to the City storm drain system from new development and redevelopment construction sites.
- Developing and implementing an operations and maintenance (O & M) program for City-owned or operated facilities.

Concerns and Priorities

Concerns

The water quality within Mapleton is relatively good. As mentioned above, the drainage system discharges to Utah Lake which is on the Section 303(d) list of the Clean Water Act. The intent of this Storm Water Management Program (SWMP) is to improve the water quality and possibly decrease the quantity of water discharged to Utah Lake. Like most communities along the Wasatch Front, some of the biggest concerns involve sediment loads (coming primarily from disturbed sites), fertilizers and pesticides coming from lawns and farmlands, and oils and grease coming from the roadways, salts and deicing materials coming from the roadways, improper disposal of household chemicals and waste materials and illicit discharge from industrial sites. Mapleton's SWMP has been geared toward small city applications, targeting the pollutants mentioned.

Priorities

As discussion was held trying to understand the nature of the problems and how to accomplish the goals of the SWMP, it was determined the following areas shall be emphasized.

- This program has been developed with an increased emphasis on education and public involvement with all four groups as listed in the permit.
- The training schedule will be emphasized in the first year of the permit so all key personnel will understand their storm water responsibilities.
- The outfall locations will be prioritized so that the most likely areas of illicit discharge will be inspected first.
- Mapleton City has very few industrial areas. The industrial areas will be located and prioritized as to where the storm water from the site discharges. Increased oversight will be initiated for these areas, especially those in proximity to sensitive areas.
- The build out in several subdivisions has slowed due to the economy. These subdivisions will be identified and given particular attention to stabilize the sites to prevent erosion.
- Good Housekeeping will be stressed through training and the inspection of priority inspections.

Threatened or Endangered Species and Historic Properties

Part 3.2 states that the Permit does not relieve the Permittee from compliance with Federal or State laws pertaining to threatened or endangered species or historic properties. Where applicable, compliance efforts to these laws shall be reflected in the SWMP document.
The SWMP requires each new project be informed of all Federal or State laws pertaining to threatened or endangered species or historic properties. A form found in Appendix A, which will be given to all developers, contractors and design engineers requires the applicant investigate and document Impaired Waters, Threatened or Endangered Species and Historic Properties.

Minimum control measures 1-6

Part 4.2 states that a Renewal Permittee must continue to implement its Storm Water Management Program (SWMP) as described in the application and submittals provided in accordance with the previous MS4 general Permit, while updating its SWMP document pursuant to this Permit. This Permit does not extend the compliance deadlines set forth in the previous MS4 general Permit unless specifically noted.

The previous SWMP document was reviewed during the preparation of this SWMP. It was concluded that most of the ongoing measurable goals in the old permit were not as detailed as the new permit required minimum measurable goals. Therefore Mapleton City has elected to replace the old permit BMPs and have filled out a JUSTIFICATION FOR CHANGES form which is located in Appendix D – Documentation.

The program elements that will be implemented in the six minimum control measures include a description of how Mapleton City intends to meet the requirements as described in Part 4.0 by referencing the target pollutants and audience, the Permit requirements, a description of the relevant measurable goals, the year by which the Permittee will achieve required actions, including interim milestones and the measure of success (Effectiveness). The six minimum control measures are described in the following MCM List.

Public Education and Outreach on Storm Water Impacts

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

Measurable Goals

MCM1 Public Education and Outreach on Storm Water Impacts

	Target Pollutant(s)	Audience(s)	Desired Results	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	Total Dissolved Solids (TDS) and Total Phosphorous (TP)	Residents and Businesses	4.2.1.1 To educate audiences about impacts from storm water discharge.	Investigate supporting SLCo TV ads.	Discussed on March 29th, at the Utah County Storm Water Coalition Meeting.	PEP and UM	Review investigation report.
2	Total Dissolved Solids (TDS) and Total Phosphorus (TP)	Residents (4th graders)	4.2.1.1 To educate audiences on ways to avoid, minimize, and reduce impacts of storm water discharge.	Continue booth at the annual Utah County Fair and educational program for fourth graders.	Annually	PEP and CESW	Renew contract with 4th grade presenter and continue Fair booth annually.
3	Total Dissolved Solids (TDS) and Total Phosphorus (TP)	Residents and Businesses	4.2.1.1 To educate audiences on actions individuals can take to improve water quality.	Investigate supporting SLCo TV ads.	Discussed on March 29th, at the Utah County Storm Water Coalition Meeting.		Review investigation report.
4	See list in "desired result" column	General Public	4.2.1.2 Information is provided to target audience on prohibitions against illicit discharges and improper disposal of waste including: maintenance of septic systems; effects of outdoor activities, such as lawn care; benefits of on-site infiltration of storm water; effects of automotive work and car washing on water quality; proper disposal of swimming pool water; and proper management of pet wastes.	Include information on the website and include information in utility bills or city newsletter at least once annually.	Annually	PEP and UM	Information is current on website and included in utility bills or city newsletter annually.
5	See list in "desired result" column	Business and Institutions	4.2.1.3 Information is provided to target audience on prohibitions against illicit discharges and improper disposal of waste including: Proper lawn maintenance; benefits of appropriate on-site infiltration of storm water; building and equipment maintenance; use of salt or other deicing materials; proper storage of materials; proper management of waste materials and dumpsters; proper management of parking lot surfaces.	Include information on the website and include information in utility bills or city newsletter at least once annually.	Annually	PEP and UM	Information is current on website and included in utility bill or city newsletter annually.
6	Illicit discharge and waste	Contractors, Developers, and plan review staff	4.2.1.4 Reduce adverse impacts from development sites	Assemble packets of information on SWPPP and BMPs.	June 1, 2012		The packet will be in the SWMP and on the website.
7	Illicit discharge and waste	Employees	4.2.1.5 Information is provided to target audience on prohibitions against illicit discharges and improper disposal of waste including: Equipment inspection to ensure timely maintenance; benefits of appropriate on-site infiltration of storm water; minimization of use of salt or other deicing materials; proper storage of industrial materials; proper management of waste materials and dumpsters; proper management of parking lot surfaces.	Have training twice a year in group employee meetings.	Semi – annually	ET	Training occurs semi-annually.
8	All pollutants	Permittee engineers, development and plan review staff, land use planners	4.2.1.6 Training on LID, Green Infrastructure, and post-construction BMPs.	Hold DRC meeting and 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.	Annually		Annual meeting occurs.
9	All pollutants	All Audiences	4.2.1.7 Evaluate the effectiveness of the public education program by a defined method.	Research public education evaluation methods and select the best one.	Annually		Select evaluation method.
10	All pollutants	All Audiences	4.2.1.7 Evaluate the effectiveness of the public education program by a defined method.	Create a spreadsheet for tracking illicit discharges.	Annually		Implement the selected method.
11	All pollutants	All Audie3nces	4.2.1.8 Document why certain BMPs were chosen for public education program (over others).	Include an explanation in the SWMP on why the public education BMPs were chosen.	Annually		Documented rationale included in the SWMP.

Public Involvement / Participation

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

Measurable Goals

MCM1 Public Education and Outreach on Storm Water Impacts

	Target Pollutant(s)	Audience(s)	Desired Result	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	All pollutants	General public	4.2.2.1 Have a program of policy in place that allows for the public to provide input.	Notice the public of the City Council Meeting when the SWMP update will be reviewed according to City noticing process and accept comment at the meeting.	July 1, 2012	PEP	
2	All pollutants	General public	4.2.2.2 Have SWMP document available for public review before it's submitted to the state.	Have a hard copy of the draft of the permit available at the City offices before the public hearing.	July 1, 2012	PEP	SWMP document is available for public review before public hearing.
3	All pollutants	General public	4.2.2.3 Have SWMP document available to the public at all times.	Post the SWMP on the website within a month from date submitted to the State.	July 1, 2012	PEP	SWMP is updated and posted on the website.
4	All pollutants	General public	4.2.2.3 Make updated SWMP document available to the public annually	Post updated SWMP annually on website.	Annually	PEP	SWMP is updated and posted on the website annually.
5	All pollutants	General public	4.2.2.4 Comply with State and local public notice requirements.	Review and document what the State and local public notice requirements are met.	July 1, 2012	PEP	City recorder certified that the State and local public notice requirements were met and are included in SWMP documentation.

Illicit discharge detection and elimination (IDDE)

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

Measurable Goals

MCM1 Public Education and Outreach on Storm Water Impacts

	Target Pollutant(s)	Audience(s)	Desired Result	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	All Pollutants	Contractors, Developers, City Council	4.2.3 Enforcement ability for storm water rules.	Preview existing ordinance to conform with IDDE requirement in permit and draft changes to be approved.	March 2012	0D	Ordinance meets the permit requirements.
2	All Pollutants	Contractors, Developers, City Council	4.2.3 Enforcement ability for storm water rules.	Update the ordinance to conform with IDDE requirement in permit.	March 2012	0D	Ordinance is in place and meets the permit requirements.
3	N/A	Public Works	4.2.3.1 Maintain a current storm sewer system map of the MS4, with locations of outfalls (Names and location of all State waters that receive discharges), storm drain pipe and other storm water conveyance structures within the MS4.	Establish policy to maintain a current SD System Map on all new developments.	March 2012	MSWD	Policy is in place and meets the permit requirements.
4	N/A	Public Works	"	Implementing policy and bring map current with all new accepted developments.	On going	MSWD	90% are input within 12 months.
5	N/A	Public Works	"	Implementing policy and have all map updates done within 6 months of final acceptance.	Semi-Annually	MSWD	90% are input within 6 months.
6	All Pollutants	All Audiences	4.2.3.3.1 Develop and implement written systematic procedures for locating and listing the following priority areas likely to have illicit discharges.	Develop written process for identifying priority area.		NSWD	Plan is in place.
7	All Pollutants	All Audiences	4.2.3.3.2 Field assessment activities for the purpose of verifying outfall locations and detecting illicit discharges, including dry weather screening of outfalls or facilities serving priority areas identified in Part 4.2.3.3.1 as well as routine dry weather screening of all outfalls that discharge within the Permittee's jurisdiction to a receiving water.	Inspect 20% of all priority areas each year.	Annually	NSWD	All priority areas are inspected.
8	All Pollutants	All Audiences	"	Do Dry weather screening 20% of all outfalls each year.	Annually	NSWD	All outfalls have dry weather screening completed.
9	All Pollutants	All Audiences	4.2.3.4 Develop and implement standard operating procedures (SOPs) or similar type of documents for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, using field tests of selected chemical parameters as indicators of discharge sources, collecting and analyzing water samples for the purpose of determining sanctions or penalties, and/or other detailed inspection procedures.	Review and implement Dry Weather Screening Checklist /SOP. Utilize visual monitoring form.		IIC	Completed by milestone date.
10	All Pollutants	All Audiences	4.2.3.5 Develop and implement SOP for characterizing the nature of any illicit discharges found or reported to the Permittee by the hotline developed in 4.2.3.9.	Create the incidence Response Flow Chart, IDDE Phone Call Report and IDDE Inspection report. Train personnel.	April 30, 2012	IIC, CH	Completed by Milestone date and staff is following process.
11	All Pollutants	All Audiences	"	Review flow chart (SOP) and Inspection Report with staff annually.	Annually	IIC, CH	Training is completed annually for all staff involved in incident reporting.
12	All pollutants	All Audiences	4.2.3.6 Develop and implement standard operating procedures for ceasing the illicit discharge	Create the Incidence Response Flow Chart, Spill Report Form and IDDE Inspection Report. Train Personnel.	July 1, 2012	IDC, ISDC	Completed by milestone date and staff is following process.
13	All Pollutants	Public Employees, Businesses and Residents	4.2.3.7 Inform public employees, businesses, and general public of hazards associated with illicit discharges and improper disposal of waste.	Will meet goal with MCM1 – Lines 5 & 7.	Annually	PEP, ET	See MCM 1- 5 & 7
14	Household Hazardous Waste	Residents	4.2.3.8 Promote or provide services for the collection of household hazardous waste.	Put the Household Hazardous Waste address and phone number on the City web site.	Done in new letter when advertized.	UOR, HWM	Completed by milestone date.
15	Household Hazardous Waste	Residents	4.2.3.9 Permittees shall keep written record of all calls received, all follow-up actions taken, and any feedback received from public education efforts.	Create a spreadsheet for tracking IDDE calls.	July 1, 2012	CH	Completed by milestone date.
16	All Pollutants	All Audiences	4.2.3.10 Adopt and implement procedures for program evaluation and assessment. Include a database for mapping, tracking of the spills or illicit discharges identified and inspections conducted.	Create a spreadsheet for tracking illicit Discharges.	July 1, 2012	IIC, MSWD	Completed by milestone date.

Construction Site Storm Water Runoff Control

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

Measurable Goals

MCM1 Public Education and Outreach on Storm Water Impacts

	Target Pollutant(s)	Audience(s)	Desired Result	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	Sediment, Construction Site Debris, Hydrocarbons	Contractor, Developers, MS4 Staff and City Attorney	4.2.4.1 Develop and adopt ordinance or other regulatory mechanism that requires use of erosion and sediment control practices at construction sites, construction operators to prepare a Storm Water Pollution Prevention Plan (SWPP) for sites greater than 1 acre or part of a Common Plan of Development, provision for access by qualified personnel to inspect construction storm water BMPs on private properties that discharge to the MS4 and defines an escalating enforcement strategy.	Review existing ordinance to meet requirement in Part 4.2.4.1.	Completed March 2012	OD	When review is completed and list of changes have been documented.
2	Sediment , Construction Site Debris, Hydrocarbons	Contractors, Developers, MS4 Staff and City Attorney	"	Draft changes to ordinance to meet requirement to Part 4.2.4.1.	Completed March 2012	OD	Completed by milestone date.
3	"	Contractor, Developers, MS4 Staff, City Attorney & City Council	"	Submit ordinance changes to City Council for approval	Completed March 2012	OD	Completed by milestone date.
4	"	"	4.2.4.2 Documentation and tracking of all enforcement actions.	Develop and begin using a construction site enforcement action log / database.	Completed March 2012	OD	We have a log and are using it.
5	Sediment, Construction Site Debris, Hydrocarbons	Contractors and Developers	4.2.4.3 Develop and implement SOPs or similar type of documents for pre-construction Storm Water Pollution Prevention Plan(SWPP) review and keep records, for at a minimum, all construction sites that disturb 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..	Develop checklist and begin to do preconstruction reviews of SWPP.	On going	ECP	We are conducting SWPpP reviews.
6	"	"	4.2.4.3.2 Incorporate into the SWPP review procedures in consideration of potential water quality impacts and procedures for pre-construction review which shall include the use of a checklist.	Develop a policy to consider potential water quality impacts on all projects – private or municipal.	On going	ZO	In DRC, Plan and Building Permit Review
7	"	"	4.2.4.3.3 Incorporate into the SWPP review procedures for an evaluation of opportunities for use of Low Impact Development (LID) and green infrastructure and when the opportunity exists, encourage such SMPs to be incorporated into the site design.	Develop a policy to consider Low Impact Development practices on all projects – private or municipal.	December 1, 2012	ZO	
8	"	"	4.2.4.3.4 Identify priority construction sites, including at a minimum those construction sites discharging directly into or immediately upstream of water that the State	Develop a "sensitive area" map showing areas within the city where "additional" protection may be desired.		LIP	When map is completed and ready for use.
9	Sediment, Construction Site Debris, Hydrocarbons	Contractors and Developers	4.2.4.4.1 Inspections of all new construction sites…at least monthly by qualified personnel.	Conduct monthly inspections of all construction sites.	Annually	CCIT	90% of all active construction sites are inspected monthly.
10	"	Contractors, Developers and MS4 Staff.	4.2.4.5 The Permittee must ensure that all staff, whose primary job duties are related to implementing the construction storm water program, including permitting, plan review, construction site inspections, and enforcement, is trained to conduct these activities.	Provide SWPPP training annually to staff members involved with construction activities	Annually	CCIT	Completed by milestone date.
11	"	"	4.2.4.4.2 The Permittee must include in its SWMP document a procedure for being notified by construction operators/owners of their completion of active construction so that verification of final stabilization and removal of all temporary control measures may be conducted.	Develop a written Notice of Termination process for use within the city	Completed March 2012	ECP	Completed by milestone date.
12	"	"	"	Train SWPPP inspector, their supervisors, and any personnel who grant final occupancy permits on the NOT process.	July 1, 2012	ECP	Completed by milestone date.
13	"	"	4.2.4.4.3 Conduct Bi-weekly inspections on high priority construction sites.	Inspect high priority sites bi-weekly.	Annually	ECP	90% of priority construction sites are inspected bi-weekly.
14	"	"	4.2.4.5 Maintain a log of active construction sites.	Establish an active construction sites log.	Completed March 2012	ECP	Construction sites are recorded in the log.

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

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

MCM1 Public Education and Outreach on Storm Water Impacts

	Target Pollutant(s)	Audience(s)	Desired Result	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	All Pollutants	All Audiences	4.2.5.1 Develop and adopt an ordinance or other regulatory mechanism that requires long-term post-construction storm water controls at new development and redevelopment sites. (4.2.5.3.1 for flood control structure issues and 4.2.5.3.2 for LID)	Review existing ordinance to determine if it meets new Post-Construction requirement – Use checklist from coaching sessions.	March 2012	OD	Review is complete.
2	"	"	"	Draft Post-Construction ordinance revisions	March 2012	OD	Draft is complete and ready for others to review.
3	"	"	"	Adopt Post-Construction ordinance	March 2012	OC	Ordinance has been passed.
4	"	"	4.2.5.2.2 Documentation on how the requirement of the ordinance or other regulatory mechanism will protect water quality and reduce the discharge of pollutants to the MS4.	Review and update standard SMPs Fact sheets	March 2012	IPL	Update is completed by the milestone date.
5	"	"	"	Adopt updated BMP Fact sheets.	March 2012	IPL	BMP Fact sheets are adopted.
6	"	MS4 Staff, City Council	4.2.5.3.3 The Permittee must develop a plan to retrofit existing developed sites that are adversely impacting water quality.	Update Storm Drain Master Plan and Capital Improvement Plan to include Water Quality	March 2012	IPL	CIP includes water quality projects.
7	"	MS4 Staff, Contractors and Developers	4.2.5.3.4 Each Permittee shall develop and define specific hydrologic method or methods for calculating runoff volumes and flow rates.	Review existing design standard to see if they meet new permit requirements – see section 4.2.5.3.4.	March 2012	IPL	Standards have been reviewed and comments made.
8	"	"	"	Update design standards.	March 2012	IPL	Updated standards have been adopted.
9	"	"	4.2.5.4.1 Review Storm Water Pollution Prevention Plans (SWPPs)	See goals for MCM 4 Lines 1-3.		IPL	
10	"	"	4.2.5.4.2 Permittees shall provide developers and contractors with preferred design specifications to more effectively treat storm water for different development types…projects located in adjacent to, or discharging to environmentally sensitive areas.	Develop preferred method(s) of treating storm water for high impact sights.	March 2012	IPL	List of preferred method(s) is complied.
11	"	"	4.2.5.4.3 Permittees shall keep a representative copy of information that is provided to design professionals…the dates of the mailings and lists of recipients.	Put packet information on the website.	Annually	EM	The packet is located on the website.
12	"	"	4.2.5.5 All Permittees shall adopt and implement SOPs or similar type of documents for site inspection and enforcement of post-construction storm water control measures.	Review and customize SOPs for inspection and enforcement of post-construction control measures.	March 2012	LIP	Inspection and enforcement SOPs are current and being utilized.
13	"	"	4.2.5.5.1 The ordinance or other regulatory mechanism shall include provisions for both construction-phase and post-construction access for Permittees to inspect storm water control measures on private properties that discharge to the MS4 to ensure that adequate maintenance is being performed.	Draft a maintenance agreement template.	March 2012	IM	Draft is completed by the milestone date.
14	"	"	"	Adopt a maintenance agreement template.	March 2012	IM	Template is adopted and being used by milestone date.
15	"	"	4.2.5.5.3 Inspections and nay necessary maintenance must be conducted annually by either the Permittee or through a maintenance agreement, the property owner/operator. On sites where the property owner/operator is conducting maintenance the Permittee shall inspect those storm water control measures at least once every five years.	Inventory post-construction BMPs – see 4.2.5.7.1 for inventory inclusion items.	March 2012	IM	Inventory is complete.
16	"	"	"	Identify who is responsible to inspect and/or maintain each post-construction BMP.	March 2012	IM	List identifies person responsible for inspections / maintenance.
17	"	"	"	Develop inspection report form for post-construction BMPs.	March 2012	IM	Form is completed.
18	"	"	"	Conduct inspections annually for City maintained post-construction BMPs.	Annually	IM	Completed inspection reports are properly filed.
19	"	"	"	Conduct inspections on privately maintained post-construction BMPs at leat 20% per year.	Annually	IM	Completed inspection reports are properly filed.
20	"	MS4 Staff	4.2.5.6 Permittees shall provide adequate training for all staff involved in post-construction storm water management, planning and review, and inspections and enforecement.	Schedule and conduct training for appropriate personnel.	Annually	IM	All appropriate personnel are trained.
21	"	"	4.2.5.7 Maintain an inventory of post construction BMPs	Inventory log updated annually	Annually	IM	Log is updated.

Pollution Prevention and Good Housekeeping for Municipal Operations

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

Measurable Goals

MCM1 Public Education and Outreach on Storm Water Impacts

	Pollutant(s)	Target Audience(s)	Desired Result	Measureable Goal	Milestone Date	Associated BMPs	Measure of Success (Effectiveness)
1	All Pollutants	NS4 Staff	4.2.6…All components of an O & M program shall be included in the SWMP document and must identify the department (and where appropriate, the specific staff) responsible for performing each activity described in this section…	Complete organization chart and define specific responsibilities for all departments shown.	July 1, 2012	HP	Organization chart is complete and up to date by milestone date.
2	"	"	4.2.6.1 Permitees shall develop and keep current a written inventory of Permittee owned or operated facilities.	Complete listing of MS4 owned / operated facilities.	July 1, 2012	HP	List is completed by milestone date.
3	"	"	4.2.6.2 & .3 All Permittees must initially assess the written inventory of Permittee – owned or operated facilities, operations and storm water controls indentified in Part 4.2.6.1 for their potential to discharge to storm water the following typical urban pollutants:	Complete assessments and identify "high priority" facilities.	July 1, 2012	HP	Assessments are completed and documentation recorded in SWMP.
4	"	"	4.2.6.4 Each "high priority" facility identified in Part 4.2.6.3 must develop facility-specific standard operating procedures (SOPs) or similar type of documents.	Review, customize and update appropriate SOPs.	July 1, 2012	HP	SOPs being updated and will be met by milestone date.
5	"	"	4.2.6.5 If a Permittee contracts with a third-party to conduct municipal maintenance or allows private developments to conduct their own maintenance, the contractor shall be held to the same standards as the Permittee.	Receive documentation from third-parties that standards are being followed or conduct annual sight visits.	July 1,2012	HP	Documentation has been received or sites have been inspected.
6	"	"	4.2.6.6.1 Weekly visual inspections: The Permittee must perform weekly visual inspections of "high priority" facilities in accordance with the developed SOPs to minimize the potential for pollutant discharge.	Develop weekly inspection form and log.	March 2012	HP	Completed inspection form and log.
7	"	"	"	Conduct weekly inspections.	Annually	HP	At annual review all weekly inspections are logged and reports completed.
8	"	"	4.2.6.6.2 Quarterly comprehensive inspections. At least once per quarter, a comprehensive inspection of "high priority" facilities, including all storm water controls, must be performed.	Develop quarterly inspection form(s) and log.	March 2012	HP	Completed inspection form and log.
9	"	"	"	Conduct quarterly comprehensive inspections.	Annually	HP	At annual review all quarterly inspections are logged and reports completed.
10	"	"	4.2.6.6.3 Quarterly visual observation of storm water discharges: At least once per quarter, the Permittee must visually observe the quality of the storm water discharges from the "high priority" facilities.	Conduct quarterly visual observations of storm water discharges at high priority facilities.	Annually	HP	At annual review all quarterly visual monitoring is completed and logged and reports completed.
11	"	MS4 Staff, Contractors and Developers	4.2.6.7 The Permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management structural controls that are associated with the Permittee or that discharge to the MS4.	Draft a policy/process to assess water quality impacts on all new flood control projects.		IPL	for internal review process by milestone date.
12	"	"	"	Get policy approved.		IPL	Policy is approved and adopted by milestone date.
13	"	MS4 Staff	4.2.6.7.1 Existing flood management structural controls must be assessed to determine whether changes or additions should be made to improve water quality.	See MCM 5 for goals (part of the retrofit program).			Schedule is complete by milestone date.
14	"	"	4.2.6.9 Permittee shall provide training for all employees who have primary construction, operation, or maintenance job functions that are likely to impact storm water quality.	See individual training goals within outher MCMs.		ET	Training goals have been met.
15	"	"	"	Conduct ongoing training according to schedule.		EM, HP	Training is completed and documented according to schedule at annual evaluation.
16	"	"	"	Conduct ongoing training according to schedule.	Annually	EM, JP	Training is completed and documented according to schedule at annual evaluation.

Budgets

4.1.2.2. Each Permittee must secure the resources necessary to meet all requirements of this permit. Each Permittee must conduct an annual analysis of the capital and operation and maintenance expenditures needed, allocated, and spent as well as the necessary staff resources needed and allocated to meet the requirements of this permit, including any development, implementation, and enforcement activities required. Each permittee must submit a summary of its fiscal analysis with each annual report.

Comment (4.1.2.2): *Please clarify how detailed this analysis should be. Does the State expect this analysis to be broken down into each of the six minimum control measures? Should the permittees track hours of individual employees engaged in storm water activities?*

Response: Each permittee will fund its SWMP differently; therefore, permittees must submit an accounting of stormwater-related budgets, cost, and staffing resources. The fiscal analysis should document and explain changes to budgets from year to year and describe how each funding can and cannot be used for storm water program activities. The analysis must account for resources utilized for compliance with this permit which includes all six minimum control measures and staff time.

Comment (4.1.2.2.): *This permit puts a bigger financial burden on municipalities struggling to meet the requirements of the old permit. How do you propose we obtain these resources when building and tax revenues are down?*

Response: Many MS4s have funded their storm water programs with storm water user fees based on impervious area. Many MS4s are cross-training other municipal staff to aid in complying with storm water permit requirements.