

**SPRINGVILLE CITY**  
**STORM WATER MANAGEMENT PLAN OVERVIEW**

**PURPOSE**

This Storm Water Management Plan (SWMP) has been updated to limit, to the maximum extent practicable, the discharge of pollutants to the Springville City Municipal Separate Storm Sewer System (MS4). The development and implementation of this SWMP is to fulfill requirements under the State of Utah UPDES Permit No. UTR090000 Authorization to Discharge Municipal Storm Water dated March 1, 2016 to February 28, 2021 in accordance to section 1.1 Authority to discharge of the UTR090000

**SWMP COORDINATION**

Agency: Springville City, Public Works Department  
Contact: Mr. Brad Stapley, Public Works Director  
UPDES Number: UTR090040

**STAFFING AND RESOURCE ALLOCATIONS**

Responsibility for implementation of the storm water management program is divided between Springville City and the Utah County Stormwater Coalition. For the City, most of the work is performed by the Public Works Department and other Divisions and Departments; the administration of the entire program is done by the Engineering Division. The City entered into an agreement entitled, "*Interlocal Cooperation Agreement for NPDES Phase II Storm Water Public Education and Outreach Best Management Practice Compliance*" (see copy attached), which delegates Utah County responsibility for administration of the Interlocal Cooperation Agreement.

Management and oversight of the City's responsibilities under the storm water management program is funded through the City's General Fund. The revenue source for the work performed by the Utah County Stormwater Coalition is an assessment to the participating municipalities.

**Water Quality Concerns**

**Permit Requirement 2.3.2.3**

The City Storm Water Management Plan (SWMP) has been updated to meet the terms of the UPDES UTR090000 March 1, 2016 to February 28, 2021 permit and consists of the six minimum control measures established by the EPA for Phase II storm water discharges. Implementation of these control measures is expected to result in significant reductions of pollutants discharged into receiving waters. The pollutants we are more concerned about in the City are: Sediments, trash, pathogens, fertilizers/nutrients, hydrocarbons, metals, pesticides, acid and base products, road salts and increased stream flow. These six control measures are addressed in separate chapters.

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

Each control measure includes Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) necessary for proper storm water management. The BMPs and SOPs include specific tasks to meet the objective of that particular control measure. The BMPs and SOPs included in this SWMP will be implemented and reviewed through out the permit term. This SWMP is intended to be a living document with BMPs added or deleted as new BMPs arise or

BMPs are found to be ineffective. Schedules for implementing the BMPs are provided along with each minimum control measure.

## **SWMP Description**

### **Permit Requirement 2.3.2.4 Description of the Program Elements**

#### Chapter One – Public Education and Outreach Program

This measure is intended to achieve greater public support for the storm water management program and greater compliance through education. An informed public can significantly contribute to the success of the program.

Education is emphasized in this SWMP because of its cost-effectiveness. It is a proactive approach because it prevents pollution rather than reactively treating pollution after it has occurred. The Education and Outreach Program includes:

- Fourth Grade Educational Program
- Utah County Storm Water Coalition
- Community/Residential Outreach Program
- Commercial Outreach Program
- Urban Development Outreach Program
- City Employees Training Program

#### Chapter Two – Public Involvement/Participation Program

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
- Comment Opportunities
- Public Notice Compliance Requirements
- Public Participation

#### Chapter Three – Illicit Discharges and Improper Disposal Program

This measure is intended to minimize illicit discharges into the storm drain system. Illicit discharges are discharges other than storm water. Storm drain systems are not designed to accept, convey, or discharge non-storm water flows. Eliminating illicit discharges helps prevent pollutants from entering receiving waters. The Program includes:

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

Chapter Four – Construction Site Storm Water Runoff Control Program

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 Include:

- Program Description
- Ordinance
- Storm Water Pollution Prevention Plan (SWPPP)
- Construction Site Inspections
- City Personnel Training
- Record Keeping of Permitted Sites

Chapter Five – Post-Construction Storm Water Management Program

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 storm water runoff. Prior planning and design to minimize pollutants in runoff from these areas is an important component to storm water quality management. The Program Include:

- Program Description
- Ordinance
- 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

Chapter Six – Pollution Prevention/Good Housekeeping For Municipal Operations Program

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
- Facilities Inventory
- High Priority Facilities and Activities
- Inspection of Facilities
- City Personnel Training

### **Permit Requirement 2.3.2.5 Modifications to City Ordinance**

Modifications to the city ordinance are under review and are expected to be adopted by **April of 2011**, below is a quick review of the changes.

Title 10 Chapter 9 Land Disturbance Permit.

- Land Disturbance Permit- Defines and regulates land disturbance activities. Permitting thresh holds for land disturbance activities were lowered to include all disturbance areas over 7,500 square feet and land disturbance areas smaller than the 7,500 square feet as required by the City Engineer. Charge fees for Land Disturbance Permits. Require a performance bond for projects the City Engineer deems needed.
- Post Construction requirements- as built plans to be turned in to the City Engineer stamped by a certified Engineer as to the proper building and installation of post construction BMP facilities. Require maintenance agreements from person responsible for the maintenance of post construction BMP facilities.
- Violations- Requires compliance with the appropriate UPDES Construction permits, gives enforcement escalation guidance.

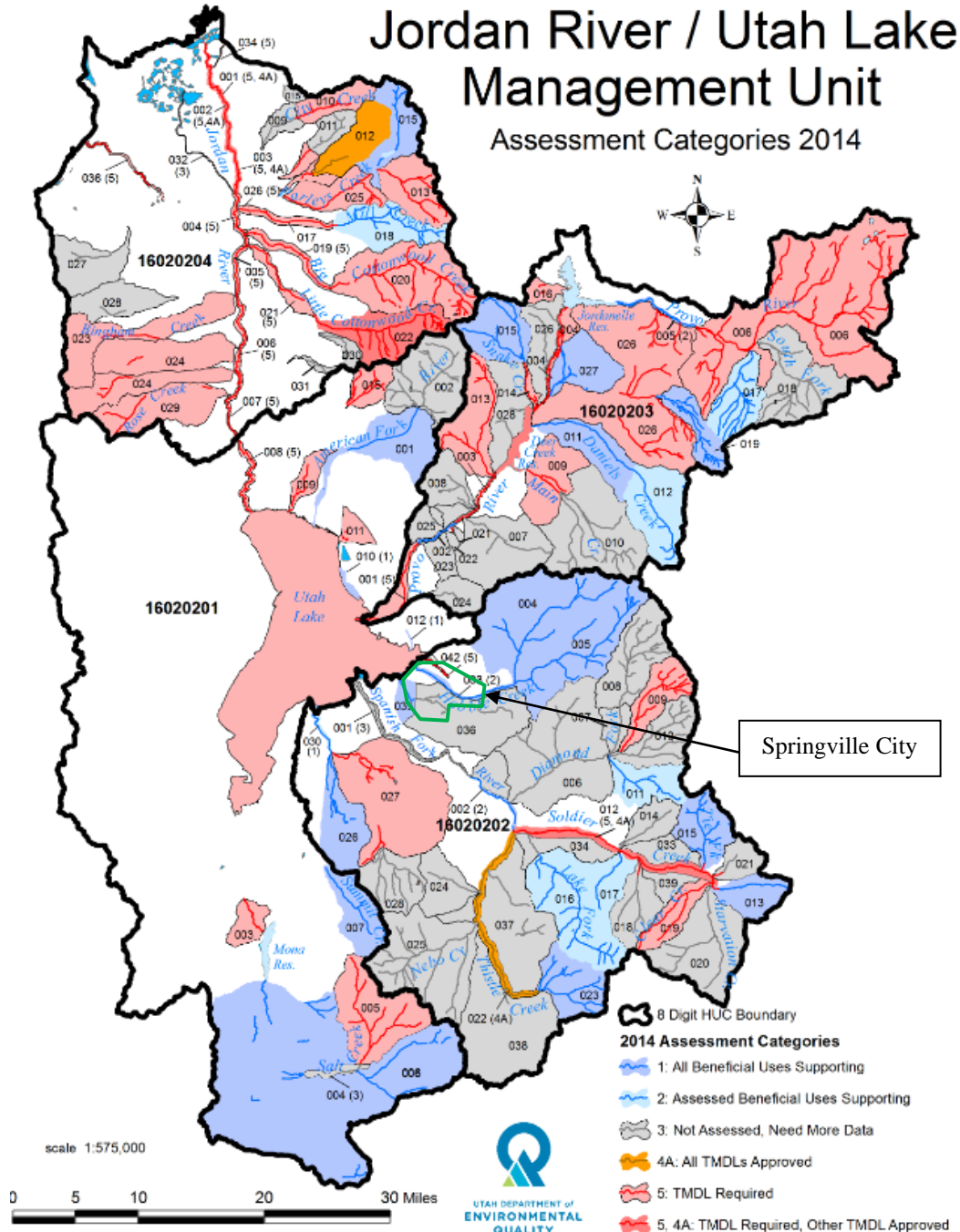
Title 4 Chapter 12 Storm Sewer Utility.

- Storm Sewer System Design and Management Standards- Makes reference to the Springville City Standards and Specifications.
- Created a Post Construction Storm Water Facilities Management section to address maintenance easements, responsibilities, arrangements and agreements; stabilization requirements; existing problem location requirements; inspection of existing facilities.
- Illicit Discharge- consolidated articles 12 and 13 to describe an illicit discharge, prohibited obstructions, prohibition of illicit connections.

Special Conditions

Discharges to Water Quality Impaired Waters

**Permit Requirement 3.1.1.1** According to the Utah 2014 Integrated Report 303(d) List; Springville City discharge its storm water to 3 tributaries that end up in the Utah Lake, these tributaries are:  
Spring Creek- Category 1  
Hobble Creek- Category 1  
Dry Creek- Category 1



On table 2. 303(d) List of Impaired Lakes and Reservoirs 2012 IT Cycle List, Utah Lake has the following description:

**Table 2. 303(d) List of Impaired Lakes and Reservoirs 2012 IT Cycle List**

AU ID	AU Name	Water Type	Size	Location Description
UT-L-16020201-004_00	Utah Lake	FRESHWATER LAKE	96900 ACRES	LL= 401145/1114733 5,6,7,8,9S 1W,1,2,3E USGS MAP AND DATE: PELICAN POINT,1975 WATERSHED: JORDAN RIVER
Cause	Cycle First Listed	TMDL Status	Use	Source
Total Dissolved Solids	2006	Medium Priority	Agricultural	<input type="checkbox"/> Highways, Roads, Bridges, Infrastructure (New Construction) <input type="checkbox"/> Industrial Point Source Discharge <input type="checkbox"/> Municipal Point Source Discharges <input type="checkbox"/> Source Unknown <input type="checkbox"/> Unspecified Urban Stormwater <input type="checkbox"/> Animal Feeding Operations (NPS) <input type="checkbox"/> Irrigated Crop Production <input type="checkbox"/> Managed Pasture Grazing
Phosphorus (Total)	1994	Medium Priority	Warm Water Aquatic Life	
PCB in Fish Tissue	2010	Low Priority	Warm Water Aquatic Life	

**Permit Requirement 3.1.1.2.** “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 EPA for the listed waterbody. 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. below and if no TMDL has been approved, the Permittee must comply with Part 3.1.2. below and any TMDL requirements once it has been approved.” Springville City has determined according to the information above that storm water runoff discharge is not entering directly to an impaired water body, however, through the 6 minimum control measures, we are targeting the sources that contribute to the Utah Lake TDMLs.

**“Permit Requirement 3.1.2.** Water Quality Controls for Discharges to Impaired Waterbodies. If the Permittee discharges to an impaired waterbody, 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.”

**“Permit Requirement 3.1.3.** Where a discharge is already authorized under this Permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard, the Division will notify the Permittee of such violation(s). The Permittee must take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and document these actions as required by the Division. If violations remain or re-occur, coverage under this Permit may be terminated by the Division and an alternative General Permit or individual Permit may be issued. Compliance with this requirement does not preclude any enforcement activity as provided by the Utah Water Quality Act for the underlying violation.”

**Nitrogen and Phosphorus Reduction-** Springville City addresses the reduction of water quality impacts associated with nitrogen and phosphorus throughout the SWMP six minimum control measurements.

**Permit Requirement 3.2.1.1.** - In collaboration with the Utah County Storm Water Coalition Education and Outreach subcommittee will evaluate, identify, target and provide outreach that addresses sources within the boundaries of the cities affiliated with the organization.