HIGHLAND CITY

2021

Storm Water Management Plan

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SUBMITTED TO:
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ACRONYMS	DEFINED
BMP	Best Management Practices
CWA	Clean Water Act
DWQ	Utah Division of Water Quality
DWSP	Dry Weather Screening Program
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
ESU	Equivalent Service Unit
GIS	Graphical Information Systems
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UPDES	Utah Pollutant Discharge Elimination System

Certification of Storm Water Management Plan & Signature

2021 Highland City SWMP

Permit Number: State of Utah National Pollutant Discharge Elimination System Phase II Permit - UTR 090000, May 12 2021

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

Name of Certifying Official, Title	Date (mm/dd/yyyy)

Chapter One: Introduction

This document is the City of Highland's Stormwater Management Plan (SWMP), in response to the State of Utah's National Pollutant Discharge Elimination Systems Phase II permit (UTR 090000, May 12, 2021). This SWMP has been developed to meet the requirements of the Phase II regulations relating to the National Pollutant Discharge Elimination System (NPDES) part of the Clean Water Act (CWA) which is being administered by the Utah Division of Water Quality.

The NPDES Permit requires that the City of Highland produce a Stormwater Management Plan (SWMP) and update it regularly to reflect Highland's actions and planned actions in meeting the UPDES permit requirements.

The City's SWMP aims to reduce the discharge of pollutants into receiving waters, surface waters, and ground waters within Highland to the maximum extent practicable (MEP), to apply reasonable technologies to address stormwater pollutants, and protect these waters from degradation. These goals will be accomplished by the implementation of all aspects of this SWMP. The City may intentionally exceed some NPDES Permit requirements to better protect water resources and to keep those resources safe for human contact and able to sustain aquatic ecosystems/species.

This document is organized according to the six NPDES Permit SWMP elements. The six elements are as follows:

I. Education and Outreach: *Efforts to educate the public through flyers, pamphlets, web pages, presentations, etc. This effort will be in conjunction with the Utah County Storm Water Coalition.*
II. Public Involvement and Participation: *Ensure that the public can help in the education of storm water issues and to ensure that the public has a say in the implementation and content of the SWMP.*
III. Illicit Discharge Detection and Elimination: *Used to detect, map, and eliminate the discharge of non-storm water in to the City's storm water system.*

IV. Controlling Runoff from Development/Redevelopment and Construction Sites: *Minimize the discharge of sediments and other pollutants from construction sites in the storm water system.*
V. Long Term Storm Water Management in New Development and Redevelopment/Post Construction Storm Water Management: *Used to ensure that the BMPs will and are functioning properly after the completion of construction.*
VI. Municipal Operations and Maintenance: *Minimize the pollutant discharge from municipal owned facilities.*

Within each section, requirements of the permit and the minimum control measures are individually detailed.

This SWMP document will be updated as program components change. This will occur on an annual basis at a minimum. The SWMP provides a comprehensive strategy that will outline and direct the Highland City Stormwater Utility's priorities and activities.

Since the last SWMP update ordinances have not been revised.

Chapter Two: Background

Highland City is named after the highland grazing fields found in Scotland. Highland is located in the north end of Utah County and covers an area of approximately seven (7 mi^2) square miles. The City was established in 1977 and has a current population of approximately 20,000 residents.

Highland City is divided by two state roads: SR-92 which connects I-15 to American Fork Canyon and SR-74 which runs from American Fork, Utah to Alpine, Utah. The City has two major drainage features at the edge of the community; American Fork River to the southeast and Dry Creek to the northwest. A location map is provided on the following page.

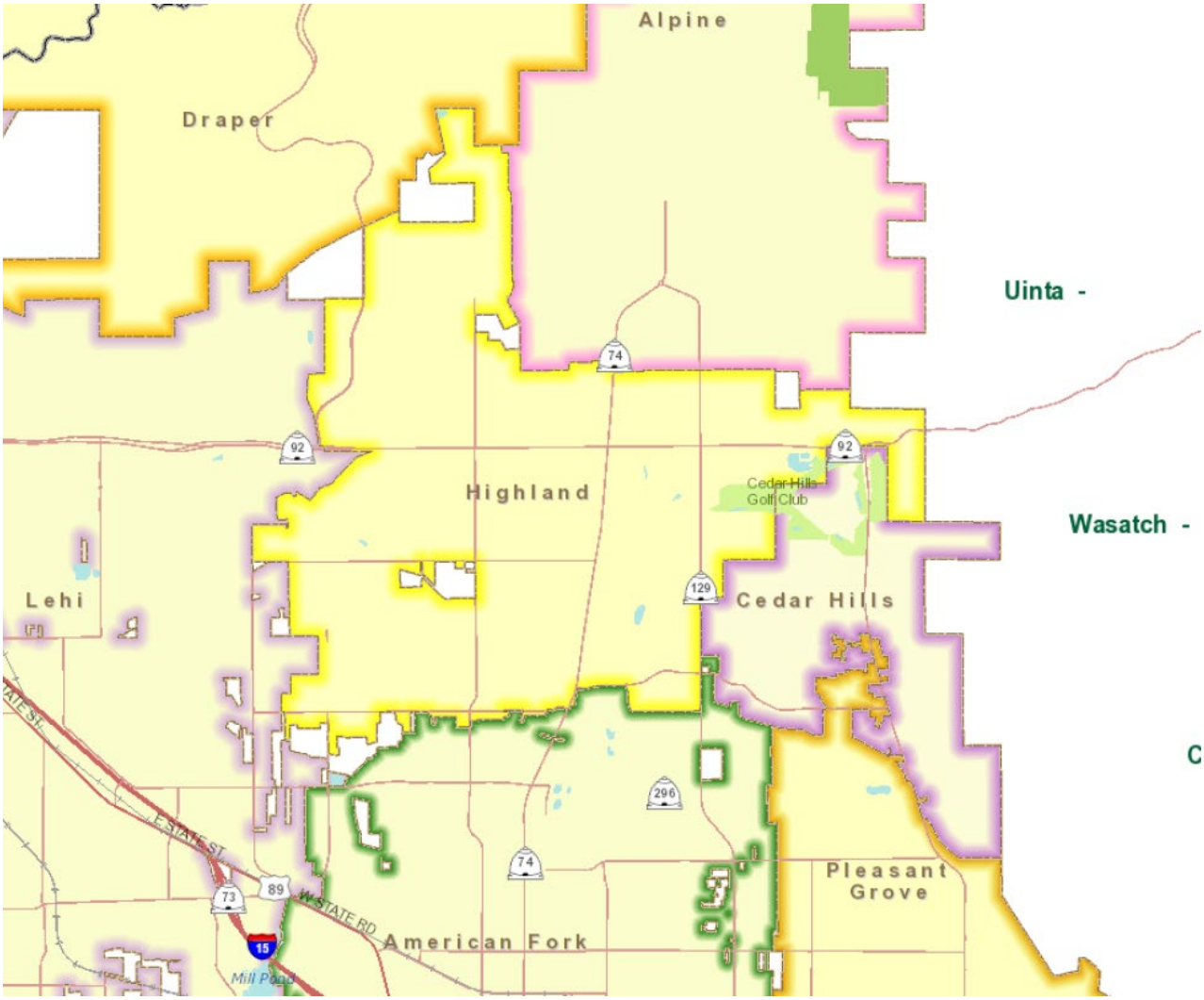
Being at the foothills of both the Traverse and Wasatch Mountains, Highland is on an alluvium. Most of the underlying soil materials are sand and gravel. Because of these materials, Highland City has chosen to use sumps for a majority of the drainage system.

In the northwest area of Highland, the City has implemented a traditional storm water system consisting of conveyance piping, inlets, and detention basins.

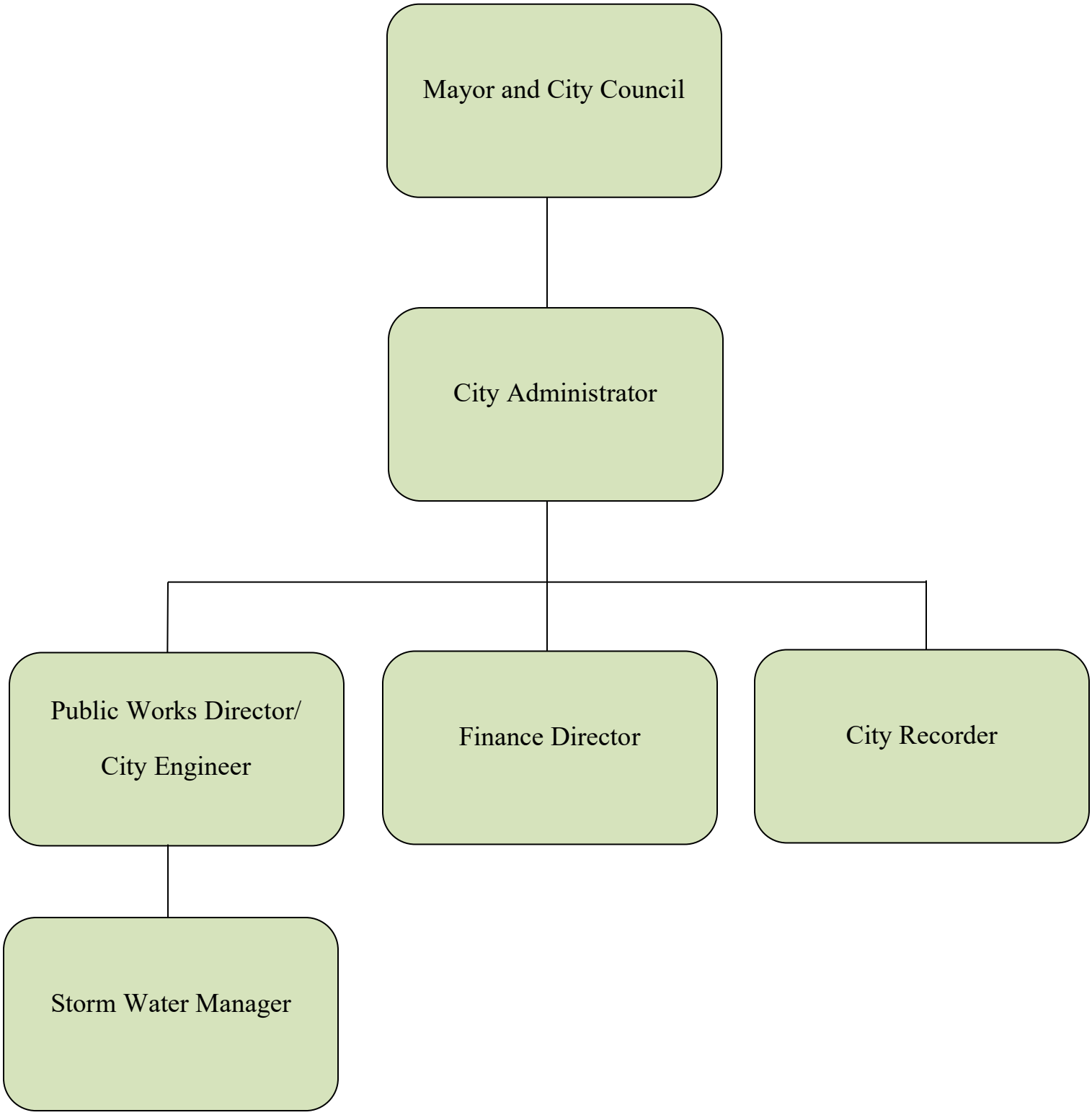
In September 2000, Highland City instituted a Storm Drain Utility Fee for the purpose of managing and constructing a storm water drainage system. Budgets required for the development and implementation of specific drainage related BMPs will be appropriated from this source in the Highland City Operating Budget.

The City is organized as a council-administrator form of government. The City Council is the responsible budgeting and policy making decision body in the City of Highland. The City Administrator is responsible for the day-to-day operations of the City. The City Administrator has designated the Public Works Director to oversee the implementation of the SWMP. The following is an abbreviated organizational chart showing the lines of responsibility for the implementation of the SWMP.

HIGHLAND CITY VICINITY MAP



Highland City Abbreviated Organizational Chart



Clean Water Act History

Growing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA).

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the Environmental Protection Agency (EPA) the authority to implement pollution control programs. The CWA also sets water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained.

The NPDES program is designed to track point sources of pollution. Point sources are defined as single, identifiable sources that discharge pollutants into the environment. They require the implementation of controls necessary to minimize the discharge of these pollutants. The NPDES program initially targeted easily detected sources of water pollution such as municipal sewage and industrial process wastewater, and was successful in improving water quality. However, the NPDES program did not address other significant sources of water quality impairment such as storm water runoff.

In 1987 the CWA was amended to address the environmental impact of storm water by adding Section 402(p), which established a comprehensive, two-phase approach to storm water control. This two-phase approach, Phase I and Phase II storm water regulations, treat storm water discharges from municipalities as point sources of pollution. As a result, local governments covered by the Phase I and Phase II regulations must – like all point source dischargers – obtain federally enforceable NPDES permits under the CWA.

Phase I was publicized on November 16, 1990. The Phase I regulations require large sources of storm water discharge to apply for NPDES permits. Large sources include medium and large municipal storm drain systems serving 100,000 people or more as well as several categories of industrial activities including construction activity disturbing

five or more acres of land. The NPDES permits require cities to develop a storm water management program, track and oversee industrial facilities that are also regulated under the NPDES storm water program, conduct monitoring, and submit periodic reports.

Phase II regulations were publicized on December 8, 1999 and expanded the scope of the NPDES program to include smaller local municipalities serving populations of less than 100,000. Similar to Phase I, Phase II requires local governments, referred to as small municipal separate storm sewer systems (small MS4) to obtain NPDES permit coverage. These local governments must design a storm water management program to include the development and implementation of six specified measures that reduce storm water pollution to the maximum extent practicable. Evaluation and reporting measures are also required. In addition, the rule sets requirements for construction activity that disturbs between one and five acres and extends a previously set deadline for municipalities that operate industrial activities regulated under Phase I.

DESCRIPTION OF THE PHASE II NPDES PROGRAM

The Phase II NPDES Program is intended to reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation. Storm water discharges from urbanized areas are a concern because of the high concentration of pollutants found in these discharges. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from human activities settle and remain until a storm event washes them into nearby storm drains or sumps. Common pollutants may include sediment, nutrients, oil and grease, organic compounds, and gross pollutants. Storm water runoff picks up, transports and discharges these pollutants, untreated, to waterways and groundwater via storm drain systems and sumps.

The NPDES Phase II program is implemented by the State of Utah under the Utah Pollutant Discharge Elimination System. The Utah Department of Environmental Quality, Division of Water Quality and its regional agencies are responsible for both interpreting the regulations and issuing the permits to local agencies that operate industrial facilities and MS4s. The updated State of Utah NPDES Small MS4 General Permit requirements were adopted on May 12, 2016.

Purpose of the Storm Water Management Program

The purpose of the Storm Water Management Program is to implement and enforce a program designed to reduce the discharge of pollutants to the "maximum extent practicable" (MEP) to protect water quality. According to the State of Utah General Permit, the MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. Since knowledge about controlling urban runoff continues to evolve, so does that which constitutes the Maximum Extent Practicable. Reducing the discharge of storm water pollutants to the MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the City must effectively assess the SWMP on an annual basis by conducting and documenting an evaluation and assessment of each relevant element of its program and revising, as necessary, SWMP activities, control measures, BMPs, and measurable goals to meet the MEP.

Minimum Control Measures and Annual Reporting

The Phase II NPDES Program contains the following six program elements, termed "Minimum Control Measures" intended to reduce polluted runoff.

A. Public Education and Outreach

- Implement a public education program to distribute materials to the community or conduct equivalent outreach activities about the impacts of polluted storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

B. Public Participation/Involvement

- Comply with State and local public notice requirements when implementing a public participation/involvement program. This provides opportunities for citizens to participate in the storm water management program development and implementation, including effectively publicizing public hearings and encouraging citizen representatives to attend these community meetings.

C. Illicit Discharge Detection and Elimination

- Develop, implement and enforce a program to detect and eliminate illicit connections and discharges (as defined at 40 CFR 122.26(b)(2)) into the regulated Small MS4.
- Develop a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the U.S., that receive discharges from those outfalls.
- To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit.
- Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.

D. Construction Site Runoff Control

- Develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that

result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from a construction activity disturbing less than one acre must be included in the SWMP if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The City shall comply with the requirements for their own construction activities that result in a land disturbance of greater than one acre. The program must include the development and implementation of, at a minimum:

- An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law.
- Requirements for construction site operators to implement appropriate erosion and sediment control best management practices.
- Requirements for construction site operators to control waste, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste, that may cause adverse impacts to water quality, at the construction site.
- Procedures for site plan review which incorporate consideration of potential water quality impacts.
- Procedures for receipt and consideration of information submitted by the public.
- Procedures for site inspection and enforcement of control measures.

E. Post-Construction Runoff Control

- Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects 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, that

discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts.

- Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for the community.
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law.
- Ensure adequate long-term operation and maintenance of BMPs.
- Incorporate retention and Low Impact Development (LID) guidance for the City.

F. Pollution Prevention and Good Housekeeping for Municipal Operations

- Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- Develop and implement employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.
- Develop Standard Operating Procedures (SOP) for appropriate municipal practices as required by the permit.

For each of these six Minimum Control Measures, there are BMPs and associated Measurable Goals that will be implemented during the course of the 5-year permit term. Storm Water Management Programs must describe BMPs and associated Measurable Goals that will fulfill the requirements of the six Minimum Control Measures. It is through the implementation and evaluation of BMPs and Measurable Goals that municipalities will ensure that the objectives of the Phase II NPDES Program are met. BMPs and measurable goals incorporate adequate measures of effectiveness in terms of achieving permit requirements and protecting and restoring water quality and beneficial uses. The

measurable goals must include, as appropriate, the months and years for scheduled actions, including interim milestones and frequency of the action.

Annual Reporting & Ongoing Documentation

The data collected for each BMP identified in this SWMP will be compiled and summarized in annual reports. The City will review results of the SWMP's control measures and program elements and measure how they obtain different outcome levels discussed in the Manual, annually. If the SWMP BMPs and measurable goals are found to be ineffective or do not achieve stated goals or desired "outcome levels," the City will revise them to optimize BMP effectiveness. As the City's Storm Water Management Program matures, assessments of the BMPs and measurable goals will begin to shift to higher outcome levels.

The City will have an ongoing documentation process for gathering, maintaining, and using information to conduct planning, set priorities, track the development and implementation of the SWMP, evaluate Permit compliance and effectiveness of the SWMP implementation. The City will track the number of inspections performed, official enforcement actions taken, and types of public education activities implemented.

Chapter Three: Pollutants of Concern

There are a number of potential urban storm water pollutants of concern that the NPDES Phase II Storm Water Management Program aims to control. These urban pollutants may include sediment, nutrients, microbiological contaminants, hydrocarbons, pesticides, metals, additional organic compounds, and gross pollutants such as trash, green waste, and other debris that collects in storm drains or is dumped illegally into waterways. Urbanization and increases in population density directly affect the type of pollutant that enter storm drains. The City discharges into sumps, the American Fork River and Dry Creek. These receiving systems do not have TMDL requirements. However, the closest TMDL system is Utah Lake.

BACKGROUND ON POLLUTANTS OF CONCERN

Sediment

Sediment is often a component of storm water that can be detrimental to aquatic life. Sediment can transport other pollutants that are adsorbed to grain surfaces, including bacteria, nutrients, metals, and hydrocarbons. Sediment is the primary component of "total suspended solids" (TSS), a common water quality analytical parameter.

Nutrients (Nitrogen & Phosphorus)

Nutrients including nitrogen and phosphorous, the major plant nutrients used for fertilizing landscapes, may be found in storm water. High concentrations of these nutrients can result in excessive or accelerated growth of algae, resulting in impaired use of water in lakes and other sources of water supply. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish.

In particular in accordance with the Small MS4 General UPDES Permit (UTR090000) the SWMP must specifically address the reduction of water quality impacts associated with nitrogen and phosphorus in discharges from MS4s. Highland City is part of the Utah County Coalition and participates in a collaborative effort to evaluate, Identify, target, and provide outreach that addresses sources within Utah County. Highland has targeted sources that use fertilizer as residents, business owners and the City that contribute Nitrogen and Phosphorus to discharges. Additional information can be found concerning the "Technical Basis for Utah's Nutrient Strategy" at the following website. http://nutrients.utah.gov/index.htm

Pesticides

Pesticides (including herbicides, fungicides, rodenticides, and insecticides) have been detected in storm water throughout the nation. As pesticide use has increased, so too have concerns about adverse effects of pesticides on the environment and human health. Accumulation of these compounds in simple aquatic organisms, such as

plankton, provides an avenue for biomagnifications through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.

Gross Pollutants

Gross Pollutants often defined as trash, debris, and floatables are often carried by storm water. Trash can include plastics, paper, yard debris, discarded household items, and other materials. Urbanization and increases in population density directly affect the type of pollution that enters storm drains. Typically resulting from an urban environment, industrial sites, and construction sites, trash and floatables are aesthetically unappealing. Gross pollutants also include plant debris (such as leaves and lawn clippings from landscape maintenance), human and animal excrement, street litter, plastics, trash, discarded household items, and other materials.

Chapter Four: Public Education and Outreach

The City of Highland is committed to ongoing opportunities for public involvement and participation in the development of this plan. The City of Highland has requested public review of the City's Stormwater Management Plan (SWMP) through the City's internet page.

When updates are made, residents are invited to review and comment on the plan's content and the City's response to permit requirements. The City also provides a contact number for residents to call with questions throughout the year from the City's SWMP webpage.

In addition, Highland has held public discussions during city council meetings and city council works sessions to adopt local ordinances and to discuss NPDES Phase II Permit requirements. Additional community interactions on receiving waters and environmental stewardship have occurred during neighborhood planning efforts.

Because stormwater runoff is generated from dispersed land surfaces—pavements, yards, driveways, and roofs—efforts to control stormwater pollution must consider individual, household, and public behaviors and activities that can generate pollution from these surfaces. These common individual behaviors have the potential to generate stormwater pollution:

- Littering,
- Disposing of trash and recyclables,
- Disposing of pet-waste,
- Applying lawn-chemicals,
- Washing cars,
- Changing motor-oil on impervious driveways,
- Household behaviors like disposing leftover paint and household chemicals.

It takes individual behavior change and proper practices to control such pollution. Therefore, it is important to make the public sufficiently aware and concerned about the significance of their behavior for stormwater pollution, through information and education, that they change improper behaviors.

Phase II MS4s are required to educate their community on the pollution potential of common activities, and increase awareness of the direct links between land activities, rainfall-runoff, storm drains, and their local water resources. Most importantly the requirement is to give the public clear guidance on steps and specific actions that they can take to reduce their stormwater pollution-potential.

Highland City has entered into an inter-local agreement with Utah County to develop and implement this Minimum Control Measure (Appendix C).

Highland City will also provide at a minimum quarterly information related to Stormwater and the public's responsibility and attention though a multimedia approach. The City will provide information through Monthly Newsletters, Social Media via their Facebook account and the webpage.

Chapter Five: Public Participation and Involvement

The Public Involvement/Participation section of the SWMP addresses the importance of public involvement with respect to protection of the storm water. Community participation involves a broader public support, shorter implementation schedule, a broader base of expertise, and the development of important relationships with other community and government programs when drawing upon the residences of the community.

The BMPs described in this section of the SWMP include opportunities for the public to take part in an active role in the development and implementation of the BMPs within the SWMP. Such opportunities include public notice process and efforts to reach out and engage all members of the Highland City Community.

A single regulatory agency or municipal office working alone cannot be as effective in reducing stormwater pollution as if it has the participation, partnership, and combined efforts of other groups in the community all working towards the same goal. The point of public involvement is to build on community capital to help spread the message on preventing stormwater pollution and to undertake group activities that highlight storm drain pollution.

BMP 2.1: PUBLIC NOTICE REQUIREMENTS AND PUBLIC OPINIONS

Description: (4.2.2) Highland City will provide members of the community with the opportunity to participate by holding town hall meetings and public hearings with the City Council that will allow the public to comment on the Storm Water Management Plan. The City will also solicit comments from local contractors and business owners to gain a broader perspective on the required BMPs. Notification to the City residents will comply with all state and local public notice requirements. A minimum of two times annually the City will solicit public involvement.

Each stakeholder has a vested interest in solving stormwater management problems for the particular water body. Therefore, stakeholders should be informed of water quality issues in their community and asked to contribute their ideas and concerns. One way to do this is through stakeholder meetings, where participants can hear what others have to say and can contribute their own ideas.

The City will post the SWMP on its website with a link for comments and input.

Objective: Provide Highland residents, business owners, and developers the opportunity for public involvement in the development and implementation of the BMPs within this SWMP.

Responsible: The Public Works Director or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 2 in Appendix A.

BMP 2.2: STORM DRAIN MARKING

Description: Storm drain marking involves labeling storm drain inlets with plaques, tiles, painted, or pre-cast messages warning citizens not to dump pollutants into the drain. The messages are generally a simple phrase or graphic to remind those passing by that the storm drains connect to local water bodies and that dumping will pollute those waters.

Storm drain marking projects offer an excellent opportunity to educate the public about the link between storm drain systems and water quality.

Objective: Reduce sediments and pollutants into the receiving sumps and storm drain system by raising public awareness of the inter-connections.

Responsible: The Public Works Director or designee will be responsible for the implementation of this BMP. Municipal crews or volunteers will affix or stencil messages on storm drain inlets and sumps. This process will continue until each inlet has been labeled.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 2 in Appendix A.

BMP 2.3: CITY PUBLIC EDUCATION PROGRAM

Description: Provide education materials to the public through a multimedia approach apart from the Utah County Coalition efforts. The audiences shall include residents, institution, industrial, commercial facilities, developers, contractors and MS4 employees.

(4.2.1.1) Target specific pollutants and pollutant sources determined to be impacting or have the potential to impact the beneficial uses of the City receiving water. Provide information that describes the potential impacts, methods for avoiding, minimizing, reducing or eliminating adverse impacts and the actions individuals can take to improve water quality.

(4.2.1.2) Provide and document education outreach given to the general public on City's prohibitions against illicit discharges and improper disposal of waste and the impacts to water quality associated with these types of discharges. Topics to include septic system maintenance; lawn care use of pesticides, herbicides and fertilizers; benefits of onsite infiltration; effects of automotive work and car washing on water quality; proper disposal of swimming pool water; proper management of pet waste and other topics deemed relevant by the City.

(4.2.1.3) Provide and document education outreach given to institutions, industrial, and commercial facilities on an annual basis of the City's prohibitions against illicit discharges and improper disposal of waste and the impacts to water quality associated with these types of discharges. Topics to include proper lawn maintenance (use of pesticides, herbicides and fertilizer); benefits of appropriate onsite infiltration of storm water; building and equipment maintenance (proper management of waste water); use of salt or other deicing materials (cover/prevent runoff to storm system and contamination to ground water); proper storage of materials with an emphasis on pollution prevention; proper management of waste materials and dumpsters (cover and

pollution prevention); and proper management of parking lot surfaces (sweeping) and other topics deemed relevant to the City. This item can be part of the IDDE measures.

(4.2.1.4) Provide and document education outreach given to engineers, construction contractors, developers, development review staff, and land use planners concerning the development of storm water pollution prevention plans (SWPPPs) and BMP use, to reduce adverse impacts from storm water runoff from development sites. This education can be coupled with Construction Site minimum control measures.

(4.2.1.5) Provide and document education and training given to employees of City operated facilities concerning the prohibition against illicit discharges and improper disposal of waste and the impacts to water quality associated with these types of discharges. Topics will include equipment inspection to ensure timely maintenance; proper storage of industrial materials (emphasize pollution prevention); proper management and disposal of wastes; proper management of dumpsters; minimization of use of salt and other de-icing materials (cover/prevent runoff to MS4 and ground water contamination); benefits of appropriate onsite infiltration (areas with low exposure to industrial materials such as roofs or employee parking); and proper maintenance of parking lot surfaces (sweeping).

(4.2.1.6) Provide and document education and training to MS4 engineers, development and plan review staff, land use planners, and other pertinent parties about Low Impact Development (LID) practices, green infrastructure practices, and the specific requirements for post-construction control and the associated Best Management Practices (BMPs) chosen within the SWMP.

(4.2.1.7) The program will show evidence of focused messages and audiences, as well as, demonstrate that the defined goal of the program has been achieved. The City must identify specific messages for each targeted audience. The City will also identify methods that will be used to evaluate the effectiveness of the educational messages and overall education program. Any methods used to evaluate the effectiveness of the

program must be tied to the defined goals of the program and the overall objective of changes in behavior and knowledge.

Objective: Educate the public to promote behavior changes that could reduce water quality impacts associated with pollutants of concern for the City in storm water runoff.

Responsible: The Public Works Director or designee will be responsible for the implementation of this BMP. City staff will provide educational information to the public through a multimedia approach.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 2 in Appendix A.

Chapter Six: Illicit Discharge Detection and Elimination

An illicit discharge is defined as any discharge to the municipal separate storm sewer system (MS4) that is not composed entirely of storm water. These non-storm water discharges occur due to illegal collections to the storm drain system from business, residential, or commercial establishments. The IDDE section of the SWMP addresses non-storm water flows that are discharged into receiving waters or ground water via storm water conveyance systems or sumps.

The IDDE program will implement BMPs to assist in the identification of illicit discharges and removal of these discharges from the system. This IDDE program will also focus on the prevention of new illicit discharges to the storm water system by means of inspections, regulations, and mapping.

With the Highland City drainage system consisting predominantly of sumps, it becomes extremely difficult to monitor and detect illicit discharges. Maintenance and inspection operations become extremely important in making this a cost-effective program.

This program will also be integrated with the Public Education and Outreach Program to promote awareness of the importance of protecting the storm water system from illicit discharge and the resultant impact to receiving waters. The following BMPs describe the implementation tasks and assessment tasks to be completed by Highland City for the IDDE program.

BMP 3.1: MAINTAIN STORM DRAIN SYSTEM MAP

Description: (4.2.3.1) Runoff throughout the City is predominately in an east to west or a northeast to southwest direction. Most of the natural flow from storm events eventually drains either to American Fork River, or other natural drainages passing through the City. These drainage features will convey runoff contributed from Highland to the adjacent communities such as American Fork and Lehi.

The City will locate sump inlets, storm drain inlets, and identify other drainage features throughout the City by use of GIS. For runoff systems that drain to irrigation facilities, an estimate of the capacity of the irrigation system will be determined to approximate the excess flow for storm water beyond the basic irrigation water rights. If an irrigation ditch accepts storm runoff but is to be abandoned, the City will evaluate the need to secure an easement or right-of-way for maintaining its use for storm water purposes.

Objectives: Identify all of the sumps, storm drain lines, detention and retention ponds, and outfall lines to waterways. By mapping this, a program of inspections can be developed and implemented by the City to better detect illicit discharges.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 3 in Appendix A.

BMP 3.2: ILLICIT DISCHARGE STORM WATER ORDINANCE

Description: (4.2.3.2) Review and revise, if necessary, the ordinance that prohibits illicit discharges into the sumps and other storm drainage systems, and review enforcement procedures and actions annually.

Illicit discharges are defined as any discharge to the storm drain system that is not composed entirely of storm water. Examples of illicit discharges include sanitary wastewater, improper disposal of waste oil, paint, household toxics, and spills from roadway accidents. (Exceptions to this definition are categories of non-storm water discharges identified in UPDES Permit, Part IV.B.3.a.6.)

Objective: Implement an ordinance that allows for the enforcement of the IDDE program. Illicit discharge pollutants into the storm drain system, if not treated properly, will contribute to high levels of pollutants entering underground aquifers and waterways. An effective Storm Water Ordinance with enforcement procedures will contribute to the elimination of illicit discharges into the storm drain system.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 3 in Appendix A.

BMP 3.3: DRY WEATHER SCREENING & ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM.

Description: (4.2.3.3) Develop, implement and prepare a plan to detect and address non-storm water discharges. Plan shall include:

(4.2.3.3.1) Develop and implement written systematic procedures for locating and listing priority areas. Document the selection basis, and update annually.

High priorities shall include: Areas upstream of sensitive waterbodies; areas with history of past illicit discharge; areas with history of illegal dumping; industrial, commercial, or mixed-use areas; areas with older infrastructure; areas with history of sewer overflows.

(4.2.3.3.2) Provide field inspections, with and inspection form, of priority areas identified in 4.1.3.3.1.

(4.2.3.3.3) Continue a Dry Weather Screening Program (DWSP) designed to detect and address illicit discharges. Through the DWSP the City will inspect each sump every five years (through the permit period), with major and minor outfalls once per year. The Dry Weather Screening Program provides a framework to identify suspect sources as a basis for initiating more detailed drainage area investigations. All activities conducted under the Dry Weather Screening Program will be documented in GIS.

(4.2.3.3.4) If the City discovers or suspects that a discharger may need a separate UPDES Permit the City shall notify the Director within 30 days.

(4.2.3.4) Review and implement SOPs for tracing the source of an illicit discharge. These SOPs as they are developed are included in Appendix E with the other SOPs.

(4.2.3.5) Review and implement SOPs for characterizing the nature and threat of any illicit discharges. These SOPs as they are developed are included in Appendix E with the other SOPs.

(4.2.3.5.1) When the source is identified and confirmed, record the required information in the GIS inspection sheet. Decision process must be documented.

The inspection sheet documentation shall be stored in the City's GIS.

(4.2.3.6) Review and implement SOPs for ceasing the illicit discharge, including notification and follow-up.

These SOPs as they are developed are included in Appendix E with the other SOPs. The municipal code provides additional information to deter illicit discharges.

(4.2.3.6.1) Upon detection of an Illicit Discharge the City will immediately require the cessation of the improper disposal practice in accordance with its ordinance.

(4.2.3.6.2) Illicit Discharge Detection and Elimination (IDDE) investigations must be thoroughly documented

The documents shall be stored in Appendix D.

(4.2.3.7) Permittees shall inform public employees, businesses, and general public of hazards associated with illicit discharges and improper disposal of waste.

The website and or newsletter will be utilized for distribution of information regarding illicit discharges.

(4.2.3.8) Permittees shall promote or provide services for the collection of household hazardous waste.

The City website, Utah County Coalition efforts and City Newsletters will promote hazardous waste disposal sites.

(4.2.3.9) Permittees shall publicly list and publicize a hotline for public reporting of spills and other illicit discharges. A written record shall be kept of all calls, all follow-up actions taken, and any feedback.
The City website has a complaint form, City phone numbers and a link to the Utah Department of Environment Quality to report any spills. The spills reports are maintained in the City's public work order database for reference.

(4.2.3.9.1) Permittee must develop a written spill/dumping response procedure and flow chart for public referrals of illicit discharges.

Develop a flow chart for spill reporting and include in the Appendix D.

(4.2.3.10) Permittees shall adopt and implement procedures for program evaluation and assessment including a database.

A drawing showing the location of spill incidents and high priority areas is maintained in the city database. High priority sites shall be inspected annually. An assessment of the IDDE program shall be made annually and revisions to the program will be made at that time.

(4.2.3.11) Permittees shall at a minimum, annually train employees about the IDDE program. Training records must be kept and shall include dates, description of topics, names and positions of staff in attendance. A summary will be included in the annual report.

Trainings will be based off of SOPs developed for municipal activities.

Objective: Identify and eliminate any discharges into the sumps or storm drain system. Any dry weather flows that are identified are traced to their source. Dry weather screening will be conducted on all identified outfalls once during the permit term.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 3 in Appendix A.

Chapter Seven: Construction Site Storm Water Runoff Control

Phase II MS4s are required to develop a program to reduce pollutants in stormwater runoff to the MS4 for construction sites disturbing one or more acres including sites less than one acre that are part of a larger common plan. This primarily includes developing:

- BMP 4.1: Ordinance,
- BMP 4.2: Procedures for reviewing construction site plans,
- BMP 4.3: Procedures to receive and consider information submitted by the public,
- BMP 4.4: Procedures for inspections and enforcement of stormwater requirements at construction sites.
- BMP 4.5: Contractor Education

The Construction Site Storm Water Runoff Control Program section of the SWMP addresses water quality concerns for construction sites greater than or equal to one acre including sites less than one acre that are part of a larger common plan. Polluted storm water runoff from construction sites often flows to storm drainage systems and into receiving waters comparative to that which can be deposited naturally during several decades.

The resulting siltation can cause physical, chemical, and/or biological harm to sumps (causing complete blockage) and receiving waters. The BMPs described in this section of the SWMP includes the development of a construction site program designed to reduce pollutants in storm water runoff from construction activities.

This program will include procedures for construction site plan review, site inspections, public reporting, contractor education, and notification of permit requirements to all construction site owners/operators. Physical BMPs include but are not limited to: temporary on-site basins, check dams, energy dissipaters, silt fencing, channel linings, etc.

BMP 4.1: CONSTRUCTION SITE PROGRAM ORDINANCE

Description: The ordinance requires construction operators to use erosion and sediment controls, and maintain appropriate structural and non-structural BMPs to reduce pollutants discharged during times of soil disturbances or excavation activities, along with penalties to enforce and ensure compliance.

The ordinance provides the frame work for the Construction Site Storm Water Program, as well as the regulatory jurisdiction for enforcement. The ordinance will be reviewed annually to help assure compliance with appropriate regulations. Site plan review and approval procedures have been developed and incorporated in the design standards. Consideration for proper operation and maintenance of control measures is incorporated into the plan review process.

(4.2.4.1) Review and enforce the ordinance requiring the use of erosion and sediment control practices at construction sites.

(4.2.4.2) Review the written enforcement strategy and implement the enforcement provisions of the ordinance which shall include:

(4.2.4.2.1) SOPs that include specific processes and sanctions to minimize the occurrence of, and obtain compliance from violators using appropriate escalating enforcement procedures and actions.

(4.2.4.2.2) Document and track all enforcement actions.

The procedures for escalating enforcement actions are included in the Appendix E.

Objective: An effective ordinance with enforcement procedures, requiring an erosion control plan and proper waste handling will contribute to the reduction of erosion, sediment transportation, and other pollution from construction sites.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 4 in Appendix A.

BMP 4.2: SITE PLAN AND SUBDIVISION REVIEW

Description: Develop procedures for site plan review that incorporate considerations for potential short and long-term water quality impacts and minimize these impacts, to the MEP. An erosion control plan must be submitted for review and approval prior to commencing grading operations.

(4.2.4.3) Develop and implement SOPs for pre-construction SWPPP review and keep records for five years or until construction is completed, whichever is longer. A checklist for SWPPP review will be utilized.

(4.2.4.3.1) Conduct a pre-construction SWPPP review

SWPPPs are a required part of the approval process.

(4.2.4.3.3) Identify priority construction sites, including slope, project size and type, sites discharging directly into water recognized as impaired or high quality and past records of non-compliance by operators of a construction site.

Prioritizing construction sites is part of the review process and checklist.

Objective: Prevent erosion during the construction phase by implementing various erosion control measures as appropriate. Such measures may include temporary silt or sediment fences, sediment traps and detention ponds, temporary and permanent vegetation, etc.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 4 in Appendix A.

BMP 4.3: SITE INSPECTION

Description: Construction sites lacking adequate stormwater controls can contribute significant amounts of sediment to streams and lakes; therefore, the City will develop procedures for site inspection and enforcement of erosion control measures at construction sites to deter infractions. Procedures will include steps to identify priority sites for inspection and enforcement. To reduce the water quality impacts of active construction sites, the site inspections will ensure that construction projects install and maintain appropriate erosion and sediment control, stormwater management, and housekeeping BMPs.

(4.2.4.4) Develop and Implement SOPs for construction site inspection and enforcement.

SOPs will be reviewed, revised and placed into Appendix E.

(4.2.4.4.1) Minimum monthly inspections by a qualified person.

(4.2.4.4.2) Inspection must be provided at all phases of construction. The City will document the procedure for being notified by construction operators of their completion of active construction.

(4.2.4.4.3) Biweekly inspections must be completed for priority construction sites.

(4.2.4.4.5) Documentation of all enforcement actions

Enforcement actions are recorded according to the documentation process.

(4.2.4.5) Staff whose primary job duties are related to implementing the program are annually trained. Training records must be maintained per the Permit.

(4.2.4.6) Permittee shall adopt and implement a procedure to maintain records of all projects. (e.g. plan review, inspections, and enforcement actions) for five years or until construction is completed, whichever is longer.

The City is utilizing the website ComplianceGO for all records. The documentation process outlines the procedure for storing records. SWPPP review folder, plans in subdivision folder and web-based software for site inspection updates.

Objective: Ensure that BMPs are properly installed, maintained, and are reducing pollutants in storm water runoff from construction activities, to the MEP.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 4 in Appendix A.

BMP 4.4: PUBLIC REPORTING

Description: Public reporting can provide important assistance in preventing storm water pollution during construction activities. In order to accept such reporting, a procedure for the receipt and consideration of public inquiries, concerns, and information submitted regarding storm water runoff from local construction activities must be outlined. A phone number for the purpose of reporting possible violations will be made available at all public meetings including city council, planning commission, and neighborhood.

(4.2.4.3.2) Develop procedures for receiving and considering information and comments submitted by the public on proposed projects.

Objective: Encourage public participation in addressing storm water quality concerns during construction activities.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 4 in Appendix A.

BMP 4.5: CONTRACTOR EDUCATION

Description: (4.2.1.4 & 4.2.4) Make available appropriate education and training material to construction site operators for minimizing storm water pollution during construction activities.

- "A Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices" - EPA
- "Construction Storm Water Fact Sheet" – DWQ
- Utah County Guidelines for Construction Site BMPs
- Highland City Design Standards.

Objective: Provide information and references for owners, designers and contractors to utilize in the planning and implementation of structural and non-structural BMPs to reduce pollutants discharged to the storm drain system during construction.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 4 in Appendix A.

Chapter Eight: Long Term Storm Water Management in New Development and Redevelopment/Post-Construction Storm Water Management

The Post-Construction Storm Water Management in New Development and Redevelopment Program addresses storm water runoff from new development and redevelopment projects that disturb greater than, or equal to, one acre. The program ensures that controls are in place that will protect water quality and reduce the discharge of pollutants to the maximum extent practicable.

This program will be integrated with the Construction Site Storm Water Runoff Control Program of the SWMP to ensure adequate long-term operation and maintenance of the BMPs. The following BMPs describe implementation tasks and assessment tasks to be completed by Highland City for the Post-Construction Storm Water Management in New Development and Redevelopment.

The best way to mitigate stormwater impacts from new developments is to use practices to treat, store, and infiltrate runoff onsite before it can have any negative effects downstream. Innovative site designs that reduce imperviousness and smaller-scale low impact development practices dispersed throughout a site are excellent ways to achieve the goals of reducing flows and improving water quality.

Phase II MS4s are required to address post-construction stormwater runoff from new development and redevelopments that disturb one or more acres. This primarily includes developing:

- An ordinance to address post-construction runoff,
- Strategies to implement a combination of structural and non-structural BMPs,
- A program to ensure adequate long-term operation and maintenance of BMPs.

BMP 5.1: POST-CONSTRUCTION STORM WATER ORDINANCE

Description: Review and if necessary, modify the existing City ordinance with requirements for post-construction runoff controls. Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. There are two forms of impacts associated with post-construction runoff.

The type and quantity of pollutants in storm water runoff increases following new development and redevelopment projects. As runoff flows over newly disturbed areas it picks up harmful sediment and chemicals from the unprotected surface and conveys it to receiving waters. By controlling development and preserving open space, the quantity of impervious surface is minimized, which has an effect of reducing both the quantity and quality of the runoff. The open space also allows for the protection of sensitive areas such as wetlands and riparian areas. BMPs can be either non-structural or structural.

(4.2.5.2) Develop an enforcement strategy which includes:

(4.2.5.2.1) Procedures that include specific processes and sanctions to minimize occurrence of, and obtain compliance from, repeat violators using escalating enforcement procedures.

The enforcement strategy will be included in or referenced by the ordinance.

(4.2.5.2.2) Documentation on how the requirements of the ordinance will protect water quality and reduce the discharge of pollutants. The permit provides specific information on the documentation requirements.

(4.2.5.2.3) The ordinance or other regulatory mechanism shall include provisions for 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.

Objective: Develop and implement an effective ordinance requiring the implementation of post-construction runoff controls that will contribute to the reduction of erosion, sediment transportation, and other pollution from development sites.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 5 in Appendix A.

BMP 5.2: NEW DEVELOPMENT/REDEVELOPMENT PROGRAM

Description: Implement a program to ensure adequate long-term operation and maintenance of storm water controls at post construction sites.

(4.2.5.1) The Permittee's new development/redevelopment program must have requirements or standards to ensure that any storm water controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality. BMPs must be selected that address pollutants known to be discharged or anticipated to be discharged from the site.

(4.2.5.1.1) The Permittee's new development/redevelopment program shall include nonstructural BMPs such as requirements and standards to minimize development in areas susceptible to erosion and sediment loss; to minimize the disturbance of native soils and vegetation; to preserve areas in the municipality that provide important water quality benefits; to implement measures for flood control; and to protect the integrity of natural resources and sensitive areas.

(4.2.5.1.2) Retention Requirement. The Permittee must develop and define a specific hydrologic method or methods for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review.

New development projects that disturb land greater than or equal to one acre, including projects that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre must manage rainfall on-site and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event or a predevelopment hydrologic condition, whichever is less. This objective must be accomplished by the use of practices that are designed, constructed, and maintained to infiltrate, have evapotranspiration, and/or harvest and reuse rainwater. The 80th percentile rainfall event is the event whose precipitation total is greater than or equal to 80 percent of all storm events over a given period of record.

Redevelopment projects that disturb greater than or equal to one acre, including projects less than an acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre must provide a site-specific and project-specific plan aimed at net gain to onsite retention or a reduction to impervious surface to provide similar water quality benefits. If a redevelopment project increases the impervious surface by greater than 10%, the project shall manage rainfall on-site and prevent the off-site discharge of the net increase in the volume associated with the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event. This objective must be accomplished by the use of practices that are designed, constructed, and maintained to infiltrate, have evapotranspiration, and/or harvest and reuse rainwater.

(4.2.5.1.3) Low Impact Development Approach. The program shall include a process which requires the evaluation of a Low Impact Development (LID) approach for all projects subject to the requirements in 4.2.5.1.2. A LID approach promotes the implementation of BMPs that allow storm water to infiltrate, have evapotranspiration or harvest1 and use storm water on site to reduce runoff from the site and protect water quality. Guidance for implementing LID can be found in DWQ LID controls with are appropriate for use in the State of Utah can be found in A Guide to Low Impact Development within Utah (the Guide)

Permittees must allow for use of a minimum of five LID practices from the list in Appendix C of the Guide. If a Permittee has not adopted specific LID practices from Appendix C, any LID approach that meets 4.2.5.1.2 and is feasible may be used to meet this requirement.

(4.2.5.1.4) If an LID approach cannot be utilized, the Permittee must document an explanation of the reasons preventing this approach and the rationale for the chosen alternative controls on a case-by-case basis for each project. Causes of nonuse may include high groundwater, drinking water source protection areas, soil conditions, slopes, accessibility, excessive costs, or any other justifiable constraint.

Program is provided in City's Design Standards

Objective: To develop and implement a new development/redevelopment program which complies with the General Permit requirements.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 5 in Appendix A.

BMP 5.3: POST-CONSTRUCTION MAINTENANCE

Description: Develop procedures to ensure adequate long-term operation and maintenance of storm water controls at post-construction sites. Proper operation and maintenance of the control measures will help to minimize pollutants in storm water runoff. This program will require the establishment of maintenance responsibility for the development. Improper maintenance or failure of storm water controls following construction can lead to adverse impacts on storm water quality.

(4.2.5.2.4) Permanent structural BMPs shall be inspected at least once during installation by qualified personnel. Upon completion the Permittee must verify that long-term BMPs were constructed as designed.

(4.2.5.2.5) Inspections and any necessary maintenance must be conducted every other year by either the Permittee or through a maintenance agreement, the property owner/operator.

(4.2.5.5) Permittees shall ensure that all staff involved in post-construction storm water management, planning and review, and inspections and enforcement receive adequate training on an annual basis.

(4.2.5.4.2) Based on inspections conducted pursuant to Part 4.2.5.5., the Permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site.

Process is provided in City's Design Standards

Objective: Establishing procedures to ensure adequate long-term operation and maintenance of storm water controls is imperative in reducing storm water pollution.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 5 in Appendix A.

BMP 5.4: POST-CONSTRUCTION STORM WATER INVENTORY

Description: (4.2.5.4) The Permittee must maintain an inventory of all post-construction structural storm water control measures installed and implemented at new development and redeveloped 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. This inventory shall include both public and private sector sites located within the Permittee's service area. Per (4.2.5.4.1) each inventory shall include basic information on each project such as projects name, owners name and contact information, location, start/end date, etc.

In addition, inventory entries must include the following for each project:

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

(4.2.5.4.2) Based on inspections conducted pursuant to Part 4.2.5.5., the Permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site.

Objective: Maintain Inventory of all post-construction structural storm water controls

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 5 in Appendix A.

Chapter Nine: Pollution Prevention/Good House Keeping Program

The Pollution Prevention/Good Housekeeping Program of the Storm Water Management Plan addresses routine activities in the operation and maintenance for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm drain systems. The program will implement BMPs to address specific roadway practices which include snow removal, de-icing, salt pile management, and road crew training.

This program will also focus on storm drainage system maintenance, maintenance yard practices, pesticide, herbicide and fertilizer program, spill prevention and response. This Pollution Prevention/Good Housekeeping Program will be integrated with other BMPs described within this Storm water management plan to promote awareness of water quality concerns in performing routine roadway maintenance and operation and other practices. The following BMPs describe implementation tasks and assessment tasks to be completed by Highland City for the Pollution Prevention/Good Housekeeping Program.

Municipalities conduct numerous activities that can pose a threat to water quality if practices and procedures are not in place to prevent pollutants from entering the MS4. These activities include winter road maintenance, minor road repairs, infrastructure work, automobile fleet maintenance, park maintenance, and building maintenance. Municipalities also conduct activities that remove pollutants from the MS4 when performed properly, such as parking lot and street sweeping, and storm drain system cleaning. Finally, municipal facilities can be sources of stormwater pollutants if BMPs are not in place to contain spills, manage trash, and handle non-stormwater discharges. The following is a list of some potential problems usually associated with a municipal operation:

Municipality Facility Activity	Potential Pollutants							
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides
Building and Grounds Maintenance and Repair	X	X	X	X	X	X	X	X
Parking/Storage Area Maintenance	X	X	X	X	X	X	X	
Waste Handling and Disposal	X	X	X	X	X	X	X	X
Vehicle and Equipment Fueling			X	X		X	X	
Vehicle and Equipment Maintenance and Repair				X		X	X	
Vehicle and Equipment Washing and Steam Cleaning	X	X	X	X		X	X	
Outdoor Loading and Unloading of Materials	X	X	X	X		X	X	X
Outdoor Container Storage of Liquids		X		X		X	X	X
Outdoor Storage of Raw Materials	X	X	X			X	X	X
Outdoor Process Equipment	X		X	X		X	X	
Overwater Activities			X	X	X	X	X	X
Landscape Maintenance	X	X	X		X			X

Municipal Program	Activities	Potential Pollutants							
		Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides
Roads, Streets, and Highways Operation and Maintenance	Sweeping and Cleaning	X		X	X		X		
	Street Repair, Maintenance, and Striping/Painting	X		X	X		X	X	
	Bridge and Structure Maintenance	X		X	X		X	X	
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	X	X			X	X		
	Graffiti Cleaning	X	X		X		X		
	Sidewalk Repair	X		X					
	Controlling Litter	X		X		X	X		
Fountains	Fountain and Pool Draining		X					X	
Landscape Maintenance	Mowing/Trimming/Planting	X	X	X		X			X
	Fertilizer & Pesticide Management	X	X	X					X
	Managing Landscape Wastes			X					X
	Erosion Control	X	X						
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X	
	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X
	Maintenance of Inlet and Outlet Structures	X		X	X		X		
Waste Handling and Disposal	Solid Waste Collection		X	X	X	X	X	X	
	Waste Reduction and Recycling			X	X				
	Household Hazardous Waste Collection			X	X		X	X	
	Controlling Litter			X	X	X		X	
	Controlling Illegal Dumping	X		X		X	X		X
Water and Sewer Utility Operation and Maintenance	Water Line Maintenance	X				X	X		
	Sanitary Sewer Maintenance	X				X	X		
	Spill/Leak/Overflow Control	X	X			X		X	

Phase II MS4s are required to train staff on ways to protect stormwater, particularly when maintaining MS4 infrastructure and performing daily municipal activities, such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. This primarily includes:

- Developing inspection and maintenance procedures and schedules for stormwater BMPs,
- Implementing BMPs to treat pollutants from transportation infrastructure, maintenance areas, storage yards, sand and salt storage areas, and waste transfer stations,
- Establishing procedures for properly disposing of pollutants removed from the MS4,
- Identifying ways to incorporate water quality controls into new and existing flood management projects.

BMP 6.1: MAINTENANCE OF STORM DRAIN FACILITIES

Description: Maintain existing drainage system operation, maintenance, and cleaning procedures for the purpose of reducing pollutants in storm water runoff. Evaluate system and identify high maintenance systems or areas, maintenance schedules, long term inspection schedules, and long-term inspection procedures for storm drain controls.

Personnel training is a component of this program. Proper system maintenance and employee training will help to reduce storm water impacts from such activities as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

(4.2.6.6.3) Permittee must ensure and document proper disposal methods of all waste and wastewater removed during cleaning and maintenance of the storm drain system.

Objective: Maintain and operate the storm water drain system in a manner that reduces the discharge of pollutants to the MEP.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 6 in Appendix A.

BMP 6.2: STREET CLEANING

Description: Review and assess current practices for street sweeping and any other procedure in place which keeps roadways open and free of debris.

Objective: Operate procedures in a manner that reduces the discharge of pollutants, to the MEP, without compromising motorists' safety.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 6 in Appendix A.

BMP 6.3: UPDATE/PREPARE A STORM WATER MANAGEMENT PLAN OR A FACILITY SPECIFIC SOP FOR THE HIGH PRIORITY PUBLIC WORKS FACILITIES

Description: Identify, maintain, and control industrial facilities owned by Highland City Corporation that are subject to the State's UPDES Multi-Sector General Permit for discharges of storm water associated with industrial activity which ultimately discharge to the MS4. Proper management of these facilities will prevent migration of concentrated suspended material to storm drain systems.

(4.2.6.1) Permittee shall develop and keep a written inventory of Permittee-owned or operated facilities that are termed as “high priority” facilities per the Permit facility list.

An inventory of City owned or operated facilities will be included in Appendix G.

(4.2.6.2) All permittees must initially assess the written inventory (4.2.6.1) for their potential to discharge pollutants to storm water. City will make a list of common pollutants that may originate from these facilities and how to prevent them from entering the storm water system. A description of the assessment process and findings must be included in the SWMP document.

An initial assessment of City owned property will be included in Appendix G.

(4.2.6.3) Identify the “high-priority” facilities or operations.

The properties with the highest pollution potential are the Public Works Facility. This is due to the onsite chemicals, salt storage and other hazardous materials kept on site. BMPs shall be provided at all high priority sites.

(4.2.6.4) Each “high-priority” facility must develop a facility-specific SOP to protect water quality and reduce the discharge of pollutants. Include BMPs and LID techniques for all of the following types of facilities and/or activities listed:

Buildings and facilities, materials storage areas, heavy equipment storage areas and maintenance areas, parks and open space, and vehicle and equipment maintenance.

(4.2.6.5.1) Monthly Visual Inspections shall be performed at each high priority facility. The inspection log should include identified deficiencies and the corrective actions taken to fix the deficiencies.

(4.2.6.5.2) Semi Annual comprehensive inspections shall be performed at least twice per year at each high priority facility. The inspection report should include identified deficiencies and the corrective actions taken to fix the deficiencies.

(4.2.6.5.3) An annual visual observation of storm water discharges shall be performed at least once per year at each high priority facility.

(4.2.6.6) SOPs to protect water quality at each of the facilities owned or operated by the Permittee shall be developed.

(4.2.6.6.4) Permittee shall ensure that vehicle, equipment and other wash waters are not discharged to the MS4 or waters of the state. Additionally, the City will minimize discharges to the waters of the state that are associated with snow disposal and melt.

(4.2.6.6.6) Permittee shall maintain an inventory of all floor drains inside all permittee owned or operated buildings and ensure that floor drains discharge to appropriate locations. The inventory shall be updates to ensure accuracy.

(4.2.6.7) Permittee shall be responsible for ensuring through contractually required documentation and/or periodic site visits that contractors performing Operation and Maintenance activities for the Permittee are using appropriate storm water controls and following SOPs and best housekeeping practices.

(4.2.6.9) Permittee shall develop a plan to retrofit existing developed sites that are owned by the Permittee that are adversely impacting water quality.

(4.2.6.10) Permittees shall provide training for all employees who have construction, operation, or maintenance job functions that are likely to impact storm water quality.

Staff will be trained per the SOPs that are prepared for their individual work.

Objective: Minimize pollutants entering storm drain system from equipment yards and maintenance facilities.

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 6 in Appendix A.

BMP 6.4: Develop a Process to Assess Water Quality Impacts From Flood Management Structural Controls

Description: (4.2.6.8) Develop and implement a process to assess the water quality impacts in the design of all new flood management structural controls. A description of this process must be included in the SWMP document.

(4.2.6.8.1) Existing flood management structural controls must be assessed. A description of this process must be included in the SWMP document.

These processes will be included in Appendix H.

Objective: Minimize water quality degradation due to Flood Management Structural Controls

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 6 in Appendix A.

BMP 6.5: DEVELOP A SPILL PREVENTION PLAN

Description: (4.2.6.6.5) Develop and implement a spill prevention plan in coordination with the local fire department.

Objective: Minimize water quality degradation due to Spills

Responsible: The Stormwater Manager or designee will be responsible for the implementation of this BMP.

Funding: The funding for this BMP will be provided through the Storm Water Utility Fee as adopted by the City Council.

Implementation and Assessment: See Table 6 in Appendix A.

Appendix A:

- BMP Table 2
- BMP Table 3
- BMP Table 4
- BMP Table 5
- BMP Table 6

Table 2 Minimum Control Measure Public Participation and Involvement BMP Two

BMP Number	Title	Objective	Concern	Permit Year					Measurable Goal
				1	2	3	4	5	
2.1	Public Notice Requirements and Public Opinions	Provide Highland residents, business owners, and developers the opportunity for public involvement in the development and implementation of the BMPs	Public involvement	X	X	X	X	X	Annually Update SWMP on website Gather public input for any changes to SWMP 2x's per year.
2.2	Storm Drain Marking	Reduce sediments and polluants into the receiving sumps and storm drain system by raising public awareness of the interconnections	Bacteria, nutrients, sediment, public education	X	X	X	X	X	Ensure that every inlet is labeled
2.3	City Public Education Program	Distribute information to the public who work or reside in Highland via a multimedia approach.	Public involvement	X	X	X	X	X	Provide information quarterly through Facebook, website, newsletter, flyers, and etc. This BMP also includes Coalition Education

Table 3 Minimum Control Measure Illicit Discharge Detection and Elimination BMP Three

BMP Number	Title	Objective	Concern	Permit Year					Measurable Goal
				1	2	3	4	5	
3.1	Storm Drain System Map	Identify all sumps, storm drain lines, detention and retention ponds, and outfall lines to waterways	Bacteria, nutrients, and sediments	X	X	X	X	X	Regularly update map to reflect and new drainage structures, retrofits, or alterations
3.2	Illicit Discharge Storm Water Ordinance	Review, pass, and enforce an ordinance that allows for the enforcement of the IDDE program	Enforcement authority to control illicit discharges	X	X	X	X	X	Complete initial review by January 2023 Bi-Annual review of written ordinance after 2023 Track & log citations for violations annualy
3.3	Dry Weather Screening & Illicit Discharge Detection and Illimination Program	Identify and eliminate any illicit discharges into sumps or storm drain system. Trace any dry weather flows to source.	Illicit discharge locations	X	X	X	X	X	Identify, cite, and eliminate illicit discharge sites as needed.
3.3.1	Dry Weather Screening & Illicit Discharge Detection and Illimination Program	Develop and implement written systematic procedures for locating and listing priority areas.	Illicit discharge priority locations	X					Review List of illicit discharge priority locations and procedures by June 2022
3.3.4 & 5	Dry Weather Screening & Illicit Discharge Detection and Illimination Program	Develop and implement SOPs for tracing the source of illicit discharges and SOP for characterizing the nature and threat of any illicit discharges.	Illicit discharge illimination		X				SOPs reviewed and revised by June 2023

3.3.6	Dry Weather Screening & Illicit Discharge Detection and Illimination Program	Develop and implement SOPs for ceasing the illicit discharge	Illicit discharge illimination		X				SOPs reviewed and revised by 2023

Table 4 Minimum Control Measure Construction Site Storm Water Runoff Control BMP Four

BMP Number	Title	Objective	Concern	Permit Year					Measurable Goal
				1	2	3	4	5	
4.1	Construction Site Program Ordinance	Review and enforce an ordinance that allows for the enforcement of the Construction Site Storm Water Program.	Sediment transportation and gross pollutants	X	X	X	X	X	Implement ordinance and erosion control plan Annual review of written ordiance
4.2	Site Plan and Subdivision Review	Implement various erosion control measures as appropriate	Erosion	X	X	X	X	X	Utilize site plan and subdivision review process, and make adjustments as needed
4.3	Site Inspection	Ensure that BMPs are properly installed and maintained, and are reducing pollutants to the MEP	Water quality impacts of active construction	X	X	X	X	X	Provide site inspections Create and maintain individual project files to track and log construction site storm water runoff control activities
4.4	Public Reporting	Encourage public participation in addressing storm water quality concerns during construction activities	Storm water pollution	X	X	X	X	X	Track and log all public reports Respond to reports within 24 hours or next business day
4.5	Contractor Education	Provide information and references for owners, designers, and contractors to utilize in the planning and implementation of BMPs	Storm water pollution during construction	X	X	X	X	X	Provide information on website for these professionals.

Table 5 Minimum Control Measure Post-Construction Storm Water Management BMP Five

BMP Number	Title	Objective	Concern	Permit Year					Measurable Goal
				1	2	3	4	5	
5.1	Post-Construction Storm Water Ordinance	Develop, write, pass, and enforce an ordinance that allows for the enforcement of the Post-Construction Storm Water Management program.	Erosion, sediment transportation, and gross pollutants	X	X	X	X	X	Annual review of written ordinance
5.2	New Development/Redevelopment (Post-Construction) Storm Water Program	Implement a new development/redevelopment program which complies with the General Permit requirements	Adverse impacts on storm water quality	X	X	X	X	X	Review standards annualy & revise as best for City
5.3	Post-Construction Maintenance	Establish procedures to ensure adequate long-term operation and maintenance of storm water controls	Adverse impacts on storm water quality	X	X	X	X	X	Track and log all reports Establish a post-construction BMP inspection process
5.4	Post-Construction Storm Water Program	Maintain Inventory & Inspection of all post-construction structural storm water control measures.	Adverse impacts on storm water quality	X	X	X	X	X	Update Inventory and keep records regarding inspections.

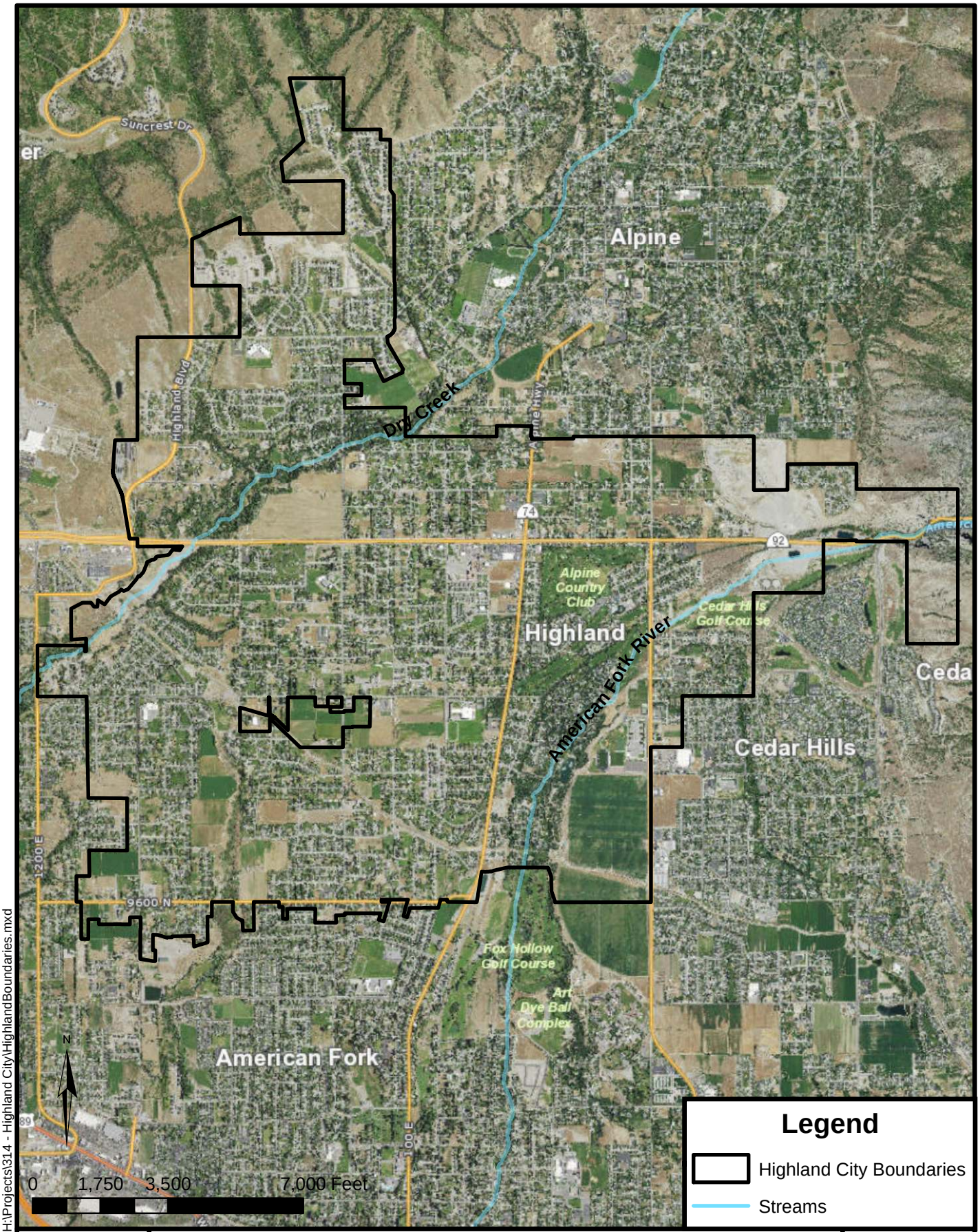
Table 6 Minimum Control Measure Pollution Prevention / Good Housekeeping BMP Six

BMP Number	Title	Objective	Concern	Permit Year					Measurable Goal
				1	2	3	4	5	
6.1	Maintenance of Storm Drain Facilities	Maintain and operate the storm water drain system in a manner that reduces the discharge of pollutants to the MEP	Discharge of pollutants	X	X	X	X	X	Inspect and maintain each sump every 5 yrs Review and update the sump inspection plan
6.2	Street Cleaning	Operate procedures in a manner that reduces the discharge of pollutants to the MEP without compromising motorist safety	Sediment and gross pollutants	X	X	X	X	X	Track and log all street sweeping activity Semi-annually sweep each street Prepare street sweeping schedule and map
6.3	Inventory of City owned or operated facilities.	Minimize pollutants entering the storm drain system from equipment yards and maintenance facilities	Sediment, gross pollutants, bacteria, and salt	X	X	X	X	X	Current inventory.
6.3.1	Review the Storm Water Management Plan for the Public Works Facility & Implement Inspections	Minimize pollutants entering the storm drain system from equipment yards and maintenance facilities	Sediment, gross pollutants, bacteria, and salt			X			Review plan in 2023. Provide Site Inspections per Permit - Monthly Visual, Semi Annual Comprehensive, Annual storm water discharge
6.4	Review process to assess the water quality impacts of new flood management structural controls.	Avoid or minimize water quality impacts from new flood management structural controls.	Sediment and gross pollutants	X	X	X	X	X	Process to be updated by July 2022 with annual updates as needed.

6.5	Develop A Spill Prevention Plan	Minimize pollutants entering the storm drain system from spills	Pollutants		X		X		Develop Spill Prevention Plan by June 2023 & Review after 2 Yrs

Appendix B:

- Highland City Map



Date: 6/30/2016
Document Path: H:\Projects\314 - Highland City\HighlandBoundaries.mxd

HANSEN ALLEN & LUCE INC
ENGINEERS

HIGHLAND CITY MUNICIPAL BOUNDARIES

FIGURE 1

Appendix C:

- Utah County MCM

Agreement No. 2014-111

INTERLOCAL COOPERATION AGREEMENT FOR NPDES PHASE II STORM WATER PUBLIC EDUCATION AND OUTREACH BEST MANAGEMENT PRACTICE COMPLIANCE

THIS AGREEMENT, is entered into this 11th day of February, 2014, by and between PROVO, OREM, PLEASANT GROVE, AMERICAN FORK, SPRINGVILLE, SPANISH FORK, LEHI, PAYSON, UTAH COUNTY, LINDON, HIGHLAND, ALPINE, MAPLETON, SALEM, CEDAR HILLS, and EAGLE MOUNTAIN, political subdivisions of the State of Utah.

WITNESSETH:

WHEREAS, pursuant to the provisions of the Interlocal Cooperation Act, Title 11, Chapter 13, Utah Code Annotated, 1953 as amended, public agencies, including political subdivisions of the State of Utah as therein defined, are authorized to enter into written agreements with one another for joint or cooperative action; and

WHEREAS, the parties to this Agreement are public agencies as defined in the Interlocal Cooperation Act; and

WHEREAS, the parties desire to establish a joint undertaking to comply with National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Permit Coverage;

NOW, THEREFORE, the parties do mutually agree, pursuant to the terms and provisions of the Interlocal Cooperation Act, as follows:

Section 1. EFFECTIVE DATE; DURATION

This Interlocal Cooperation Agreement shall become effective and shall enter into force, within the meaning of the Interlocal Cooperation Act, upon the submission of this Interlocal Cooperation Agreement to, and the approval and execution thereof by Resolution of the governing

bodies of each of the parties to this Agreement. Unless otherwise terminated as provided for herein, this Interlocal Cooperation Agreement shall be effective for a period of up to, but not exceeding, fifty (50) years. This Interlocal Cooperation Agreement shall not become effective until it has been approved by Resolution of all parties and reviewed as to proper form and compliance with applicable law by the attorney authorized to represent each of the parties hereto. Prior to becoming effective, this Interlocal Cooperation Agreement shall be filed with the official keeper of records of each of the parties hereto.

Section 2. ADMINISTRATION OF AGREEMENT

The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Interlocal Cooperation Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code Annotated, 1953 as amended, UTAH COUNTY shall act as the administrator responsible for the administration of this Interlocal Cooperation Agreement. The parties further agree that this Interlocal Cooperation Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as the Utah County Clerk/Auditor shall specify and further agrees that said books shall be open for examination by all parties to this Agreement, at reasonable times. The parties agree that they will not acquire, hold nor dispose of real or personal property pursuant to this Interlocal Agreement during this joint undertaking.

Section 3. PURPOSES

This Interlocal Cooperation Agreement has been established and entered into between the parties, for the purpose of a joint undertaking to comply with NPDES Phase II Storm Water Permit Public Education and Outreach Best Management Practices.

Section 4. MANNER OF FINANCING

The parties agree that they shall provide the following resources and/or assistance for this joint undertaking:

a. COUNTY shall act as the administrator of this Agreement, pursuant to the terms of Section 2 hereof, and shall :

1. Schedule and conduct Utah County Storm Water Coalition meetings which are necessary to correlate activities, set proposed budgets, and provide training opportunities.

2. Provide information regarding best management practices for preventing storm water pollution that can be placed in a newsletter or other form of communication as determined by each member agency to be distributed to the public as each agency deems appropriate.

3. Maintain contract with approved Storm Water Educational Instructor and ensure proper teaching material is being presented. Maintain a master list of approved schools to be given to approved Storm Water Educational Instructor. Provide for each member agency a list of schools visited, the dates of all visits, an estimated number of attending students, and the number of classes taught.

4. Become a central warehouse for storm water educational materials and provide on demand materials for distribution. These materials could include informational pamphlets, activity books, pencils, note pads, magnets, videos, etc.

5. Maintain storage of display information for booths to be used for city and

county activities and other events.

6. Provide, maintain, and promote an information system to the public for the disposal of household materials and chemicals to include internet and phone services. Citizens will be able to call a local, countywide phone number or access a website where gathered information for disposal sites will be distributed.

b. Each party to this agreement will pay to Utah County within 30 days of receipt of an annual invoice from Utah County, the sums listed in Exhibit A to this Agreement, said sums to be used solely for the NPDES Storm Water Phase II Public Education and Outreach Best Management Practices. The sums listed in Exhibit A shall be reviewed, approved, and modified by agency representatives on an annual basis, based on a combination of the percentage of the party's total population to the total population of the County as determined by the most recent Mountainland Association of Government figures and the percentage of the party's total number of schools to the total school count as submitted by the member agencies.

Section 5. METHOD OF TERMINATION

This Interlocal Cooperation Agreement will automatically terminate at the end of its term herein, pursuant to the provisions of paragraph one (1) of this Agreement. Prior to the automatic termination at the end of the term of this Agreement, any party to this Agreement may terminate its participation in and responsibilities under this Agreement at any time and for any reason by providing a sixty (60) day written notice of termination to the other parties. This Agreement may not be terminated in any event, if termination would cause a violation of the parties' NPDES Storm Water Permit.

Section 6. INDEMNIFICATION

The parties to this Agreement are public entities. Each party agrees to indemnify and save harmless the other for damages, claims, suits, and actions arising out of a negligent error or omission of its own officials or employees in connection with this Agreement.

Section 7. ADDITION OF OTHER MEMBERS

Other entities may become parties to this Interlocal Cooperation Agreement, by executing an Addendum to this Agreement. In order for an entity to be added to this Agreement by Addendum, the Addendum must be approved by resolution of the governing body of the entity to be added and the Addendum must be reviewed for proper form and compliance with applicable law by the attorney for the entity to be added. Prior to becoming effective, this Interlocal Cooperation Agreement and any Addendum shall be filed with the official keeper of records of the entity being added to this Agreement.

Section 8. FILING OF INTERLOCAL COOPERATION AGREEMENT

Executed copies of this Interlocal Cooperation Agreement shall be filed with the official keeper of records of all parties to this Agreement and shall remain on file for public inspection during the term of this Interlocal Cooperation Agreement.

Section 9. ADOPTION REQUIREMENTS

This Interlocal Cooperation Agreement shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5(3), Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

Section 10. LAWFUL AGREEMENT

The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, by-laws, and other legal requirements applicable to their operation.

Section 11. AMENDMENTS

This Interlocal Cooperation Agreement may not be amended, changed, modified or altered except by an instrument in writing which shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties, (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5(3), Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

Section 12. SEVERABILITY

If any term or provision of the Interlocal Cooperation Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Interlocal Cooperation Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Interlocal Cooperation Agreement unenforceable.

Section 13. NO PRESUMPTION

Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against the party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being

acknowledged that all parties have participated in the preparation hereof.

Section 14. BINDING AGREEMENT

This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

Section 15. NOTICES

All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties' recorder or clerk/auditor as the case may be; or at such other addresses as may be designated by notice given hereunder.

Section 16. ASSIGNMENT

The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the original parties from any liability hereunder.

Section 17. GOVERNING LAW

All questions with respect to the construction of this Interlocal Cooperation Agreement, and the rights and liability of the parties hereto, shall be governed by the laws of the State of Utah.

Section 18. ENTIRE AGREEMENT

This Agreement shall constitute the entire Agreement between the parties and any prior understanding or representation of any kind proceeding the date of this Agreement shall not be binding upon either party except to the extent incorporated in this Agreement.

IN WITNESS WHEREOF, the parties have signed and executed this Interlocal Cooperation Agreement, after resolutions duly and lawfully passed, on the dates listed below:

UTAH COUNTY

Authorized by Resolution No. 2014-20, authorized and passed on the 11th day of February, 2014.

BOARD OF COUNTY COMMISSIONERS
UTAH COUNTY, UTAH

By: _____
GARY J. ANDERSON, Chairman

ATTEST: Bryan Thompson
Utah County Clerk/Auditor

By: _____
Deputy

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:
Jeff Buhman, Utah County Attorney

By: _____
Deputy Utah County Attorney

PROVO CITY STORM WATER SERVICE DISTRICT

_____
Mayor of Provo
TITLE

ATTEST: _____
RECORDER FOR DISTRICT

PROVO CITY SEAL
INDUSTRY AND COMMERCE
UTAH COUNTY, UTAH.

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR DISTRICT

CITY OF OREM

Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF PLEASANT GROVE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF AMERICAN FORK

Mayor

ATTEST: _____
DEPUTY RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF SPRINGVILLE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF SPANISH FORK

Mayor

ATTEST: Kent R. Clark
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

Asst. ATTORNEY FOR CITY

CITY OF LEHI

Mayor

ATTEST:
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

ATTORNEY FOR CITY

CITY OF PAYSON

Mayor

ATTEST: Jeanette C. Wineteer
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

ATTORNEY FOR CITY

CITY OF LINDON

Mayor

ATTEST: Kathryn Moosman
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

ATTORNEY FOR CITY

CITY OF HIGHLAND

Mayor

ATTEST: _____
RECORDER FOR CITY

HIGHLAND CITY CORPORATE SEAL STATE OF UTAH

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF ALPINE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

Alpine City CORPORATE Seal Utah County, Utah

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF MAPLETON

Mayor

ATTEST: _____
RECORDER FOR CITY

MAPLETON CITY CORPORATION
UTAH COUNTY-STATE OF UTAH

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF SALEM

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

SALEM CITY CORPORATE SEAL UTAH COUNTY UTAH

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF CEDAR HILLS

Mayor

ATTEST: Colleen A. Mulvey
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

ATTORNEY FOR CITY

CITY OF EAGLE MOUNTAIN

Mayor

ATTEST:
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

ATTORNEY FOR CITY

Based on 2014-2015 Total Schools to be Visited

STORM WATER COALITION

MEMBER AGENCY ANNUAL FEE SCHEDULE

CITY	POPULATION COUNT	%	$	SCHOOL COUNT	%	$	BILL AMOUNT $	
PROVO	112488	22.54%	$ 2,866	15	14.15%	$ 6,109	$ 8,975	0.16
OREM	88328	17.70%	$ 2,251	18	16.98%	$ 7,331	$ 9,582	0.17
PLEASANT GROVE	33509	6.72%	$ 854	7	6.60%	$ 2,851	$ 3,705	0.07
AMERICAN FORK	26263	5.26%	$ 669	6	5.66%	$ 2,444	$ 3,113	0.06
SPRINGVILLE	29466	5.91%	$ 751	6	5.66%	$ 2,444	$ 3,194	0.06
SPANISH FORK	34691	6.95%	$ 884	10	9.43%	$ 4,073	$ 4,957	0.09
LEHI	47407	9.50%	$ 1,208	9	8.49%	$ 3,666	$ 4,873	0.09
PAYSON	18294	3.67%	$ 466	5	4.72%	$ 2,036	$ 2,503	0.04
COUNTY	10009	2.01%	$ 255				$ 255	0.01
LINDON	10070	2.02%	$ 257	3	2.83%	$ 1,222	$ 1,478	0.03
HIGHLAND	15523	3.11%	$ 396	4	3.77%	$ 1,629	$ 2,025	0.04
ALPINE	9555	1.91%	$ 243	3	2.83%	$ 1,222	$ 1,465	0.03
MAPLETON	7979	1.60%	$ 203	2	1.89%	$ 815	$ 1,018	0.02
SALEM	6423	1.29%	$ 164	4	3.77%	$ 1,629	$ 1,793	0.03
CEDAR HILLS	9796	1.96%	$ 250	2	1.89%	$ 815	$ 1,064	0.02
EAGLE MOUNTAIN	21415	4.29%	$ 546	5	4.72%	$ 2,036	$ 2,582	0.05
SARATOGA SPRINGS	17781	3.56%	$ 453	7	6.60%	$ 2,851	$ 3,304	0.06
TOTAL	498997	100.00%	$ 12,714	106	100.00%	$ 43,172	$ 55,886	

*Population count based on 2010 Census figures as per Mountainland Association of Governments

Appendix D:

SOPs for Illicit Discharge Detection and Elimination

- SOP IDDE – OUTFALL INSPECTION
- SOP IDDE – PRIORITY AREA INSPECTION
- SOP IDDE – REPORTING AND RESPONSE
    - Incoming Call Report form
    - Reporting and Response Flow Chart
    - IDDE Response Form
- SOP - SPILL CONTAINMENT AND CLEANUP
- SOP - TRACING ILLICIT DISCHARGE
    - Illicit Discharge Screening Flow Chart
- SOP - REMOVING ILLICIT DISCHARGE

Field Inspection Sheet

IDDE – DRY WEATHER OUTFALL INSPECTION

1. PREPARATION

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

   b. Identify each outfall with a consistent and unique identifier.

   c. Gather all necessary equipment including: personal protective equipment, tape measure, clear container, clipboard with Outfall Inspection Form, flashlight, and camera.

   d. Obtain maps showing outfall locations and identifiers.

   e. Obtain outfall description and observations from previous inspections, so the outfall can be accurately identified and observations compared.

2. PROCESS

   a. Perform an inspection of all outfalls every year. Whenever possible, use the same personnel for consistency in observations.

   b. Use maps and previous inspection reports to confirm the outfall identity and location.

   c. If dry weather flow is present at the outfall, then document and evaluate the discharge by completing the following steps:

      - Collect a field sample for visual observation in a clean, clear container, and in a manner that avoids stirring up sediment that might distort the observation.

      - Complete the Outfall Inspection Form.

      - Compare observations to previous inspections.

      - If the flow does not appear to be an obvious illicit discharge (e.g., flow is clear, odorless, etc.), attempt to identify the source of the flow (groundwater, intermittent stream, irrigation, etc.)

      - Take photo of outfall and collected sample in container as needed.

   d. If an illicit discharge (such as raw sewage, petroleum products, paint, etc.) is encountered or suspected, follow the procedure of SOP IDDE – Tracing Illicit Discharge.

   e. Input information into GIS database.

3. ACTIONS

   a. Follow procedures identified in the following SOPs as needed:

      - SOP IDDE – Tracing Illicit Discharge

- SOP IDDE – Removing Illicit Discharge

4. DOCUMENTATION

   a. Inspector will document outfall inspection in GIS database.

IDDE – PRIORITY AREA INSPECTION

1. PREPARATION

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

   b. Identify priority areas and document the basis for the selection of priority areas.

   c. Identify each inspection point with a consistent and unique identifier.

   d. Gather all necessary equipment including: personal protective equipment, tape measure, clear container, clipboard with Priority Area Inspection Form, flashlight, and camera.

   e. Obtain maps showing priority areas, inspection points, and identifiers.

   f. Obtain inspection point description and observations from previous inspections, so the inspection point can be accurately identified and observations compared.

2. PROCESS

   a. Perform an inspection of all priority areas every year. Whenever possible, use the same personnel for consistency in observations.

   b. Use maps and previous inspection reports to confirm the inspection point identity and location.

   c. Set up traffic control as required.

   d. Pull manhole lid or grate to perform inspection.

   e. If dry weather flow is present at the inspection point, then document and evaluate the discharge by completing the following steps:

      - Collect a field sample for visual observation in a clean, clear container, and in a manner that avoids stirring up sediment that might distort the observation.

      - Complete the Priority Area Inspection Form.

      - Compare observations to previous inspections.

      - If the flow does not appear to be an obvious illicit discharge (e.g., flow is clear, odorless, etc.), attempt to identify the source of the flow (groundwater, intermittent stream, irrigation, etc.)

      - Take photo of inspection point and collected sample in container as needed.

   f. If an illicit discharge (such as raw sewage, petroleum products, paint, etc.) is encountered or suspected, follow the procedure of SOP IDDE – Tracing Illicit Discharge.

g. Input information into ComplianceGO database.

3. ACTIONS

   a. Follow procedures identified in the following SOPs as needed:

      - SOP IDDE – Tracing Illicit Discharge
      - SOP IDDE – Removing Illicit Discharge

4. DOCUMENTATION

   a. Inspector will document priority area inspection in GIS database.

IDDE – REPORTING AND RESPONSE

1. PREPARATION

    a. Have a system in place to receive reports and collect information regarding spills and suspected illicit discharges and respond to reports.

2. PROCESS

    a. Collect the appropriate information from the caller using the Incoming Call Report form. Online reports will be received by email.

    b. Follow the Reporting and Response Flow Chart.

        - Call the Utah County Health Department as needed (see Reporting and Response Flow Chart).

        - Call the Highland City Fire Department as needed (see Reporting and Response Flow Chart).

        - Call the UPDES Inspector and transfer report information (Incoming Call Report or Online Report). If the UPDES Inspector is not available, call one of the other Public Utilities Inspectors.

        - Call Utah Department of Environmental Quality as needed (see Reporting and Response Flow Chart – Highland City).

    c. Inspector to promptly investigate reported incident and fill out IDDE Response Form.

    d. For spills, follow the procedures of SOP Spill Containment and Cleanup.

    e. If an illicit discharge is confirmed and the source is unknown, follow the procedures of SOP IDDE – Tracing Illicit Discharge.

    f. If an illicit discharge is confirmed and the source is known, follow the procedure of SOP IDDE – Removing Illicit Discharge.

    g. Follow up with the individual or entity responsible for cleaning or any other actions taken, including the County Health Department, to confirm that the spill or illicit discharge has been taken care of.

    h. Input information into database for tracking.

    i. Track actions taken for spill / illicit discharge and input into GIS as completed.

3. ACTIONS

    a. Follow procedures identified in the following SOPs as needed:

        - SOP Spill Containment and Cleanup

- SOP IDDE – Tracing Illicit Discharge
- SOP IDDE – Removing Illicit Discharge

4. DOCUMENTATION

   a. Operator will document hotline calls and online reports in Hotline Calls and Online Reporting Log.

   b. Inspector will document inspection and follow-up information in GIS and with hard copies in file.

INCOMING CALL REPORT

(For Phone Operator)

Date: …… Time: …… □ AM □ PM

Location: ……

City: *Highland* State: *Utah*

Reported by □ Telephone □ Anonymously □ Other: ……

Complaint Information

Last Name:…… First Name:……

Phone:…… Remain anonymous? □ YES □ NO

Description of Spill or Illicit Discharge: ……

Source of Illicit Discharge: ……

Is this a Hazardous substance: □ YES □ NO □ Do not know

Estimate of Quantity Spilled: □ 1 to 5 Gallons □ 5 to 10 Gallons □ More than 10 Gallons

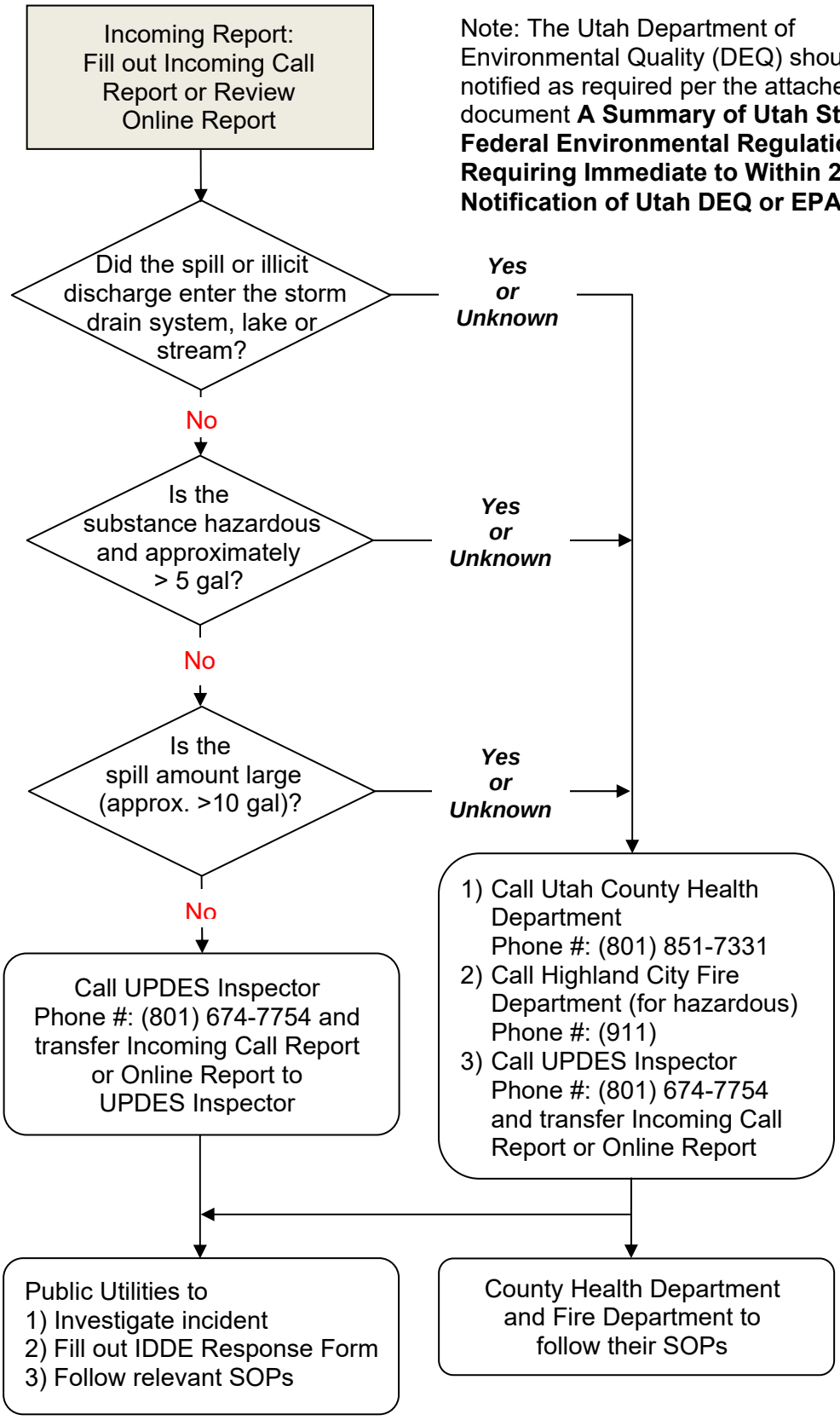
Any Discharge to Storm Drain? □ YES □ NO □ Do not know

Was the spill reported to Utah County Health Department (801) 851-7331

□ YES □ NO □ Do not know □ Report Number: ……

* See Illicit Discharge Incoming Report Response Flow Chart

REPORTING AND RESPONSE FLOW CHART
HIGHLAND CITY



Note: The Utah Department of Environmental Quality (DEQ) should be notified as required per the attached document **A Summary of Utah State and Federal Environmental Regulations Requiring Immediate to Within 24 Hour Notification of Utah DEQ or EPA**

HIGHLAND CITY
IDDE RESPONSE REPORT FORM

GENERAL INFORMATION

Date of Incident:_____ Time Notified:_____
Reported by:_____ Time Responded: _____

Type of Investigation: ☐Discharge ☐ Spill ☐ Illicit Connection ☐Other_____

RESPONDING AGENCIES
☐ Highland City Public Works/Code Enforcement
☐ Utah County Health Department
☐ State of Utah DEQ
☐ Other:

NAME OF REPRESENTATIVE
_____
_____
_____
_____

INCIDENT INFORMATION

LOCATION OF INCIDENT
_____
_____
LATITUDE._____ LONGITUDE_____

RESPONSIBLE PARTY
☐Unknown
Company Name _____
Company Rep. _____
Address _____

Chemical name or identity of any substance involved in the discharge _____
Did the substance discharge into a Storm Drain System? ☐ Yes ☐ No
Did the substance discharge in receiving water (creek, stream, canal, pond)? ☐ Yes ☐ No

FOLLOW UP

FOLLOW UP REQUIRED _____
ENFOCEMENT _____

DATE OF FOLLOW UP_____
CLOSED _____
DATE CLOSED _____

NOTES

SPILL CONTAINMENT AND CLEANUP

1. PURPOSE

    a. Develop standard operating procedures for reviewing OSHA required Safety Data Sheets (SDS) and pictograms, containing and cleaning up spills, and properly disposing of waste. Identify locations of spill kits.

2. SPILL KIT LOCATIONS

    a. Public Works

        - PW Vehicles (2)
        - PW Building (2)

3. NOTIFICATION

    a. Confirm that Utah County Health Department (801-851-7331), Highland City Fire Department (911), Highland City UPDES Inspector Mitch Hilburn(801-674-7754), and Utah Department of Environmental Quality (801-536-4123), have been notified as required (see IDDE – Reporting and Response) and notify them as needed.

4. CONTAINMENT

    a. Personal protective equipment as appropriate is to be used.

    b. After appropriate safety precautions have been taken, no chemical or contaminant of any kind should be permitted to enter a storm drain, canal, pond, ditch, stream, or source protection zone.

    c. The general spill containment procedure is the following:

        - Stop the source of the spill.
        - Plug storm drain pipes, manholes, and inlets as needed.
        - Contain any spilled material using spill kits and/or other available material (nearby dirt, landscaping materials, rags, etc.). Surround the perimeter of the spill with absorbent pads/rolls, berms, etc.
        - Take any further action directed by the Utah County Health Department and Highland City Fire Department.

5. CLEAN UP

    a. Never wash spills into the storm drain pipes

    b. Cleanup per OSHA SDS, but generally most spills can be cleaned up according to the following:

        - Use dry cleanup methods such as sorbent materials, broom and shovel, and

vacuum.

- Cleanup with water and detergents may also be necessary depending on the spilled material. The waste from this operation must also be vacuumed or effectively picked up by other methods.

6. DISPOSAL AND DECONTAMINATION

   a. Dispose of material using containment bag in the spill kit and in compliance with local state and federal regulations.

      - For any questions regarding appropriate disposal methods and procedures for disposal of cleanup or spill materials, contact Utah County Health Department (801-851-7331).

   b. If necessary decontaminate the spill site, personnel and equipment.

   c. If spill reaches soil, dig up affected area and dispose of soil according to state and federal regulations.

7. DOCUMENTATION

   a. Document notifications, containment, clean up, and disposal of spill in ComplianceGO or other work management database for tracking purposes.

IDDE – TRACING ILLICIT DISCHARGE

1. PREPARATION

    a. Review/consider information collected when illicit discharge was initially identified and documented (see completed IDDE Inspection Form, or Outfall Inspection Form).

    b. Obtain storm drain mapping for the area of the reported illicit discharge.

    c. Gather all necessary equipment including: personal protective equipment, tape measure, clear container, clipboard with necessary forms, flashlight, and camera.

2. PROCESS

    a. Follow the Illicit Discharge Screening Flow Chart.

    b. If the source is located, follow SOP IDDE – Removing Illicit Discharge, as specified in the flow chart.

    c. If the source cannot be found, continue to monitor and inspect until source is located.

    d. Input information into database for tracking and file hard copy of forms.

3. ACTIONS

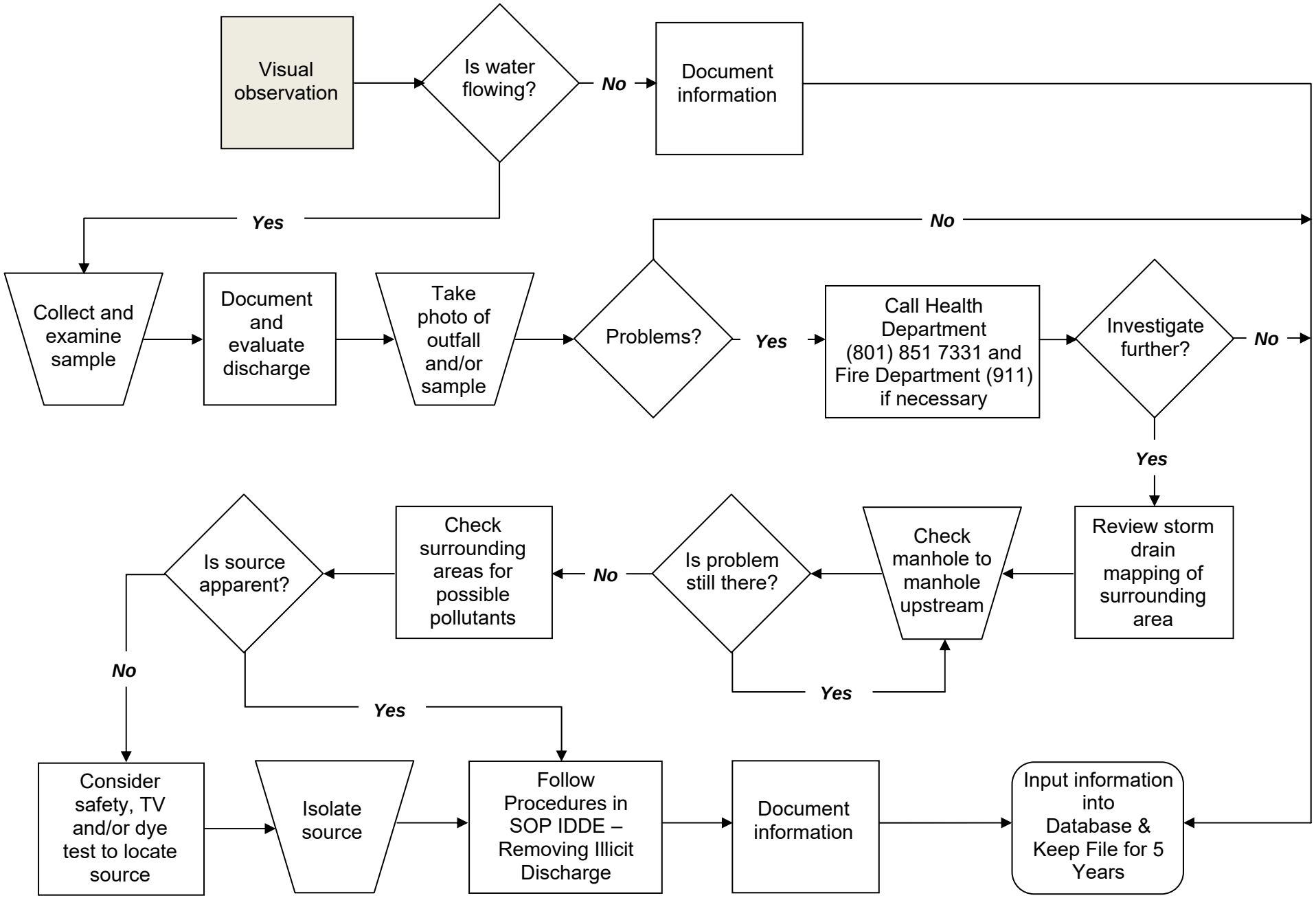
    a. Follow procedures identified in SOP IDDE – Reporting and Response.

    b. Follow procedures identified in SOP IDDE – Removing Illicit Discharge as needed.

4. DOCUMENTATION

    a. Inspector will document tracing information in database and file. Keep hardcopy for 5 years before destroying.

ILLICIT DISCHARGE SCREENING FLOW CHART
HIGHLAND CITY



IDDE – REMOVING ILLICIT DISCHARGE

1. PREPARATION

   a. Obtain available property ownership information for the source of the illicit discharge.

2. PROCESS

   a. Determine who is financially responsible; and follow associated procedures as given below.

   b. For private property owner:

      - Contact owner.
      - Educate owner and/or issue Notice of Violation as needed.
      - Determine schedule for removal.

   c. For municipal facility:

      - Notify appropriate municipal authority or department head.
      - Educate municipal authority or department head and schedule for removal.
      - Remove illicit connections.

   d. Suspend access to storm drain if threats of serious physical harm to humans or the environment are possible.

   e. Direct responsible party to initiate repairs/corrections/cleanup. Coordinate with enforcement official for escalating penalties in accordance with the municipal ordinance.

   f. Repair/correct cause of discharge if municipality is responsible. Schedule the work through the appropriate municipal authority or department head.

   g. Seek technical assistance from the Utah County Health Department or Utah Department of Water Quality (DWQ), if needed. The DWQ contact is Jeanne Rile (801-536-4369).

   h. Input information into GIS database for tracking.

3. ACTIONS

   a. Clean or cause to be cleaned catch basins, storm drains, streets, etc. or initiate spill response procedures as identified in the relevant SOPs.

   b. Confirm illicit discharge is removed or eliminated by follow-up inspections.

4. DOCUMENTATION

   a. Inspector or drainage supervisor will document illicit discharge removal in database for tracking purposes including:

- Records of Notice of Violation and penalties.
- Repairs, corrections, and any other actions required.
- A hard copy of the documentation will be kept for 5 years.

HIGHLAND DRY WEATHER SCREENING

INSPECTION INFORMATION

Inspection Date: _____ *(Inspect during dry periods; 72hrs since previous storm)*

Inspector Name(s): _____

Outfall ID: _____ Nearest Street: _____ _____ _____

Description of Outfall Location: _____

Adjacent Land Use(s): ☐ Commercial ☐ Industrial ☐ Agricultural ☐ Residential

☐ Undeveloped ☐ Institutional ☐ _____

OUTFALL INFORMATION

Size (Diameter or Dimensions): _____ Material Type: ☐ Concrete ☐ Metal ☐ Thermoplastic

Condition of Outfall: _____

Receiving Waterbody: ☐ Stream ☐ Lake ☐ Pond ☐ Canal ☐ Ditch ☐ _____

Receiving Waterbody Name (If known): _____

FIELD OBSERVATIONS

Flow Present in Outfall? ☐ Flowing ☐ Ponded ☐ Dry

OBSERVATIONS FOR FLOWING OUTFALLS

Odor	Color	Clarity	Floatables	Deposits/ Stains	Adjacent Vegetation
☐ None	☐ Clear	☐ Clear	☐ None	☐ None	☐ None
☐ Chemical	☐ White	☐ Cloudy	☐ Oil Sheen	☐ Oil	☐ Normal
☐ Sewage	☐ Brown	☐ Opaque	☐ Foamy	☐ Paint	☐ Excessive
☐ Rotten Egg	☐ Yellow	☐	☐ Sewage	☐ Sediment	☐ Dead
☐	☐		☐	☐	☐

Likely Source of Flow: ☐ Groundwater/Natural ☐ Irrigation Water ☐ Illegal Connection

Is sampling and lab testing needed? ☐ Yes ☐ No

OBSERVATIONS FOR NON-FLOWING OUTFALLS

Deposits/Stains Inside Outfall	Unusual Color Inside Outfall	Adjacent Vegetation	Outlet Pool Quality
☐ None	☐ None	☐ None	☐ None
☐ Oil	☐ Brown	☐ Normal	☐ Oil Sheen
☐ Paint	☐ Green	☐ Excessive	☐ Foam
☐ Sediment	☐ Red	☐ Dead	☐ Excessive Algae

CONCLUSION

Is it likely that an illicit discharge occurred? ☐ Yes ☐ No

If Yes, Notify the Storm Water Manager and follow appropriate SOP

Appendix E:

- Standard Operating Procedures (SOPs) for Plan Review & Construction
    - SOP – SWPPP and Development Plan Review
        - SWPPP Review Checklist
        - SWPPP Compliance Inspection Form
    - SOP – Construction Site Inspections
    - SOP – Post Construction Management & Inspection
        - Detention Pond Maintenance
        - Storm Drain Pipe Maintenance
        - Storm Drain Structure Maintenance
        - Storm Water System Prioritization
    - SOP - Enforcement
    - SOP – Documentation (ComplianceGO)

SWPPP AND DEVELOPMENT PLAN REVIEW

1. PURPOSE

   a. Develop standard procedures for reviewing development plans and Storm Water Pollution Prevention Plans (SWPPP) to verify compliance with current City and County code and ordinances, state regulations and federal law.

2. PROCESS

   a. Prior to submitting an application for development, it is recommended that a pre-design meeting be held with the developer or that the developer attend a Development Review Meeting. In these meetings, the development proposal can initially be assessed and suggestions made to assist with compliance to International Building Code, Land Development Code, City ordinances, Development Requirements and Standards, and State and Federal requirements. Information can be provided regarding City requirements and standards and review procedures.

   b. An application for planned development is submitted by the developer to the Engineering Department with all supporting documents identified in the Land Development Code, including plans, storm drain calculations, SWPPP etc. where required.

   c. A preliminary review of the plans and all supporting documents is completed including the following:

      - Review plans, calculations, etc. for compliance with Development Standards.

      - Confirm that the SWPPP has been prepared using the State template for projects that warrant compliance with the Utah General Construction Permit (UGCP) regulation. (Also the Common Plan Permit)

      - Review the SWPPP using Page 1 of the State UPDES Storm Water Inspection Evaluation Form for SWPPP Compliance. (We have been using our own forms for review of the SWPPPs – I can send these over to you if you would like)

   d. Provide review comments to the developer.

   e. Meet with the developer, as needed, to review comments and discuss any questions the developer might have.

   f. Follow-up reviews should confirm that all comments have been addressed and required documents have been received.

   g. Final plans with all supporting documents for planned development is submitted to the Engineering Department by the developer.

   h. Prior to final approval, the following requirements shall be met:

      - All comments have been addressed and finalized from previous reviews.

      - The owner of development that warrants compliance with the Utah General

Construction Permit (UGCP) regulation must submit a signed Storm Water Facilities Maintenance Agreement using the Highland City Agreement template. The agreement will be recorded prior to release of bonds.

- The SWPPP management system shall be reviewed and approved.

i. Provide Final Approval Letter to Developer.

3. DOCUMENTATION

a. File scanned copies of the development review redlines and Final Approval Letter.

b. Storm Water Facilities Maintenance Agreement is to be recorded once the project is constructed and before the bond is released.

c. Once the Post-Construction Storm Water Maintenance Agreement is recorded:

- Add information for the property in ComplianceGO for tracking of the post-construction inspections performed by the City for tracking of maintenance and inspections performed by the Owner.

  * See SOP Post-Construction Management and Inspection.

d. Records of SWPPP and development plan review shall be kept for 5 years or until construction is completed, whichever is longer.

SWPPP REVIEW

SWPPP Review Procedures

1. The SWPPP and land disturbance permit must be submitted and approved prior to development activities or a building permit being issued

    a. SWPPP plans are received via email

    b. SWPPPs are reviewed and comment sent with any items that need to be fixed in the SWPPP

        - The SWPPP reviews are emailed and also documented in ComplianceGO

    c. When the revised SWPPP is provided and it is in compliance the SWPPP will be approved

    d. When the SWPPP is approved then the Public Works Administrative Assistant is notified, allowing for other permits to move forward.

    e. Prior to construction beginning a pre-con SWPPP meeting is setup and takes place at the construction site. (We also have cards that we pass out which are attached to this email)
        - The pre-con SWPPP meeting is documented in ComplianceGO

SOP - CONSTRUCTION SITE INSPECTIONS

1. PURPOSE

    a. Maintain list of active construction sites.

    b. Develop standard procedures for identifying priority construction sites, completing construction site inspections, and documenting/tracking inspections and enforcement.

2. MONTHLY INSPECTION LOG

    a. The Monthly Inspection Log is regularly updated by the Inspector which includes a list of active construction sites.

        - All construction sites which are required to have submitted a SWPPP are to be included.

        - Sites which are Utah General Construction Permit (UGCP) regulated (sites with a land disturbance of greater than or equal to one acre and sites less than one acre that are part of a larger common plan of development) are to be identified on the Monthly Inspection Log. (Also common plan permit)

        - Identify priority construction sites (highlighted on Log):

            1. Include sites discharging directly into or immediately upstream of Dry Creek or the American Fork River.

            2. Include areas that are located in sensitive areas including:

                a. Wetlands

                b. Historic areas

                c. Primary recharge zones

                d. Drinking Water Protection Zones

                e. Steep slopes, drainage ravine areas, any surface water bordered by the project or within the project.

            3. Consider phasing of construction (sites that are in initial phases of construction should be considered high priority).

            4. Consider current and past SWPPP compliance.

3. CONSTRUCTION SITE INSPECTIONS

    a. Storm Water Inspector is responsible for completing construction site inspections and documenting/tracking inspections and enforcement.

    b. Frequency of inspections:

- Inspections of UGCP regulated projects are to be done at least monthly.
- Inspections of Priority Construction Sites are to be done at least biweekly.

c. Conduct a review of the site prior to any land disturbance.

d. Conduct routine inspections during construction activity (at the minimum frequency identified above) as follows:

- Before Inspection

1. Review SWPPP thoroughly.
2. Plan approach for inspection.
3. Take any necessary equipment for measuring.
4. Be sure to have personal protection equipment.

- Inspecting the Site

1. Follow procedures outlined in Section 1 of the Utah RSI Manual and the SWPPP Compliance Inspection Form.
2. Communicate with responsible person if on site regarding any noncompliance items. If not on site, contact responsible person by phone.
3. Send email with Compliance Inspection Form to responsible person(s).

e. Conduct a final inspection of the site once the Notice of Termination (NOT) has been filed with the State. Follow procedures outlined in Section 1 of the Utah RSI Manual and the SWPPP Compliance Inspection Form.

4. ENFORCEMENT ACTION

a. Verbal warnings are going to be given at the time of the inspection if there are items that need a warning.

b. If items are not completed and signed off within seven days then a written warning will be given.

c. If seven days after the written warning the items still are not taken care of then a stop work order will be issued for the site.

d. A stop work order can be issued for major violations at any time but the goal is to not have any of these.

5. DOCUMENTATION

a. Complete the SWPPP Compliance Inspection Form, which identifies Corrective Action Items within ComplianceGO.

- Follow up inspections will be completed until all Corrective Action Items are addressed or until further enforcement actions are taken. The follow-up inspections are to be documented within ComplianceGO created for the original inspection.

- The NOT portion of the SWPPP Compliance Inspection Form is to be completed at the time of the final inspection.

b. A log is to be kept by the Storm Water Inspector for each project which will include drive thru inspections, monthly/bi-weekly inspections, follow-up visits, and response to complaints. The log will be maintained in ComplianceGO.

c. Any follow up and enforcement actions taken are also to be logged in the Follow Up / Enforcement Log for tracking purposes.

d. Records of inspections and enforcement shall be kept for 5 years or until construction is completed, whichever is longer.

POST-CONSTRUCTION SITE MANAGEMENT AND INSPECTION

1. PURPOSE

    a. Maintain log of post-construction maintenance and inspections of storm water facilities performed by owner of private residential, commercial, and industrial properties.

    b. Develop standard procedures for completing inspections of storm water facilities of private residential, commercial, and industrial properties to ensure that the Post-Construction Storm Water Maintenance Plan is followed and pollutants are contained and managed.

2. TRACKING OF POST-CONSTRUCTION MAINTENANCE AND INSPECTION BY OWNER

    a. Once the Maintenance Agreement is recorded and confirmed, the City will input information for the property in ComplianceGO for tracking of the post-construction inspections and maintenance performed by the Owner.

    b. Manage ComplianceGO database to confirm that property owners are completing required maintenance and inspections.

    c. The City Storm Water Inspector will perform the first post-construction inspection with the owner for the final bond release at the end of the 1-year warranty period.

3. POST-CONSTRUCTION INSPECTION BY CITY

    a. Storm Water Coordinator is responsible for coordinating and performing post-construction inspections and documenting/tracking inspections and enforcement.

    b. Conduct post-construction inspections once every five years:

        - Before inspection

            1. Send letter to owner/manager of private residential, commercial, or industrial property to inform the individual of the scheduled inspection.

            2. Review the following:

                a. Spreadsheet Post-Construction Maintenance and Inspection by Owner for history of maintenance and inspections completed by Owner.

                b. ComplianceGO database for previous inspections completed by City.

                c. Post-Construction Maintenance Plan and Agreement for property.

            3. Plan approach for inspection.

            4. Bring copy of Post-Construction Maintenance Plan for quick referral.

            5. Take any necessary equipment for measuring.

            6. Be sure to have personal protection equipment.

- Inspecting the Site

    1. Evaluate the site and document inspection findings using the Post-Construction Inspection Form.

    2. Communicate with owner/manager regarding any noncompliance items.

4. ENFORCEMENT ACTION

    a. Follow procedures identified in SOP – Storm Water Enforcement as needed.

5. DOCUMENTATION

    a. Inspections and maintenance performed by owner and inspections performed by the City are to be documented in ComplianceGO.

DETENTION POND MAINTENANCE

1. PURPOSE

    a. Develop standard operating procedures for maintaining detention ponds.

2. PROCESS

    a. Schedule

        - City detention ponds are to be maintained per the Storm Drain Maintenance Plan schedule.
        - Private detention ponds are to be maintained per Maintenance Agreement.
        - Schedule the pond maintenance work for a time when dry weather is expected.

    b. Inspection and Cleaning

        - Do visual inspection of grates and lids to identify any cleaning or repairs needed.
        - Do visual inspection on inside of structures to identify any cleaning or repairs needed.

            1. Look for sediment, debris, cracks, and missing or broken pieces in the walls of the structure.

        - If possible, do a visual inspection of inside the storm drain pipe.

            1. Look for sediment, debris, cracks, sags, and missing or broken pieces in the pipe.

        - Perform a video inspection as necessary to identify any cleaning or repairs needed.
        - Remove sediment and trash from grates, placing in a truck for disposal.
        - Provide outlet protection where feasible to minimize the amount of debris that might leave the pond during cleaning process.
        - Grub and remove debris with backhoe as needed.
        - Finish cleaning structure and pond bottom as necessary by sweeping and shoveling.
        - Put all material removed from the pond into a dump truck.
        - After cleaning pond, clean off the concrete pads using dry methods (sweeping and shoveling) as needed.
        - Some structures and pipe may require use of a vacuum truck. If so, follow the procedures of the Cleaning Process of SOP – Storm Drain Structure Maintenance and SOP – Storm Drain Pipe Maintenance.

c. Repair

- Any needed repairs are to be documented in the appropriate inspection forms. Once repairs are performed they are to be documented within the maintenance forms.

3. CLEAN-UP

   a. Make sure pond concrete pads are swept up and clean.

   b. Solids are to be disposed of in a landfill.

4. DOCUMENTATION

   a. City projects to be documented through GIS and Utility Work Order Tracking Software

   b. Private facilities to document structure maintenance in ComplianceGO database and provided to City annually.

STORM DRAIN PIPE MAINTENANCE

1. PURPOSE

    a. Develop standard operating procedures for maintaining storm drain pipes.

2. PROCESS

    a. Schedule

        - City storm drain pipes are to be maintained per the Storm Drain Maintenance Plan schedule.

        - Private storm drain pipes are to be maintained per Maintenance Agreement.

    b. Inspection and Cleaning

        - If possible, do a visual inspection of inside the storm drain pipe.

        - Perform a video inspection as necessary to identify any cleaning or repairs needed.

        - Look for sediment, debris, cracks, sags, and missing or broken pieces in the pipe.

        - Send a high pressure hose down pipe and pull back any sediment.

        - Clean inlets and outlets.

    c. Repair

        - Any needed repairs are to be documented in the appropriate inspection forms. Once repairs are performed they are to be documented within the maintenance forms.

3. CLEAN-UP

    a. When cleaning operation is complete or the vacuum truck is full, take sediment to an approved dewatering area. The liquids are to be discharged to the sanitary sewer.

    b. Once the material in the dewatering area has dried, the solids are to be disposed of in a landfill.

4. DOCUMENTATION

    a. City projects to be documented through GIS and Utility Work Order Tracking Software

    b. Private facilities to document structure maintenance in ComplianceGO database and provided to City annually.

STORM DRAIN STRUCTURE MAINTENANCE

1. PURPOSE

    a. Develop standard operating procedures for maintaining storm drain structures (inlet boxes, combo boxes, junction boxes, and manholes).

2. PROCESS

    a. Schedule

        - City structures are to be maintained per the Storm Drain Maintenance Plan schedule.

        - Private structures are to be maintained per Maintenance Agreement.

    b. Inspection and Cleaning

        - Do visual inspection on outside of structure including grate, hood, collar, and lid to identify any cleaning or repairs needed.

        - Do visual inspection on inside of structure to identify any cleaning or repairs needed.

            1. Look for sediment, debris, cracks, and missing or broken pieces in the walls of the structure.

        - When a video is performed on storm drain pipe, connecting structures are to be inspected.

        - Remove sediment and trash from grate, hood, and lid as required, placing in a truck for disposal.

        - Clean inside of structure using a high powered vacuum truck by cleaning the walls and sucking out sediment on the bottom.

        - Use a high pressure washer to break up any remaining material while capturing the slurry with the vacuum.

        - After structure is clean, remove any sediment that might have entered the pipe.

    c. Repair

        - Any needed repairs are to be documented in the appropriate inspection forms. Once repairs are performed they are to be documented within the maintenance forms.

3. CLEAN-UP

    a. When cleaning operation is complete or the vacuum truck is full, take sediment to an approved dewatering area. The liquids are to be discharged to the sanitary sewer.

    b. Once the material in the dewatering area has dried, the solids are to be disposed of in a landfill.

4. DOCUMENTATION

   a. City projects to be documented through GIS and Utility Work Order Tracking Software

   b. Private facilities to document structure maintenance in ComplianceGO database and provided to City annually.

SUMPS MAINTENANCE

*This includes underground detention structures.

1. PURPOSE

    a. Develop standard operating procedures for maintaining sumps/underground retention structures.

2. PROCESS

    a. Schedule

        - City sumps are to be maintained per the Storm Drain Maintenance Plan schedule.
        - Private sumps are to be maintained per Maintenance Agreement.

    b. Inspection and Cleaning

        - Do visual inspection on outside of structure including grate, hood, collar, and lid to identify any cleaning or repairs needed.
        - Determine how water is supposed to drain from the structure and assess the ability of the structure to allow water to drain as designed.
        - If possible, do visual inspection of inside of sump/injection well to identify any cleaning or repairs needed.

            1. Look for sediment, debris, cracks, and missing or broken pieces in the walls of the structure.

        - Clean sediment and trash off inlet to sump/injection well as required.
        - Clean inside of structure using a high powered vacuum truck by cleaning the wall of the structure and sides of the pipe and sucking out sediment on the bottom.
        - Use a high pressure washer to break up any remaining material while capturing the slurry with the vacuum.
        - Remove fine sediments that might inhibit the drainage of water if the structure is designed such that the water drains out the bottom.
        - Clean those places where the water drains if the structure is designed to drain out the sides of the sump/injection well.
        - Clean inlets and overflow outlets.

    c. Repair

        - Any needed repairs are to be documented in the appropriate inspection forms. Once repairs are performed they are to be documented within the maintenance forms.

3. CLEAN-UP

    a. When cleaning operation is complete or the vacuum truck is full, take sediment to an approved dewatering area. The liquids are to be discharged to the sanitary sewer.

    b. Once the material in the dewatering area has dried, the solids are to be disposed of in a landfill.

4. DOCUMENTATION

    a. City projects to be documented through GIS and Utility Work Order Tracking Software

    b. Private facilities to document structure maintenance in ComplianceGO database and provided to City annually.

STORM WATER SYSTEM MAINTENANCE PRIORITIZATION

1. PURPOSE

   a. Develop standard operating procedures for prioritizing maintenance of the storm water system.

2. PRIORITY CONSIDERATIONS

   a. Maintenance includes:

      - Inspection and Cleaning
      - Repair

   b. City-owned or operated storm water system facilities to be maintained:

      - Pipes
      - Structures (inlet boxes, combo boxes, junction boxes, and manholes)
      - Detention/retention ponds
      - Oil/water separators
      - Sumps
      - Underground detention
      - Canals/ditches
      - Creeks/channels

   c. Prioritization for maintenance should consider:

      - Water quality
      - Condition of receiving water
      - Material accumulation
      - Potential for flooding
      - Limitations in functionality (flat slope, siphon, inadequate size, flow obstruction, etc.)

3. PRIORITIZATION PROCESS

   a. Inspection and Cleaning

      - Priority facilities to be inspected and cleaned annually at a minimum:

         1. Pipes with flat slopes

         2. Structures with large sand traps

         3. Detention/retention ponds

         4. Oil/water separators

         5. Sumps

      - Priorities for inspection and cleaning of other facilities will be established quarterly at a minimum by the Drainage Supervisor and Public Works Director.

   b. Repair

      - Facilities in need of repair will be identified through inspections and cleaning.

      - Priorities for repair will be established quarterly at a minimum by the Drainage Supervisor and Public Works Director.

4. DOCUMENTATION

   a. The storm water system maintenance plan shall be updated annually at a minimum with updated prioritization.

STORM WATER ENFORCEMENT

1. PURPOSE

   a. Develop standard escalating enforcement procedures to minimize the occurrence of and obtain compliance from violators.

2. ENFORCEMENT ACTION DEFINITIONS

   a. **SWPPP Corrective Action Notice** – A formal notice that informs a contractor of the status of compliance with State permit regulation or City ordinance/code. It is used to inform the contractor of any violations and demands items be corrected according to a schedule defined by the inspector.

   b. **Warning Notice** – A formal notice that informs a person, business, or other entity that SWPPP have been violated:

      Generally, a Warning Notice is issued after educating and following up with the person, business, or other entity, or after a SWPPP Corrective Action Notice has been issued, and the violation is not adequately addressed. A warning notice demands that activities causing the violations cease and be corrected according to a schedule defined by the inspector.

   c. **Stop Work Order (SWO)** – A formal notice that informs a person, business, or other entity that requirements of the State permit or City ordinance/code have been violated and demands that the entire project cease. However, all unsafe conditions, pollution control BMPs, any disruption to the Right-of-Way or any affected private property be restored to acceptable use prior to leaving the project site. Generally, an SWO is issued after an NOV continues to be disregarded. The SWO is typically issued with a Citation when a significant environmental concern or chronic noncompliance exist. The SWO may revoke all City permits and hold any contracts held with the City. The SWO may remain in effect until the Citation is served and the required corrective actions have been completed.

   d. **Citation** – A formal notice that informs a person, business, or other entity that requirements of the State permit or City ordinance/code has been violated and serves notice of possible fines and criminal charges. Generally, a Citation is issued after an NOV has been issued. However, a Citation may be issued without prior warning for violations that have a significant impact on water quality, pose physical hazard or public nuisance. A Citation may be issued for each violation, each day the site is in violation. A citation may be issued by the Police Department and Code Enforcement.

3. CONSTRUCTION ENFORCEMENT

   a. The inspector is to communicate (verbal, email, letter, etc.) with the Contractor regularly through the permit term to achieve understanding of the State permit regulation and City ordinance/code requirements. Generally, all communication is to be recorded on the second page of the SWPPP Compliance Inspection Form for UPDES permitted projects and in the project file for non UPDES permit projects.

   b. SWPPP Corrective Action Notice is provided to the Contractor using the SWPPP

Compliance Inspection Form for UPDES permitted projects and via email or letter for non UPDES permit projects. The notice should include correction deadlines. The notice can include language that informs and educates if it is effective at correcting the violations.

c. The inspector is to follow up and communicate with the Contractor to confirm that Corrective Action Notice items have been addressed. The inspector should evaluate understanding or expected understanding and issue a Warning Notice (via letter or email) as necessary. The Warning Notice should include correction deadlines and a warning that if not addressed adequately, further enforcement may be required including but not limited to NOV, AO, SWO, and Citation.

d. Generally, ample warning and communication should occur prior to issuing further enforcement actions. If the Contractor continues to disregard warnings and communications, the inspector should generally exercise the use of non criminal enforcement actions, including but not limited to NOVs, AOs, and SWOs in this order, to obtain compliance and the restitution of damages. If non-compliance and damages continue, Citations that can result in a criminal record may be exercised. However, immediate enforcement may be applied for violations that are severe, including but not limited to intentional dumping of material that will do harm or allowing of this material to contaminate by neglect.

e. Per the Memorandum of Understanding (MOU) between Utah County and Highland City, the Utah County Health Department is to be contacted for any incidents involving spills, releases or the discharge of pollutants, contaminants, or wastes into the waterways or drainage system. The Utah County Health Department will respond and investigate the incident, work with the responsible party to ensure the spill and/or discharge is remediated, and initiate appropriate enforcement actions as needed.

4. INCIDENT ENFORCEMENT

a. For storm water pollution incidents relating to minor construction related staging activities, nuisance material in right-of-way, landscaping projects, post-construction storm water maintenance agreement violations, illicit discharges, etc. the inspector is to verbally communicate with and inform the violator of laws, ordinances, code, and any other concerns. Generally, a deadline will be given to correct the violation.

b. The inspector is to follow up and communicate with the violator to confirm that the violation has been corrected. The inspector should evaluate understanding or expected understanding and issue a Warning Notice (via letter or email) as necessary. The Warning Notice should include correction deadlines and a warning that if not addressed adequately, further enforcement may be required including but not limited to NOV and Citation.

c. Generally, ample warning and communication should occur prior to issuing further enforcement actions. If the violator continues to disregard warnings and communications, the inspector should generally exercise the use of an NOV (non criminal enforcement action) to obtain compliance and the restitution of damages. If non-compliance and damages continue, Citations that can result in a criminal record may be exercised. However, immediate enforcement may be applied for violations that are severe, including but not limited to intentional dumping of material that will do harm

or allowing of this material to contaminate by neglect.

d. Per the MOU between Utah County and Highland City, the Utah Health Department is to be contacted for any incidents involving spills, releases or the discharge of pollutants, contaminants, or wastes into the waterways or drainage system. The Utah County Health Department will respond and investigate the incident, work with the responsible party to ensure the spill and/or discharge is remediated, and initiate appropriate enforcement actions as needed.

5. DOCUMENTATION

a. Documentation of all enforcement shall be completed as indicated above.

b. Records of enforcement shall be kept for 5 years or until construction is completed, whichever is longer.

DOCUMENTATION (ComplianceGO) - SOP

1. ComplianceGO - Documentation

    a. All MS4 inspections are completed on ComplianceGO

    b. The inspections include SWPPP Reviews, pre-construction, regular, and final inspections.

    c. The SWPPP documents, permits, and maps are kept on ComplianceGO. The maps are also updated on ComplianceGO through the ComplianceGO mapping system.

    c. Action items are tracked in ComplianceGO. When action items are not completed in the allotted time frame a high alert email is sent out.

    d. Action item reports can be run at anytime also in ComplianceGO.

    e. Permits are also tracked in ComplianceGO. ComplianceGO will notify us 45 days prior to the permit expiring.

2. Training

    a. The MS4 inspector will train people on site as needed and this is kept on a spreadsheet and updated at the time the training takes place.

3. Enforcement

    a. All enforcement actions are tracked on a spreadsheet. This includes verbal, written, and stop work orders.

4. Inspection site tracking

    a. A spreadsheet has been created to track all active sites that need to be inspected.

    b. The spreadsheet has an active sites tab and a NOT tab for closed out sites.

Appendix F:

- Standard Operating Procedures (SOPs) for Facility
    - Dumpster and garbage storage.
    - Garbage and scrap metal storage.
    - Parking lot maintenance.
    - Well house and booster facility cleaning
    - Sump Maintenance
- Standard Operating Procedures (SOPs) for Open Space
    - Chemical application of pesticides, herbicides, and fertilizers.
    - Graffiti removal.
    - Mowing and trimming.
    - Open space management.
    - Pet waste.
    - Planting vegetation (seeds).
    - Planting vegetation (starters).
    - Shouldering and mowing.
- Standard Operating Procedures (SOPs) for Planning
    - Retrofit existing infrastructure.
- Standard Operating Procedures (SOPs) for Streets
    - Chip seal.
    - Crack seal.
    - Curb and pavement markings.
    - New and replacement concrete work.
    - Overlays and patching.
    - Slurry seal.
    - Snow removal and de-icing.
    - Street sweeping.
- Standard Operating Procedures (SOPs) for Utility Construction
    - Planned utility excavation repair and replacement.
    - Unplanned utility excavation repair and replacement.

  - Waterline flushing after construction and system disinfection with discharge haul off.
  - Waterline flushing after construction and system disinfection with discharge to storm drain.
- Standard Operating Procedures (SOPs) for Vehicle Transporting
  - Fueling.
  - Transporting dry excavated materials and spoils.
  - Transporting equipment.
  - Transporting soil and gravel.
  - Transporting wet excavated materials and spoils.
  - Vehicle and equipment storage.
  - Vehicle washing.

DUMPSTERS / GARGAGE STORAGE

1. PREPARATION

    a. Train employees on proper trash disposal.

    b. Locate dumpsters and trash cans in convenient, easily observable areas.

    c. Provide properly-labeled recycling bins to reduce the amount of garbage disposed.

    d. Where feasible, install berms, curbing, or vegetation strips around storage areas to control water entering/leaving storage areas.

    e. Whenever possible store garbage containers beneath a covered structure or inside to prevent contact with storm water.

2. PROCESS

    a. Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.

    b. Request/use dumpsters and trash cans with lids and without drain holes.

    c. Locate dumpsters on a flat, hard surface that does not slope or drain directly into the storm drain system.

3. ACTIONS

    a. Keep areas around dumpsters clean of all garbage.

    b. Have garbage bins emptied regularly to keep from overfilling.

    c. Wash out bins or dumpsters as needed to keep odors from becoming a problem. Wash out in properly designated areas only.

4. DOCUMENTATION

    a. Check during each inspection.

GARBAGE AND SCRAP METAL STORAGE

1. PREPARATION

    a. Locate dumpsters and trash cans with lids in convenient, easily observable areas.

    b. Locate scrap metal bin under cover if there is no lid or tarp to provide cover.

    c. Provide properly-labeled recycling binds to reduce the amount of garbage disposed.

    d. Provide training to employees to prevent improper disposal of general trash.

    e. Control runoff of sediments and debris from trash storage areas. Provide silt traps or oil water separators at run off entry points into the storm drain system.

2. PROCESS

    a. Inspect garbage bins for leaks regularly, and have repairs made immediately by responsible party.

    b. Locate dumpsters on a flat, impervious surface that does not slope or drain directly into the storm drain system.

    c. Control runoff leaving the storage areas.

    d. Keep lids closed when not actively filling dumpster.

3. ACTIONS

    a. Keep areas around dumpsters clean of all garbage.

    b. Have garbage bins emptied regularly to keep from overfilling.

    c. Wash out bins or dumpsters as needed to keep odors from becoming a problem. Wash out in properly designated areas only.

4. DOCUMENTATION

    a. Check during each inspection.

PARKING LOT MAINTENANCE

1. PREPARATION

    a. Conduct regular employee training to reinforce proper housekeeping.

    b. Restrict parking areas to be swept prior to and during sweeping using regulations as necessary.

    c. Perform regular maintenance and services in accordance with the recommended vehicle maintenance schedule on sweepers to increase and maintain efficiency.

2. PROCESS

    a. Sweep parking areas, as needed, or as directed. At a minimum, the parking lot will be swept every two weeks.

    b. Hand sweep sections of gutter if soil and debris accumulate.

    c. Pick-up litter as required to keep parking areas clean and orderly.

3. ACTIONS

    a. Dispose of sweepings properly into a waste container.

    b. Street sweeper hoppers will be emptied and cleaned at the truck wash building which is connected to the sanitary sewer system.

    c. Swept materials will not be stored in locations where storm water could transport fines into the storm drain system. Dried materials from the truck wash facility will be transported to the landfill.

4. DOCUMENTATION

    a. Keep work orders to track swept parking areas and approximate quantities.

WELL HOUSE AND BOOSTER FACILITY CLEANING

1. PURPOSE

    a. As part of the UPDES program, the City was required to develop an inventory of floor drains inside city-owned or operated facilities.

    b. The City completed the inventory mapping of floor drains and found that there were some well houses and booster stations where the floor drains are connected to the storm drain system. It was determined that these connections do not need to be disconnected from the storm drain system as long as a Standard Operating Procedure (SOP) is in place and followed for the operation and maintenance of these facilities.

    c. The purpose of this SOP is to maintain standard procedures for operation and maintenance of the well houses and booster stations which have floor drains connected to the storm drain system, in order to keep pollutants from being discharged into the storm drain system from these facilities.

2. PROCESS

    a. Inspection and Cleaning

        - Do visual inspection before and after performing operations and maintenance work inside the facility.

            1. Look for sediment, debris, and any other items that could potentially enter the floor drain.

        - As needed, sweep up or vacuum any sediment and debris found on the floor and dispose of waste properly.

3. DOCUMENTATION

    a. Document operation and maintenance of these facilities in Public work order software and onsite..

SUMPS MAINTENANCE

*This includes underground detention structures.

1. PURPOSE

    a. Develop standard operating procedures for maintaining sumps/underground retention structures.

2. PROCESS

    a. Schedule

        - City sumps are to be maintained per the Storm Drain Maintenance Plan schedule.
        - Private sumps are to be maintained per Maintenance Agreement.

    b. Inspection and Cleaning

        - Do visual inspection on outside of structure including grate, hood, collar, and lid to identify any cleaning or repairs needed.
        - Determine how water is supposed to drain from the structure and assess the ability of the structure to allow water to drain as designed.
        - If possible, do visual inspection of inside of sump/injection well to identify any cleaning or repairs needed.

            1. Look for sediment, debris, cracks, and missing or broken pieces in the walls of the structure.

        - Clean sediment and trash off inlet to sump/injection well as required.
        - Clean inside of structure using a high powered vacuum truck by cleaning the wall of the structure and sides of the pipe and sucking out sediment on the bottom.
        - Use a high pressure washer to break up any remaining material while capturing the slurry with the vacuum.
        - Remove fine sediments that might inhibit the drainage of water if the structure is designed such that the water drains out the bottom.
        - Clean those places where the water drains if the structure is designed to drain out the sides of the sump/injection well.
        - Clean inlets and overflow outlets.

    c. Repair

        - Any needed repairs are to be documented in the appropriate inspection forms. Once repairs are performed they are to be documented within the maintenance forms.

3. CLEAN-UP

    a. When cleaning operation is complete or the vacuum truck is full, take sediment to an approved dewatering area. The liquids are to be discharged to the sanitary sewer.

    b. Once the material in the dewatering area has dried, the solids are to be disposed of in a landfill.

4. DOCUMENTATION

    a. City projects to be documented through GIS and Utility Work Order Tracking Software

    b. Private facilities to document structure maintenance in ComplianceGO database and provided to City annually.

CHEMICAL APPLICATION PESTICIDES, HERBICIDES, AND FERTILIZERS

1. PREPARATION

    a. Make sure your state Pesticide License is complete and up-to-date before handling any chemicals.

    b. Check calibration for fertilizer and pesticides application equipment to avoid excessive application.

    c. Positively identify pest/weed prior to application.

    d. Use pesticides only if there is an actual pest problem.

    e. Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendation for best results ("Read the Label").

    f. Know the weather conditions. Do not use pesticides if rain is expected within label recommendations. Apply pesticides only when wind speeds are low (less than 5 mph), if temperatures are below 85°, and when there is no inversion.

2. PROCESS

    a. Follow the manufacturer's recommendations for mixing, application, and disposal ("Read the Label").

    b. Pour Rinsate into tank mix.

    c. Do not mix or prepare pesticides for application near storm drains, preferably mix inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.

    d. Employ techniques to minimize off-target application (e.g. spray drift, over broadcasting) of pesticides and fertilizers.

    e. Alert park patrons in the area of your intentions.

3. ACTIONS

    a. Sweep or blow pavements or sidewalks where fertilizers or other solid chemicals have fallen, back onto grassy areas before applying irrigation water.

    b. Triple rinse pesticide and herbicide containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste. Punch holes in side and bottom of container and put lid in different trash can.

    c. Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers ("Read the Label").

4. DOCUMENTATION

   a. Keep copies of SDS sheets for all pesticides, fertilizers and other hazardous products used.

   b. Record fertilizing and pesticide application activities, including date, individual who did the application, amount of product used and approximate area covered.

GRAFFITI REMOVAL

1. PLANNING/PREPARATION

    a. Graffiti removal activities are to be scheduled during dry weather.

    b. Whenever there is a ditch or waterway underneath the graffiti, always paint over instead of removing.

    c. Waterless and nontoxic chemical cleaning methods (i.e. gels or spray compounds) should be used when possible.

    d. Avoid using cleaning products that contain hazardous substances (i.e. hydrofluoric acid, muriatic acid, sodium hydroxide, bleach) that can turn wastewater into hazardous waste.

    e. Minimize the amount of water used during high pressure washing activities.

2. COLLECTION AND DISPOSAL PROCESS

    a. When sand blasting, sweep up impervious areas to collect any waste material and dispose of waste material in the trash.

    b. Locate points where wastewater will be collected.

    c. Protect and plug storm drain inlets as required prior to removing graffiti.

    d. As long as no soaps or chemicals are used, direct runoff from sand blasting and high pressure washing into a landscaped or dirt area. If such landscape or dirt area is not available, filter runoff through an appropriate filtering device (i.e. filter fabric) to keep sand, particles and debris out of the storm drains.

    e. If soaps or chemicals are used, collect the waste water by vacuuming or pumping and dispose of the wastewater to the sanitary sewer. Do not remove sewer manhole covers to dispose of wastewater to the sanitary sewer system without prior approval.

    f. Do not mix non-hazardous wastewater with wastewater known to contain hazardous substances. Mixing these wastes can increase the characteristic and/or total volume of waste, resulting in more expensive disposal and additional regulatory requirements.

    g. Once wastewater has been collected, visible solids remaining in the collection area after liquids have been removed or evaporated must be swept up and properly disposed to prevent future discharges to the storm sewer system.

3. DOCUMENTATION

    a. Maintain a list of graffiti removal activities and individuals responsible for conducting such operation.

MOWING AND TRIMMING

1. PREPARATION
    a. Review the overall process with all employees.
    b. Check the oil and fuel levels of the mowers and other equipment; fill if needed.
2. PROCESS
    a. Protect catch basins where applicable.
    b. Put on eye and hearing protection.
    c. Mow and trim the lawn.
    d. Sweep or blow clippings to grass areas.
3. ACTIONS
    a. Wash equipment in approved wash station.
4. DOCUMENTATION
    a. No documentation required.

OPEN SPACE MANAGEMENT

1. PREPARATION

    a. Provide a regular observation and maintenance of parks, golf course, and other public open spaces.

    b. Identify public open spaces that are used for storm water detention and verify that detention areas are included on the storm water system mapping, inspection schedules, and maintenance schedules.

2. PROCESS

    a. Ensure that any storm water or drainage system components on the property are properly maintained.

    b. Avoid placing bark mulch (or other floatable landscaping materials) in storm water detention areas or other areas where storm water runoff can carry the mulch into the storm drainage system.

    c. Follow all SOPs related to irrigation, mowing, landscaping, and pet waste management.

3. ACTIONS

    a. Keep all outdoor work areas neat and tidy. Clean by sweeping instead of washing whenever possible. If areas must be washed, ensure that wash water will enter a landscaped area rather than the storm water. Do not use soap for outdoor washing.

    b. Pick up trash on a regular basis.

4. DOCUMENTATION

    a. Document any observed deficiencies for correction or repair.

PET WASTE

1. PREPARATION

   a. Adopt and enforce ordinances that require pet owners to clean up pet wastes and use leashes in public areas. If public off-leash areas are designated, make sure they are clearly defined. Avoid designating public off-leash areas near streams and water bodies.

   b. Whenever practical and cost effective, install dispensers for pet waste bags and provide disposal containers at locations such as trail heads or parks where pet waste has been a problem. Provide signs with instructions for proper cleanup and disposal.

2. PROCESS

   a. Check parks and trails for pet waste as needed.

   b. Check public open space for pet waste prior to mowing.

   c. Provide ordinance enforcement as needed.

3. ACTIONS

   a. Remove all pet waste, provide temporary storage in a covered waste container, and dispose of properly. Preferred method of disposal is at a solid waste disposal facility.

4. DOCUMENTATION

   a. Document problem areas for possible increased enforcement and/or public education signs.

PLANTING VEGETATION - SEEDS

1. PREPARATION

    a. Call the Blue Stakes Center of Utah at 811 or 1-800-662-4111 at least 2 working days before any digging will be done, to reveal the location of any underground utilities.

    b. Determine the application rate, method, water source, and ensure adequate materials are on hand.

    c. Grade and prepare the soil to receive the seed. Place any extra soil in a convenient location to collect.

2. PROCESS

    a. Place the seed any cover using the pre-determined application method (and rate).

    b. Lightly moisten the seed.

    c. Ensure that the regular watering method is working properly and limit amount of over spray on paved areas.

    d. Provide erosion control on slopes where necessary using tackifiers, erosion mats, soil stabilizers or other appropriate methods.

3. ACTIONS

    a. Sweep dirt, seed, and any cover material from surrounding pavement(s) into the planter area.

    b. Transport soils to their designated fill or disposal area.

4. DOCUMENTATION

    a. No documentation required.

PLANTING VEGETATION - STARTERS

1. PREPARATION

    a. Call the Blue Stakes Center of Utah at 811 or 1-800-662-4111 at least 2 working days before any digging will be done, to reveal the location of any underground utilities.

    b. Transport spoils to their designated fill or disposal area.

2. PROCESS

    a. Dig holes; place spoils on tarps or plastic near the hole where they may easily be placed back around roots. Avoid placing spoils in the gutter.

    b. Bring each plant near the edge of the hole dug for it.

    c. Check the depth of the hole, and adjust the depth if necessary. The depth of the hole for a tree should be 22” less than the root flare to the bottom of the root ball, so that the root flare is 2” above the finish grade.

    d. Carefully remove pot or burlap.

    e. Place the plant in the hole.

    f. Backfill the hole with existing spoils, compost, and a little fertilizer if desired. Do not use excessive amendments.

    g. Thoroughly water the plant to remove any air pockets that may be in the soil.

    h. Stake the plant, if necessary using tackifiers, erosion mats, soil stabilizers or other appropriate methods.

3. ACTIONS

    a. Sweep dirt from surrounding pavement(s) into the planter area.

    b. Transport spoils to their designated fill or disposal area.

4. DOCUMENTATION

    a. No documentation required.

SHOULDERING AND MOWING

1. PREPARATION

    a. Set up temporary traffic control devices as necessary according to part VI of the Manual on Uniform Traffic Control Devices (MUTCD).

2. PROCESS

    a. Place import material as needed and perform grading to achieve proper drainage.

    b. Mulch clippings to help reduce the amount of supplemental fertilizer required.

3. ACTIONS

    a. Clean any loose material off asphalt or gutter.

4. DOCUMENTATION

    a. Record location and date on the maintenance database and map.

RETROFIT EXISTING INFRASTRUCTURE

1. PURPOSE

   a. Develop and implement a plan/guidance to assess existing infrastructure, identify developed sites that are adversely impacting water quality, assess existing flood management structural controls to determine whether changes or additions should be made, and identify potential retrofit needs.

2. PROCESS

   a. Confirm storm drain system inventory:

      - Map all outfalls (Program 3.1-1).
      - Map all city-owned or operated storm water post-construction structural controls (Program 3.1-2).
      - Verify existing public storm water system mapping (Program 3.1-3).
      - Maintain current storm water facilities map by logging updates (Program 3.1-4).

   b. Review map of existing storm water system.

   c. Evaluate existing Post-Construction BMPs for retrofitting opportunities.

   d. Look at sub-catchments/drainage areas – prioritize based on land use, impaired waters, and sensitive areas.

   e. Start with High Priority areas:

      - Start at downstream end and look for property or opportunities to retrofit existing system for water quality.
      - Review list of possible post-construction BMPs.
      - Work upstream to the upper ends of the high priority areas.
      - Compile a list of potential projects.
      - Create budgetary level costs for each project.
      - Prioritize projects.
      - Document findings – including reasons for prioritization.
      - Integrate this list with existing Storm Drain Capital Improvement Projects.

   f. Repeat for Medium Priority areas.

   g. Repeat for Low Priority areas.

h. Budget for and implement projects.

i. Consider retrofit options with all redevelopment projects.

3. QUESTIONS TO ASK WHEN CONSIDERING RETROFITS

   a. Are there any highly impacted areas?

   b. Why are these areas highly impacted?

   c. Where are they?

   d. How does the existing system work in this area?

   e. What BMPs might address the problems?

   f. Is there room to retrofit at the end of the line?

   g. Would projects upstream maximize water quality and minimize impacts?

   h. What are the anticipated costs?

   i. How soon can this be programmed?

   j. Do we have retrofitting requirements when redeveloping?

4. DOCUMENTATION

   a. SOP posted on website and followed.

CHIP SEAL

1. PREPARATION

    a. Clean and dry areas where materials are to be applied.

    b. Apply temporary covers to manholes and catch basins, as needed, to prevent oil and materials from getting inside of them.

2. PROCESS

    a. Apply emulsion at recommended rate.

    b. Spread chips closely behind emulsion distributor, slowly such that the chips do not roll when they hit the surface.

    c. Roll chips. Rollers follow closely behind the chip spreader. Roll entire surface twice.

    d. Maximum speed 5 mph.

3. ACTIONS

    a. All loose aggregate is removed from the roadway by sweeping it up (see SOP – Street Sweeping).

    b. Excessive asphalt applications and spills are removed with shovels and scraping tools.

    c. Remove the temporary covers from manholes and catch basins. If it appears that any chip seal materials have gotten into the inlet boxes, remove the material according to the SOP – SD Structure Maintenance.

    d. Dispose of the waste material that has been swept and scraped up by taking it to the landfill.

4. DOCUMENTATION

    a. Record location and date on the maintenance database and map.

CRACK SEAL

Maintenance on city streets will be done in accordance with City Standard Specifications and Details for Municipal Construction. At a minimum, the following guidelines will be followed:

1. PREPARATION

    a. Remove weeds from the road.

    b. Air-blast the cracks to remove sediments from the crack to allow for proper adhesion.

    c. Ensure that surface is clean and dry.

2. PROCESS

    a. Maintain proper temperature of material.

    b. Apply sufficient material to form the specified configuration.

    c. Use shovels and/or scrapers to remove excessive sealant application or spills and dispose of them properly.

3. DOCUMENTATION

    a. Record location and date on the maintenance database and map.

CURB / PAVEMENT MARKINGS

1. PREPARATION

    a. Calculate the amount of pain required for the job.

    b. Use water based paints.

    c. Determine whether the wastes will be hazardous or not and designate the proper disposal of said wastes.

    d. Determine locations of storm drain inlets and sewer inlets that may need to be protected.

    e. Prepare surfaces to be painted without generating wastewater scraping.

    f. Thoroughly sweep up all paint scrapings and place them in the appropriate solid waste facilities.

    g. If paint stripping is needed, use a citrus-based paint remover whenever possible, which is less toxic than chemical strippers.

    h. If wastewater will be generated, use curb, dyke, etc. around the activity to collect the filter and collect the debris.

2. PROCESS

    a. Paint curb/pavement.

    b. Prevent over-spraying of paints and/or excessive sandblasting.

    c. Use drip pans and drop clothes in areas of mixing paints and painting.

    d. Store latex paint rollers and brushes in air tight bags to be reused later.

    e. Have available absorbent material and other BMPs ready for an accident pain spill.

3. ACTIONS

    a. Paint out brushes and rollers as much as possible. Squeeze excess paint from brushes and rollers back into the containers prior to cleaning them.

    b. Pour excess paint from trays and buckets back into the paint can containers and wipe with cloth or paper towels. Dispose of the towels according to the recommendations on the paint being used.

    c. Rinse water-based paint brushes in the sink after pre-cleaning. Never pour excess paint or wastewater from cleanup of paint in the storm drain.

    d. Upon completion of the painting project, a five-gallon bucket of clean water is used to clean the paint sprayer until the water comes out clear. The mixture of sprayed water/paint is directed at a pile of waste material. The material is allowed to dry before it is taken to the landfill.

4. DOCUMENTATION

   a. Write-up/report of any discharges into storm drain system.

NEW / REPLACEMENT CONCRETE WORK

Maintenance on city streets will be done in accordance with City Standard Specifications and Details for Municipal Construction. At a minimum, the following guidelines will be followed.

1. PREPARATION

    a. Store dry materials under cover, away from drainage areas.

    b. Remove any damaged concrete that may need to be replaced.

    c. Compact sub-grade then add approved depth of road base. Compact to 96%.

    d. Set forms and place any reinforcing steel that may be required.

    e. Determine how much new concrete will be needed.

    f. Locate or construct approved concrete washout facility.

2. PROCESS

    a. Install inlet protection as needed.

    b. Place new concrete in forms.

    c. Screed off surface.

    d. Let concrete obtain its initial set.

    e. Apply appropriate surface finish.

    f. Remove forms 24-hours after the concrete is poured.

3. ACTIONS

    a. Perform washout of concrete trucks and equipment in designated areas only.

    b. Cement and concrete dust from grinding activities is swept up and removed from the site.

    c. Sweep dirt or debris from street and gutter and dispose of in appropriate solid waste facilities.

4. DOCUMENTATION

    a. Complete work order for each project.

OVERLAYS AND PATCHING

Maintenance on city streets will be done in accordance with City Standard Specifications and Details for Municipal Construction. At a minimum, the following guidelines will be followed.

1. PREPARATION

    a. Set up/establish an approved traffic control plan for the road with necessary detours.

    b. Reference all manhole and valve locations.

    c. Manholes and catch basins are to be covered as needed to prevent oil and materials from getting inside the structures or system.

    d. Cracks should be properly sealed. Alligator cracks and potholes should be removed and patched. Rutting should be milled.

    e. Surface should be clean and dry.

    f. Uniform tack coat applied prior to placement of overlay.

    g. If milling is required, install inlet protection as needed.

2. PROCESS

    a. Check hot asphalt mix to see that it meets City mix specifications.

    b. Raise manhole lids and valves to elevation of new elevation of new asphalt surface with riser rings.

    c. Rolling should be done to achieve proper compaction.

3. ACTIONS

    a. Covering should be removed as soon as the threat of imported materials entering the system is reduced and prior to a storm event.

    b. After pavement has cooled, sweep gutters to remove loose aggregate.

4. DOCUMENTATION

    a. Record location and date on the maintenance database and map.

SLURRY SEAL

Maintenance on city streets will be done in accordance with City Standard Specifications and Details for Municipal Construction. At a minimum, the following guidelines will be followed.

1. PREPARATION

    a. Remove weeds from the roads. Sweep areas where materials are to be applied and allow to dry, if necessary. Verify that existing pavement has been inspected for problems associated with poor drainage.

    b. Cover/protect manholes and valves as needed.

2. PROCESS

    a. Apply materials in a smooth and uniform manner. Excess slurry material should not run onto adjacent pavement surface, curb and gutter or waterways.

3. ACTIONS

    a. After three weeks, loose aggregate on the street or curb will be swept.

    b. Ensure that excess emulsion materials are removed from the site and stored for later use in an area or container that is not exposed to the weather. A spill kit will be available at the site.

    c. Remove covers/protection from manholes and valves.

4. DOCUMENTATION

    a. Record location and date on the maintenance database and map.

SNOW REMOVAL AND DE-ICING

1. PREPARATION

    a. Store de-icing material (salt) under a covered storage area.

    b. Wash out vehicles (if necessary) in approved washout area before preparing them for snow removal.

    c. Calibrate spreaders to minimize amount of de-icing material used and still be effective.

    d. Supervisor vehicles have spill cleanup kits in case of hydraulic line rupture or other spills.

    e. Train employees in spill cleanup procedures and proper handling and storage of de-icing materials.

2. PROCESS

    a. Load material into trucks carefully to minimize spillage.

    b. Periodically dry sweep loading area to reduce the amount of de-icing materials exposed to runoff.

    c. Distribute the minimum amount of de-icing material to be effective on roads.

    d. Turn spreader off while loading and any other time the vehicle is not moving in the forward position.

    e. Park trucks with de-icing material inside when possible.

3. ACTIONS

    a. Sweep up all spilled de-icing material around loading area.

    b. Clean out trucks after snow removal duty in approved washout area.

    c. Provide maintenance for vehicles in covered area.

4. DOCUMENTATION

    a. Snow plow drivers complete a work order at the end of each plow shift.

STREET SWEEPING

1. PREPARATION

    a. Prioritize cleaning routes in areas with the highest potential pollutant loading.

    b. Perform preventative maintenance and services on sweepers to increase and maintain their efficiency.

    c. Streets are to be swept as needed or specified by the city. Special sweeping requests from citizens and other city department are handled on a case-by-case basis. Street maps are used to ensure all streets are swept at a specified interval.

    d. Depending on the weather, especially during the winter months, arterial streets will be swept every two weeks while collectors and residential streets are swept every three to four weeks.

2. PROCESS

    a. Drive street sweeper safely and pick up debris.

    b. If you detect any spills or illicit discharges going into the storm drain system, contact Public Works dispatch so that it can be investigated by the Public Utilities Department.

    c. When full, take the sweeper to an approved street sweeper cleaning station at either the Public Works or Public Utilities facility.

3. ACTIONS

    a. Street sweeper hoppers will be emptied and cleaned at either the Public Works Truck Wash building or the Public Utilities dump station which are connected to the sanitary sewer system.

    b. Once solids have dried out, at least 24-hours, they will be hauled to the landfill.

    c. Decant water is to be collected and routed to an approved sanitary sewer collection.

4. DOCUMENTATION

    a. Keep accurate logs to track streets swept and streets still requiring sweeping.

    b. Log the amount of debris collected and hauled off.

PLANNED UTILITY EXCAVATION REPAIR / REPLACEMENT

1. PREPARATION

   a. Prepare a Storm Water Pollution Prevention Plan (SWPPP), if disturbance will be greater than an acre or if City determines the project will be near any high impact areas.

      Items that should be considered when preparing the SWPPP include the following:

      - What is the source of discharge and where will the discharge flow go?
      - What Best Management Practices (BMPs) should be used:

        1. Are perimeter and sediment controls needed such as silt fencing, straw bales, fiber rolls, check dams, etc.?
        2. Is seeding required after construction to stabilize the soils or can some of the existing vegetation be preserved?
        3. Are there any structural controls that should be considered, such as berms, ditches, etc.?
        4. Should inlet protection be used such as wattles or dandy bags, and if so, where should it be placed?
        5. Does chlorine residual need to be neutralized before discharging water? (for water line projects)
        6. Are there any additional BMPs that should be considered?

      - What Good Housekeeping Practices should be used during the project?

        1. Will portable toilets be used during construction and if so where will they be kept and how will they be maintained?
        2. Where will trash be stored and how and where will it be disposed of?
        3. Where will material and supplies be stored/stock piled and how will runoff from the material/supplies be controlled?
        4. Where will concrete be washed out and what will be used for washout?
        5. How will tracking out of material onto streets be controlled?
        6. Do the gutters in the vicinity need to be cleaned?
        7. Do areas around the excavation need to be cleaned?
        8. Is there potential for spilling of a hazardous substance and if so what precautions and control measures will be taken to prevent release?

           a. Note: Guidance for spill prevention can be found in the **Spill Prevention and**

Response Plan. Also, in case of a spill, follow procedures identified in the **Spill Prevention and Response Plan**.

b. Submit SWPPP to the UPDES Inspector for approval.

2. PROCESS

   a. Follow approved SWPPP throughout construction.

3. ACTIONS

   a. Make changes to SWPPP and site as needed during construction.

4. DOCUMENTATION

   a. Complete paperwork.

UNPLANNED UTILITY EXCAVATION REPAIR / REPLACEMENT

1. PREPARATION

    a. Make sure service trucks have and are ready for deployment of wattles, gravel bags, de-watering bag, or other materials for inlet protection and sediment control.

2. PROCESS

    a. Slow the discharge.

    b. Inspect flow path of discharged water.

    c. Protect water inlet areas by placing inlet protection devices around or up stream of inlet.

    d. Follow planned repair procedures.

    e. Haul off spoils of excavation.

    f. Use dewatering bags or pumps and check hourly for effectiveness.

3. ACTIONS

    a. Repair eroded areas as needed.

    b. Follow planned repair procedures.

    c. Remove any inlet protection and dewatering bags and discard appropriately.

    d. Clean up the travel path of trucked excavated material.

4. DOCUMENTATION

    a. Complete paperwork.

WATERLINE FLUSHING AFTER CONSTRUCTION / SYSTEM DISINFECTION WITH DISCHARGE HAUL OFF (USED FOR DUST CONTROL / COMPACTION)

1. PREPARATION

    a. Determine chlorine content of discharged water.

    b. Determine appropriate construction activity for treatment.

2. PROCESS

    a. Flush to tanker for disposal on unpaved construction activity for dust control or compaction.

    b. Conform that application of water is in appropriate location.

3. ACTIONS

    a. Remove equipment from flush point.

4. DOCUMENTATION

    a. Residual test of discharged water.

    b. Location of water discharged.

WATERLINE FLUSHING AFTER CONSTRUCTION / SYSTEM DISINFECTION WITH DISCHARGE TO STORM DRAIN

1. PREPARATION

    a. Determine chlorine content of discharged water, and select de-chlorination equipment to be used.

    b. Determine flow path of discharge.

2. PROCESS

    a. Protect inlets in flow path.

    b. Install de-chlorination equipment.

    c. Sweep and clean flow path.

    d. Use diffuser to reduce velocities.

3. ACTIONS

    a. Pick up inlet protection.

    b. Clean flow paths.

    c. Remove equipment from flush point.

4. DOCUMENTATION

    a. Residual test of discharged water.

FUELING

1. PREPARATION

    a. Train employees on proper fueling methods and spill cleanup techniques.

    b. Install a canopy or roof over aboveground storage tanks and fuel transfer areas.

    c. Absorbent spill cleanup materials and spill kits shall be available in fueling areas and on mobile fueling vehicles and shall be disposed of properly after use.

2. PROCESS

    a. Shut off the engine.

    b. Ensure that the fuel is the proper type of fuel for the vehicle.

    c. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut off to prevent overfill.

    d. Fuel vehicle carefully to minimize drips to the ground.

    e. Fuel tanks shall not be “topped off”.

    f. Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling area in the facilities area.

    g. When fueling small equipment from portable containers, fuel in an area away from storm drains and water bodies.

3. ACTIONS

    a. Immediately clean up spills using dry absorbent (e.g. kitty litter, sawdust, etc.) sweep up absorbent material and properly dispose of contaminated clean up materials.

    b. Large spills shall be contained as best as possible and the HazMat team should be notified ASAP.

4. DOCUMENTATION

    a. Document training of employees.

TRANSPORTING DRY EXCAVATED MATERIALS AND SPOILS

1. PREPARATION
    a. Utilize truck with proper containment of materials.
    b. Determine disposal site of excavated materials.
    c. Determine the path of travel to and from disposal site.
2. PROCESS
    a. Load.
    b. Check truck after loading for possible spillage.
    c. Transport in manner to eliminate spillage and tracking.
    d. Utilize one route for transporting.
3. ACTIONS
    a. Clean loading area.
    b. Clean transporting route.
    c. Wash off truck and other equipment in a designated vehicle wash area.
4. DOCUMENTATION
    a. Complete a work order after finishing job.

TRANSPORTING EQUIPMENT

1. PREPARATION

    a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.

    b. Conduct pre-trip inspection of equipment to ensure any loose material is removed, that there are no leaking fluids, and all equipment is secure.

    c. Make sure dirt and debris that may fall from equipment is removed before transport.

2. PROCESS

    a. Load and secure equipment on trailer or truck.

    b. Load and secure fuel containers for equipment usage.

3. ACTIONS

    a. Off load equipment.

    b. Store equipment and trailer in proper location.

    c. Conduct post-trip inspection of equipment.

    d. Wash equipment, if needed, according to the SOP for that equipment.

4. DOCUMENTATION

    a. Report any leaks, defects or other problems to immediate supervisor that are noticed during pre- or post-trip inspections.

TRANSPORTING SOIL AND GRAVEL

1. PREPARATION

    a. Dry out wet materials before transporting.

    b. Spray down dusty materials to keep from blowing.

    c. Make sure you know and understand the SWPPP requirements for the site you will be working at.

    d. Determine the location that the truck and other equipment will be cleaned afterwards.

    e. Check vehicle tailgate to make sure they seal and latch properly.

2. PROCESS

    a. Use a stabilized construction entrance to access or leave the site where materials are being transported to/from.

    b. Cover truck bed with a secured tarp before transporting.

    c. Follow the SWPPP requirements for the specific site to/from which the materials are being hauled.

    d. Make sure not to overfill materials when loading trucks.

3. ACTIONS

    a. Use sweeper to clean up any materials tracked out on the roads from site.

    b. Wash out truck and other equipment when needed in properly designated areas.

4. DOCUMENTATION

    a. Complete a work order after finishing job.

TRANSPORTING WET EXCAVATED MATERIALS AND SPOILS

1. PREPARATION
    a. Utilize truck with containment for material.
    b. Determine disposal site of excavated material.
    c. Determine the path of travel to and from disposal site.
2. PROCESS
    a. Load and transport in manner to minimize spillage and tracking of material.
    b. Check truck for spillage.
    c. Utilize one route of transport.
3. ACTIONS
    a. Clean route of transport to pick up any spilled material.
    b. Wash out equipment truck and other equipment in designated vehicle wash area.
4. DOCUMENTATION
    a. Complete a work order after finishing job.

VEHICLE AND EQUIPMENT STORAGE

1. PREPARATION

    a. Inspect parking areas for stains/leaks on a regular basis.

    b. Provide drip pans or adsorbents for leaking vehicles.

2. PROCESS

    a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer system.

    b. When inside storage is not available, vehicles and equipment will be parked in the approved designated areas and away from storm drain inlets as much as possible.

    c. Maintain vehicles to prevent leaks as much as possible.

    d. Address any known leaks or drips as soon as possible. When a leak is detected a drip pan will be placed under the leaking vehicle to collect the drip.

    e. The shop will provide a labeled location to empty and store drip pans.

    f. If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.

    g. Clean up all spills using dry methods.

    h. Never store leaking vehicles over a storm drain.

3. ACTIONS

    a. Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent. The dry absorbent will be swept up and disposed of in the garbage.

    b. The paved surfaces around the building will be swept every two weeks, weather permitting.

4. DOCUMENTATION

    a. Inspect parking areas during weekly site inspection.

VEHICLE WASHING

1. PREPARATION

    a. Truck, vehicle, and equipment wash building provided with a drainage system which is attached to the sanitary sewer system.

    b. No vehicle washing will be done where the drain system is connected to the storm drain system.

2. PROCESS

    a. Minimize water and soap use when washing vehicles inside the Truck Wash building.

    b. Use hose with automatic shut off nozzles to minimize water usage.

    c. Never wash vehicles over a storm drain.

3. ACTIONS

    a. Clean solids from the settling pits on an as needed basis.

4. DOCUMENTATION

    a. Check facility during weekly site inspection.

Appendix G:

- List of City owned & operated facilities
- Assessment of Facilities
- SD Cleaning Plan

Highland City – BMP 6.3 – 2016 Inventory of City Owned Facilities

Public Works Facilities

- *Public Works Building
- Well #1 Office
- HW Building

City Offices

- City Hall
- Lone Peak Fire Station
- Lone Peak Criminal Justice Building
- Community/Arts Building

Well & Pump Houses

- Well Houses #1 - #6
- Upper PI Booster Station
- Lower PI Booster Station
- Hogs Hollow PI Booster Station
- View Pointe DW Pump Station
- Beacon Hills DW Pump Station
- Dry Creek Lift Station
- Highland Hollow Lift Station
- Pheasant Hollow Lift Station
- Greens on Highland Lift Station
- Victor's View Lift Station

Tanks & PI Ponds

- View Pointe Upper Tank
- View Pointe Lower Tank
- Beacon Hills Upper Tank
- Beacon Hills Lower Tank
- Canyon PI Pond
- Canterbury PI Pond
- Northwest PI Pond

Parks & Cemetery

- City Cemetery
- Highland Glen Park
- Beacon Hills Park
- View Pointe Park

- Dry Creek Park
- Mitchell Hollow Park
- Heritage Park
- Highland Hills Park
- North Canterbury Park
- South Canterbury Park
- Windsor Park

*Assessed as High Priority Site.

Other sites assessed as not ‘High Priority’ due to the low potential to discharge pollutants to storm water. It was determined that good housekeeping by City Staff would be beneficial at sites.

STORM DRAIN CLEANING PLAN

HIGHLAND CITY

Highland City will provide annual cleaning of their storm drain system. The City anticipates cleaning 25 sites a year with their Vac-Truck, per the appropriate SOP. A site consists of adjoining sump, combo boxes and inlets. City Staff will provide a written description of each cleaning that will be tracked through the City's GIS System (see attached tracking sheet). At the beginning of each year the Storm Drain Superintendent will provide direction on the storm drain systems to be cleaned for the upcoming season. Cleanings will be determined through the following order:

Prioritized Areas:

High Priority

- Storm drains near construction activities / new development
- Northwest area at low points in street
- Older inlets that were constructed before water quality protection and do not have a recorded cleaning
- Storm drains that have had recent reports of flooding

Next Priority

- Select storm drains that have not been recorded as 'cleaned' and are older than 10 years old

Lowest Priority

- All other storm drains, starting with the oldest and recorded as 'not cleaned'.

HIGHLAND CITY

Highland City Public Works
5400 Civic Center Drive, Ste 100
Highland, UT 84003
801-772-4515

HIGHLAND CITY
SUMP INSPECTION

Inspection Date: _____

Address: _____

Grate Style: Solid ☐ Inlet ☐ Standard Sump: Y ☐ N ☐ Not a Sump ☐

Private ☐

Pipe size: _____ Pipe material: _____

Maintenance Required? Yes ☐ No ☐

Notes: _____

_____

_____

Maintenance Date: _____

Maintenance Completed: _____

Inspection Performed By: _____

Appendix H:

- Process to access flood control facilities

WATER QUALITY CONSIDERATION

1. PURPOSE

   a. Develop and implement a process for assessing the water quality impacts in the design of all new flood management structural controls.

2. PROCESS

   a. Confirm storm drain system inventory:

      - Map all outfalls (Program 3.1-1).
      - Map all city-owned or operated storm water post-construction structural controls (Program 3.1-2).
      - Verify existing public storm water system mapping (Program 3.1-3).
      - Maintain current storm water facilities map by logging updates (Program 3.1-4).

   b. Review Storm Drain Master Plan for opportunities to include water quality projects or water quality aspects in Capital Improvement Projects.

   c. Complete an updated Storm Drain Master Plan and include consideration of water quality issues.

   d. During pre-design, conceptual design, and at Development Review Meeting, ask the questions:

      - Is there opportunity to include water quality aspects to this project?
      - Are there any highly impacted areas?
      - Are there Low Impact Development (LID) concepts and ideas that might work for this project?
      - Can we limit directly connected impervious areas on this project?
      - What could be done to minimize runoff?

   e. Follow SOP SWPPP and Development Review to confirm that LID is considered for all new development projects.

   f. Look for “green money” funding options for water quality aspects of all projects.

3. DOCUMENTATION

   a. SOP posted on website and followed.

Appendix I:

- Highland City Ordinance

2018-1

ORDINANCE NO. O-2018-01

STORM WATER MANAGEMENT AND DISCHARGE CONTROL ORDINANCE. AN ORDINANCE CREATING A NEW SECTION OF THE HIGHLAND CITY CODE REGULATING STORM WATER DRAINAGE AND DISCHARGE; ALSO PROVIDING A SAVINGS CLAUSE AND EFFECTIVE DATE FOR THE ORDINANCE.

WHEREAS, the General Plan of Highland City and the Highland City Development Code empowers the City Council with the authority to enact ordinances that promote the health, safety, morals, convenience, order, prosperity, and general welfare of Highland City;

WHEREAS, Utah Code Annotated Section 10-8-84 authorizes the City Council to pass ordinances which are reasonably and appropriately related to the objectives of that power, i.e. providing for the public safety, health, morals, welfare, peace and good order, comfort, and convenience of the City and its residents;

WHEREAS, Utah Code Ann 19-5-107 prohibits the discharge of pollutants into the waters of the state of Utah; and

WHEREAS, the Highland City Council finds and determines that it operates a storm water utility system which carries storm water runoff from roadways, and private properties into the waters of the state of Utah; and

WHEREAS, the Utah Pollution Discharge Elimination System permit (UPDES) and applicable regulations, 40 CFR Section 122.26, require Highland City to manage storm water discharge;

WHEREAS, The Utah Code provides that, among other powers municipalities have with respect to storm water facilities, municipalities have the power by ordinance or resolution to:

i. Exercise general regulation over the planning, location, construction, and operation and maintenance of storm water facilities in the municipality, whether or not owned and operated by the municipality;

ii. Adopt any rules and regulations deemed necessary to accomplish the purposes of this statute, including the adoption of a system of fees for services and permits;

iii. Establish standards to regulate the quantity of storm water discharged and to regulate storm water contaminants as may be necessary to protect water quality;

iv. Review and approve plans and plats for storm water management in proposed subdivisions or commercial developments;

v. Issue permits for storm water discharges or for the construction, alteration, extension, or repair of storm water facilities;

vi. Suspend or revoke permits when it is determined that the permittee has violated any applicable ordinance, resolution, or condition of the permit;

vii. Regulate and prohibit discharges into storm water facilities of sanitary, industrial, or commercial

sewage or waters that have otherwise been contaminated; and

viii. Expend funds to remediate or mitigate the detrimental effects of contaminated land or other sources of storm water contamination, whether public or private.

WHEREAS, the City Council has determined that the public interest, convenience, health, welfare and safety requires that all water generated from individual construction, commercial, industrial, and public use developments and subdivisions be confined and disposed of in a flood control storm drain system;

WHEREAS, the City Council has determined that each area which is proposed to be subdivided, developed, or built upon does in fact generate additional runoff water that needs to be disposed of in a safe manner, avoiding damage and hazards to the inhabitants of Highland City;

WHEREAS, the welfare of the City will be promoted by regulating storm water discharge and drainage;

NOW THEREFORE, be it ordained by the Municipal Council of Highland, Utah, as follows:

Section 1. Adoption. The Storm Water Management and Discharge Control Ordinance attached hereto, is hereby adopted and the Storm Water Management Ordinance No. 2006-027 is hereby repealed.

Section 2. Effective Date. This ordinance shall take effect immediately upon its passage and publication as prescribed by law.

PASSED AND ADOPTED by the City Council of Highland City, Utah, this 9th day of January, 2018.

HIGHLAND CITY, UTAH

_____

Rodney W. Mann

Highland City Mayor

ATTEST:

_____

Cindy Quick, CMC
City Recorder

COUNCILMEMBER

	YES	NO
Brian Braithwaite	□	□

Ed Dennis □ □
Tim Irwin □ □
Kurt Ostler □ □
Scott L. Smith □ □

HIGHLAND CITY STORM WATER MANAGEMENT AND DISCHARGE CONTROL ORDINANCE

TABLE OF CONTENTS

HIGHLAND CITY STORM WATER MANAGEMENT AND DISCHARGE CONTROL ORDINANCE

SECTION 1: GENERAL PROVISIONS

(1) Purpose

It is the purpose of this ordinance to:

a. Protect, maintain, and enhance the environment of Highland City ("the City"),

b. Establish responsibilities for controlling and managing storm water runoff.

c. Protect the public health, safety, and the general welfare of the citizens of the City by controlling discharges of pollutants to the City's storm water system and to maintain and improve the quality of the receiving waters into which the storm water outfalls flow, including, without limitation, lakes, rivers, streams, ponds, wetlands, and groundwater of the City.

d. Enable the City to comply with state and federal laws and regulations.

(2) Administering Entity

The City's Public Works Department shall administer the provisions of this ordinance. Nothing in this ordinance shall relieve any person from responsibility for damage to other persons or property, nor impose upon Highland City, its officers, agents or employees, any liability for damage to other persons or property.

SECTION 2: DEFINITIONS

For the purpose of this chapter, the following definitions shall apply. Words used in the singular shall include the plural, and the plural shall include the singular; words used in the present tense shall include the future tense. The word "shall" is mandatory and not discretionary. The word "may" is permissive. Words not defined in this section shall be construed to have the meaning given by common and ordinary use as defined in the most recent edition of Webster's Dictionary.

(1) "Highland City Storm Water Management Program" means those certain manuals, ordinances,

practices, and policies set in place by Highland City to regulate, permit, manage, and otherwise oversee the discharge of storm water within the corporate boundaries and influence area of the City. This includes both of those manuals and practices which are in place at the time of the passage of this ordinance and those which will yet be put in place or adopted in this ordinance or future actions.

(2) “As-built plans” means drawings depicting conditions as they were actually constructed.

(3) “Best management practices” or “BMPs” are physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water that have been approved by Highland City and that have been incorporated by reference into this ordinance as if fully set out therein. For purposes of this Title, the relevant BMPs are more particularly defined in the Highland City Storm Water Management Program.

(4) “Best Management Practices Manual” means the most recent documentation adopted by Highland which accepts specific Best Management Practices for use in Highland City.

(5) “Channel” means a natural or artificial watercourse with a definite bed and banks that conducts flowing water continuously, or periodically.

(6) “City Engineer” means the City Engineer of Highland, or authorized designee.

(7) “City Storm Drain Inspector” means the Regulatory Compliance Coordinator or the City Storm Drain Division Superintendent and his authorized designees.

(8) “City Storm Water System” means the storm system that receives runoff from public right-of-way, natural waterways, and systems identified in a City easement.

(9) “Community water” means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetlands, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of Highland City.

(10) “Contaminant” means any physical, chemical, biological, or radiological substance or matter in the water.

(11) “Design storm event” means a hypothetical storm event, of a given frequency interval and duration, used in the analysis and design of a storm water facility.

(12) “Discharge” means dispose, deposit, spill, pour, inject, seep, dump, leak, or place by any means, or that which is disposed, deposited, spilled, poured, injected, seeped, dumped, leaked, or placed by any means, including any direct or indirect entry of any solid or liquid matter, into the municipal separate storm sewer system.

(13) “Easement” means a non-possessory interest acquired by a person, party, firm, corporation, municipality, or other legal entity that entitles the holder only to the right to the use of the owner’s land in the manner specified.

(14) “Erosion” means the removal of soil particles by the action of water, wind, ice, or other geological agents; whether naturally occurring or acting in conjunction with or promoted by anthropogenic activities or effects.

(15) “Erosion and sediment control plan” means a written plan (including drawings or other graphic representations) that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

(16) “General Construction Storm Water Permit” means a permit required by the Utah Department of Environmental Quality, Division of Water Quality.

(17) “Hotspot” (“priority area”) means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in storm water.

(18) “Illicit connections” means either of the following:

a. Any drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the storm drain system. Examples include, but are not limited to, any conveyances which allow non-storm water discharge, such as sewage, process wastewater, or wash water to enter the storm drain system and any connections to the storm drain system from indoor drains or sinks; regardless of whether said drain or connection had been previously allowed, permitted, or approved by government agency; or

b. Any drain or conveyance connected to or discharging to the storm drain system, which has not been (1) documented in plans, maps, or equivalent records submitted to the City, and (2) approved in writing by the City. Minor discharges as described in Section 8 (2) of this ordinance are allowed and not considered illicit connections.

(19) “Illicit discharge” means any discharge to the municipal separate storm sewer system that is not composed entirely of storm water and not specifically exempted under Section 3 (4) of this ordinance. Illicit discharges include both direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm water system) and indirect connections (e.g., infiltration into the storm water system or spills collected by drain inlets).

(20) “Irrigation ditches” means gravity irrigation ditches used by irrigation shareowners having a right of water passageway by ROW, easement, or prescription.

(21) “Land Disturbance Permit” means Highland City Land Disturbance Permit as adopted by the City.

(22) “Land disturbing activity” means an activity on property that results in a significant change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, developing, redeveloping, demolishing, constructing, reconstructing, clearing, grading, filling, grubbing, paving, and excavating. A resident doing landscape maintenance, home gardening, etc. would not be considered a land disturbance activity.

(23) “Maintenance” means any activity that is necessary to keep a storm water facility in good working order so as to function as designed. Maintenance shall include complete reconstruction of a storm water facility if reconstruction is needed in order to restore the facility to its original operational design parameters. Maintenance shall also include the correction of any problem on the site property that may directly impair the functions of the storm water facility.

(24) “Maintenance agreement” means a document recorded in the land records that acts as a property deed restriction, and which provides for long-term maintenance of storm water management practices.

(25) “Municipal separate storm sewer system (MS4)” means the conveyances owned or operated by the municipality for the collection and transportation of storm water, including the roads and streets and their drainage systems, catch basins, detention basins, sumps, curbs, gutters, ditches, man-made channels, and storm drains.

(26) “Notice of Violation (NOV)” means whenever the City Storm Water Inspector finds that a person is in noncompliance with this ordinance, the Inspector will

order compliance by written notice of violation to the responsible person. Requirements in this Notice are at the discretion of the City Storm Water Inspector and may include monitoring, payment to cover costs relating to the noncompliance, and the implementation of Best Management Practices (BMPs).

(27) “Off-site facility” means a structural BMP located outside the subject property boundary described in the permit application for land development activity.

(28) “On-site facility” means a structural BMP located within the subject property boundary described in the permit application for land development activity.

(29) “Peak flow” means the maximum instantaneous rate of flow of water at a particular point resulting from a storm event.

(30) “Person” means any individual, corporation, partnership, association, company, or body politic, including any agency of the State of Utah and the United States government.

(31) “Pre-existing conditions” means conditions of property in its native state or changed under approval by the City or changed property that is grandfathered.

(32) “Priority area” means “hot spot” as defined in Section 2 (15).

(33) “Property owner” means the owner of record of property within the boundary of Highland City.

(34) “Runoff” means that portion of the precipitation on a drainage area that is discharged from the area into the municipal separate storm water system. Also, water produced by storms, surface drainage, snow and ice melt, and other water handled by the storm sewer drainage system.

(35) “Sediment” means solid material, both mineral and organic, that is in
suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth’s surface either above or below sea level.

(36) “Sedimentation” means soil particles suspended in storm water that can settle in stream beds and disrupt the natural flow of the stream.

(37) “Soils Report” means a study of soils on a subject property with the primary purpose of characterizing and describing the soils. The soils report shall be prepared by a qualified soils engineer, who shall be directly involved in the soil characterization either by performing the investigation or by directly supervising employees.

(38) “Stabilization” means providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring.

(39) “Storm Drain Division Superintendent” means the City Storm Drain Division Superintendent, or authorized designee.

(40) “Storm water” means storm water runoff, snow melt runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration, and drainage.

(41) “Storm Water Design Standards and Regulation” means current Highland City storm water standards and regulations as adopted by the City.

(42) “Storm Water Master Plan” means current Highland City Storm Water Master Plan as adopted by the City.

(43) “Storm water management” means the programs to maintain quality and quantity of storm water runoff to pre-development levels.

(44) “Storm water management facilities system” means the drainage structures, conduits, ditches, combined sewers, sewers, and all device appurtenances by means of which storm water is collected, transported, pumped, treated, or disposed of.

(45) “Storm Water Management Plan (SWMP)” means the set of drawings and other documents that comprise all the information and specifications for the programs, drainage systems, structures, BMPs, concepts, and techniques intended to maintain or restore quality and quantity of storm water runoff to pre-development levels.

(46) “Storm Water Pollution Prevention Plan (SWPPP)” means a set of plans showing the location of the BMPs during the different phases of construction.

(47) “Storm Water Management Program (SWMP)” means a Technical Report including a copy of the Land Disturbance Permit, Notice of Intent (if applicable), Storm Water Pollution Prevention Plan, Best Management Practices from, during, and post construction, spill prevention and countermeasure information, inspection records, and a signed and dated Certification Statement from the site operator and the consultant preparing the report.
(48) “Storm water runoff” means flow on the surface of the ground, resulting from precipitation.

(49) “Storm water utility” means the storm water utility created by ordinance of the City to administer the storm water management ordinance and other storm water rules and regulations adopted by the municipality.

(50) “Structural BMPs” means devices that are constructed to provide control of storm water runoff.

(51) “Surface water” includes waters upon the surface of the earth inbounds created naturally or artificially including, but not limited to, streams, other water courses, lakes, and reservoirs.

(52) “SWPPP” means Storm Water Pollution Prevention Plan. A set of plans showing the location of the BMPs during the different phases of construction and system management.

(53) “SWMP” means Storm Water Management Program. A Technical Report including a copy of the Land Disturbance Permit, Notice of Intent (NOI) (if applicable), Storm Water Pollution Prevention Plan during construction and post construction, storm water pollution prevention BMPs, spill prevention control and countermeasure information, inspection records and signed and dated Certification Statement from the Site Operator and the responsible person preparing the report.

(54) “Watercourse” means a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

(55) “Watershed” means all the land area that contributes runoff to a particular point along a waterway.

(56) “UPDES” means the Utah Pollution Discharge Elimination System.

SECTION 3: LAND DISTURBANCE PERMITS

(1) When Required

Every person will be required to obtain a land disturbance permit from the City in the following cases:

a. Land disturbing activity that generally disturbs one (1) or more acres of land.

b. Land disturbing activity of less than one (1) acre of land if such activity is part of a larger common plan of development that affects one (1) or more acre of land;

c. Land disturbing activity of less than one (1) acre of land, if, in the discretion of the City Engineer, such activity poses a unique threat to water, or public health or safety. A unique threat may be conditions of steep slopes, poor draining soils, or adjacent to waterways;

d. Development of a single-family home;

e. Commercially processing of earthen materials such as top soil and gravel screening;

f. Construction of parking lots;

g. Creation of an impervious area (0.25 acres/10,890 square feet) constructed with compacted gravel, asphalt, or concrete pavement;

h. Creation or alteration of storm drain works or systems;

i. Excavation or disturbance of more than 1,000 cubic yards of material in any non – agricultural earth moving activity.

(2) Drainage Channels, Waterways, and Sensitive Areas

a. Property owners shall not alter or restrict natural channels and waterways without proper federal, state, and city permits.

b. Modifications of sensitive areas will require a Land Disturbance Permit and approval from all applicable governing agencies (Army Corps of Engineers, etc.).

c. Property owners proposing to redirect runoff, surface and/or channelized pipe flow to properties or facilities outside Highland City boundaries must provide written approval from the federal (if applicable), state, county or municipality or their agents.

d. Property owners are responsible for the protection of channels per the relevant sections of this ordinance.

e. Discharges or modifications to the channels require written approval from the canal owners and applicable governing agencies.

(3) Building Permit

No building permit shall be issued until the applicant has obtained a Land Disturbance Permit where the same is required by this ordinance.

(4) Exemptions

The following activities are exempt from the permit requirement:

a. Any emergency activity that is immediately necessary for the protection of life, property, or natural

resources including activities required to promote public safety, repairs to water lines and/ or other City infrastructure repairs.

b. Existing nursery and agricultural operations conducted as a predominant land use.

c. Any agricultural activity that is consistent with an approved farm conservation plan or a management plan prepared or approved by the appropriate federal, state, or city agency.

d. Additions or modifications to existing single family structures.

e. Landscape modifications resulting in disturbances below the limits identified in Section 3 (1).

f. Excavation activities necessary for public purposes approved through the City approval process.

(5) Applications for a Land Disturbance Permit

a. Each application shall include the following:

1. Name of applicant;

2. Business or residence address of applicant;

3. Name, address, and telephone number of the owner of the property of record in the office of the Utah County Assessor;

4. Address and legal description of subject property, including the tax reference number and parcel number of the subject property;

5. Name, address, and telephone number of the contractor and any subcontractor(s) who shall perform the land disturbing activity and who shall implement the erosion and sediment control plan;

6. A statement indicating the nature, extent, and purpose of the land disturbing activity including the size of the area for which the permit shall be applicable and a schedule for the starting and completion dates of the land disturbing activity.

b. The applicant shall obtain, from any other state or federal agency, any other appropriate environmental permits that pertain to the property. However, the inclusion of those permits in the application shall not foreclose the City Engineer from imposing additional development requirements and conditions, commensurate with this ordinance, on the development of property covered by those permits.

c. Each application shall be accompanied by:

1. A sediment and erosion control plan; and

2. A Storm Water Pollution Prevention Plan (SWPPP); and

3. A storm water management plan providing for storm water management during the land disturbing activity and after the activity has been completed sufficient to handle the design storm events.

d. Each application for a land disturbance permit shall be accompanied by payment of the land disturbance permit and other storm water management fees, as adopted by resolution and found in the City Fee Schedule.

(6) Review and Approval of Application

a. The City Engineer will review each application for a land disturbance permit to determine its conformance with the provisions of this
ordinance. Within fifteen (15) days after receiving an application, the City Engineer shall provide one of the following responses in writing:

1. Approval of the permit application;

2. Approval of the permit application, subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the permit subject to these conditions; or

3. Denial of the permit application, indicating the reason(s) for the denial.

b. If the City Engineer has granted conditional approval of the permit, the applicant shall submit a revised plan that conforms to the conditions established by the City Engineer. However, the applicant shall be allowed to proceed with his land disturbing activity so long as it conforms to conditions established by the City Engineer.

No development plans will be released until the land disturbance permit has been approved and all plan review fees are paid in full.

(7) Permit Duration

Every land disturbance permit shall expire and become null and void if substantial work authorized by such permit has not commenced within one hundred eighty (180) calendar days of issuance, or is not complete within eighteen (18) months from the date of the commencement of construction.

(8) Notice of Construction

a. The applicant must notify the City Public Works Department ten (10) working days in advance of the commencement of construction. Regular inspections of the storm water management system construction shall be conducted by a City Storm Drain Inspector. All inspections shall be documented and written reports shall be prepared that contain the following information:

1. The date and location of the inspection;

2. Whether construction is in compliance with the approved storm water management plan;

3. Variations from the approved construction specifications;

4. Any violations that exist and remedies the applicant is required to perform.

(9) Performance Bonds

a. The City Engineer shall require the submittal of a performance security or performance guarantee bond prior to issuance of a permit in order to ensure that the storm water pollution prevention practices are installed by the permit holder as required by the approved Storm Water Pollution Prevention Plan (SWPPP).

1. The amount of the installation performance security or performance guarantee bond shall be the total estimated construction cost of the structural BMPs approved under the permit, plus any reasonably foreseeable additional related costs.

2. The performance security shall contain forfeiture provisions for failure to complete work specified in the Storm Water Pollution Prevention Plan (SWPPP).

3. The applicant shall provide an itemized construction cost estimate, complete with unit prices, which shall be subject to acceptance, amendment or rejection by the City Engineer.

4. Alternatively, the City Engineer shall have the right to calculate the estimates for the cost of construction and review the Opinion of Probable Cost accordingly.

b. The performance security or performance guarantee bond shall be released in full only upon submission of as-built plans and written certification by a registered professional engineer licensed to practice in the State of Utah that the structural BMP has been installed in accordance with the approved plan and other applicable provisions of this ordinance. Completion of all final inspection punch list items and removal of all temporary control measures are also required prerequisites for release of guarantee funds.

c. A City Storm Drain Inspector will make a final inspection of the structural BMP to ensure that it is in compliance with the approved plan and the provision of this ordinance. Provisions for a partial pro-rata release of the performance security or performance guarantee bond based on the completion of various development stages may be made at the discretion of the City Engineer.

SECTION 4: STORM WATER SYSTEM DESIGN AND MANAGEMENT STANDARDS

(1) Irrigation Ditches

a. All existing irrigation ditches located within a development site or straddling a development site boundary shall be piped with a sufficiently-sized pipe and shall be coordinated with the water user, and approved by the Irrigation Company and City Engineer.

b. Storm drain discharges to private ditches require written approval from the ditch owners and design shall comply with the terms of approvals and the Storm Water Design Standards and Regulations and the Land Disturbance Permit.

c. Piping of ditches and modification to the diversion boxes require documented coordination with ditch owners or representative(s) and should receive written approval of ditch owners. Design and coordination requirements shall comply with the Storm Water Design Standards and Regulations and the Land Disturbance Permit documents.

(2) Storm Water Design and BMP Manuals

a. Adoption

The municipality adopts as its storm water design and best management practices (BMPs) manuals the following publications, which are incorporated by reference in this ordinance as if fully set out herein:

1. Highland City Storm Water Design Standards and Regulations

2. Highland City Storm Water Master Plan

3. Other guidance document for Storm used in the administration of the Highland City Storm Water

Management Program.

b. These manuals include a list of acceptable BMPs and include specific design performance criteria and operation and maintenance requirements for each storm water practice. The manuals may be updated and expanded from time to time at the discretion of the

governing body of the City, upon the recommendation of the City Engineer, based on improvements in engineering, science, monitory and local maintenance experience. Storm water facilities that are designed, constructed, and maintained in accordance with these BMP criteria will be presumed to meet the minimum water quality performance standards.

(3) General Performance Criteria for Storm Water Management

Unless granted a waiver or judged by the City Engineer to be exempt, the following post construction performance criteria shall be addressed for storm water management at all sites:

a. Design of storm drain systems in boundaries and discharges into a Highland City storm drain system require direct supervision of a Utah Registered Professional Engineer, and shall carry the seal of the same supervising professional engineer.

b. All site designs shall control the peak flow rates of storm water discharge associated with design storms specified in this ordinance or in the BMP manuals and reduce the generation of post construction storm water runoff to preconstruction levels or 100-year historical runoff flow rates. These practices should seek to utilize pervious areas for storm water treatment and to infiltrate storm water runoff from driveways, sidewalks, rooftops, parking lots, and landscaped areas to the maximum extent practical to provide treatment for both water quality and quantity.

c. The design of detention ponds shall also include the UPDES requirements for retention. If the requirements cannot be fulfilled, due to soil conditions, the property owner must request an exception to the City engineer and provide detailed soils information.

d. To protect stream channels from degradation, specific channel protection criteria shall be provided as prescribed in the BMP manuals.

e. Storm water discharges to critical areas with sensitive resources (i.e., cold water fisheries, swimming beaches, recharge areas, water supply reservoirs) may be subject to additional performance criteria, or may need to utilize or restrict certain storm water management practices.

f. Storm water discharges from “hot spots” may require the application of specific structural BMPs and pollution prevention practices.
g. Prior to or during the site design process, applicants for land disturbance permits shall consult with the City Engineer to determine if they are subject to additional storm water design requirements.

h. The calculations for determining peak flows as found in the BMP manuals shall be used for sizing all storm water facilities.

(4) Minimum Control Requirements

a. Storm water discharge during all construction activities shall comply with the terms of the Land Disturbance Permit, the Storm Water Design Standards and Regulations, and/or requirements set forth by the International Building Code and the State of Utah UPDES requirements.

b. Storm water designs shall meet the multi-stage storm frequency storage requirements as identified in the BMP manuals unless the City Engineer has granted the applicant a full or partial waiver for a

particular BMP pursuant to Section 6 of this ordinance.

c. Runoff rates from one lot to another shall not exceed pre-existing conditions, per the City Design Standards, or increase in such a manner that may unreasonably and unnecessarily cause greater harm than before.

d. If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the City Engineer may impose any and all additional requirements deemed necessary to control the volume, flow velocity, timing, and rate of runoff.

(5) Storm Water Management Plan (SWMP) Requirements

Property owners are responsible to manage storm water runoff and sediment, whether in conduit systems or on the surface, that traverse or originate on their property, unless this responsibility is relinquished through the terms and conditions of an easement. The Storm Water Management Plan (SWMP) shall include sufficient information to allow the City Engineer to evaluate the environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, and the effectiveness and acceptability of the measures proposed for managing storm water generated at the project site. To accomplish this goal, the Storm Water Management Plan (SWMP) shall include the following:

a. Topographic Base Map

A 1” = 100’ feet topographic base map of the site which extends a minimum of two hundred fifty (250) feet beyond the limits of the proposed development and indicates:

1. Existing surface water drainage, including stream, ponds, culverts, ditches, sink holes, wetlands; and the type, size, elevation, etc., of nearest upstream and downstream drainage structures;

2. Current land use, including all existing structures, locations of utilities, roads, and easements;

3. All other existing significant natural and artificial features;

4. Proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns, locations of utilities, roads, and easements; and the limits of clearing and grading;

5. Proposed structural BMPs;

6. A written description of the site plan and justification of proposed changes in natural conditions may also be required.

7. Tabulations shall be provided for both existing and proposed land use and surface coverage materials, with specific types of permeability characteristics.

8. When deemed necessary by the City Engineer, the Topographic Base Map and Survey shall conform to the minimum levels established by the American Land and Title Association (A.L.T.A. Survey).

b. Calculations

Hydrologic and hydraulic design calculations for the pre- development, during construction, and post-development conditions for the design storms specified in the BMP manuals. These calculations must show that the proposed storm water management measures are capable of controlling runoff from the site in compliance with this ordinance and the guidelines of the BMP manuals. Such calculations shall include:

1. A description of the design storm frequency, duration, and intensity where applicable;

2. Time of concentration;

3. Curve numbers or runoff coefficients, including assumed soil moisture conditions;

4. Peak runoff rates and total runoff volumes for each watershed area;

5. Infiltration rates verified by percolation tests or geotechnical reports, where applicable;

6. Culvert, storm water sewer, ditch, and/or other storm water conveyance capacities;

7. Flow velocities;

8. Data on the increase in rate and volume of runoff for the design storms referenced in the BMP manuals; and

9. Documentation of sources for all computation methods and field test results.

c. Soils Information

If a storm water management control measure depends on the hydrologic properties of soils (e.g., infiltration basins), then a soils report shall be submitted. The soils report shall be based upon on-site boring logs or soil pit profiles survey reports. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the control measure.

d. Maintenance and Repair Plan

The design and planning of all storm water management facilities shall include detailed maintenance and repair procedures to
ensure their continued performance. These plans will identify the parts or components of a storm water management facility that need to be maintained and the equipment and skills or training necessary. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan. A permanent elevation benchmark shall be identified in the plans to assist in the periodic inspection of the facility.

e. Landscaping Plan

The applicant must present a detailed plan for management of vegetation at the site after construction is finished, including who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved. Where it is required by the BMP, this plan must be prepared by a registered landscape architect licensed in the State of Utah.

(6) Maintenance Easements

The applicant must ensure access to the site for the purpose of inspection and repair by securing all the maintenance easements needed. These easements must be binding on the current property owner and all subsequent owners of the property and must be properly recorded in the land record.

(7) Maintenance Agreement

The owner of the property to be served by an on-site storm water management facility must execute an inspection and maintenance agreement that shall operate as a deed restriction binding on the current property owner and all subsequent property owners. The maintenance agreement shall:

a. Assign responsibility for the maintenance and repair of the storm water facility to the owner of the property upon which the facility is located and be recorded as such on the plat for the property by appropriate notation.

b. Provide for a periodic inspection for the purpose of documenting maintenance and repair needs and ensure compliance with the purpose and requirements of this ordinance. The property owner will arrange for this inspection to be conducted by a Registered
Storm Water Inspector in the State of Utah who will submit a sealed report of the inspection to the City Public Works Department. It shall also grant permission to the City to enter the property at reasonable times and to inspect the storm water facility to ensure that it is being properly maintained.

c. Provide that the minimum maintenance and repair needs include, but are not limited to: the removal of silt, litter, and other debris, the cutting of grass, grass cuttings and vegetation removal, and the replacement of landscape vegetation, in detention and retention basins, and inlets and drainage pipes and any other storm water facilities. It shall also provide that the property owner shall be responsible for additional maintenance and repair needs consistent with the needs and standards outlined in the BMP manuals.

d. Provide that maintenance needs must be addressed in a timely manner, on a schedule to be determined by the City Engineer.

e. Provide that, if the property is not maintained or repaired within the prescribed schedule, the City Public Works Department shall perform the maintenance and repair at its expense, and bill the same to the property owner. The maintenance agreement shall also provide that the City Public Works Department's cost of performing the maintenance may be filed as a lien against the property.

(8) Dedication

The municipality shall have the discretion to accept the dedication of any existing or future storm water management facility, provided such facility meets the requirements of this ordinance, and includes adequate and perpetual access and sufficient areas, by easement or otherwise, for inspection and regular maintenance.

Any storm water facility accepted by the municipality must also meet the municipality's construction standards and any other standards and specifications that apply to the particular storm water facility in question.

(9) Sediment and Erosion Control Plans

The applicant must prepare a sediment and erosion control plan for all construction activities that complies with Section 4 (9) below.
The sediment and erosion control plan shall accurately describe the potential for soil erosion and sedimentation problems resulting from land disturbing activity and shall explain and illustrate the measures that are to be taken to control these problems. The length and complexity of the plan is to be commensurate with the size of the project, the severity of the site condition, and the potential for off-site drainage. The plan shall be sealed by a registered professional engineer licensed in the State of Utah. The plan shall also conform to the requirements found in the BMP manuals and shall include at least the following:

a. Project Description – Briefly describe the intended project and proposed land disturbing activity,

including the number of units and structures to be constructed and infrastructures required.

b. A topographic map with contour intervals of two (2) feet or less showing present conditions and proposed contours resulting from land disturbing activity.

c. All existing drainage ways, including intermittent and wet- weather. Include any designated floodways or flood plains.

d. A general description of existing land cover. Individual trees and shrubs do not need to be identified.

e. Stands of existing trees as they are to be preserved upon project completion, specifying their general location on the property. Differentiation shall be made between existing trees to be preserved, trees to be removed, and proposed planted trees. Tree protection measures must be identified and the diameter of the area involved must also be identified on the plan and shown to scale. Information shall be supplied concerning the proposed destruction of exceptional and historic trees in setbacks and buffer strips, where they exist. Complete landscape plans may be submitted separately. The plan must include the sequence of implementation for tree protection measures.

f. Approximate limits of proposed clearing, grading, and filling.

g. Approximate flows of existing storm water leaving any portion of the site.

h. A general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.

i. Location, size, and layout of proposed storm water and sedimentation control improvements.
j. Proposed drainage network.

k. Proposed sizing for storm system piping, dewatering facilities, or other waterways.

l. Approximate flows leaving site after construction and incorporating water run-off mitigation measures. The evaluation must include projected effects on property adjoining the site and on existing drainage facilities and systems. The plan must address the adequacy of outfalls from the development: When water is concentrated, what is the capacity of waterways, if any, accepting storm water offsite; and what measures, including infiltration, sheeting into buffers, etc., are going to be used to prevent the scouring of waterways and drainage areas off-site, etc.

m. The projected sequence of work represented by the grading, drainage, and sedimentation and erosion control plans as related to other major items of construction; beginning with the initiation of excavation and including the construction of any sediment basins or retention facilities or any other structural BMPs.

n. Specific remediation measures to prevent erosion and sedimentation run-off.

Plans shall include detailed drawings of all control measures used. Stabilization measures, including vegetation and non-vegetation measures, both temporary and permanent, will be detailed.
Detailed construction notes and a maintenance schedule shall be included for all control measures in the plan.

o. Specific details for the construction of rock pads, wash-down pads, and settling basins for controlling erosion; road access points; eliminating or keeping soil, sediment, and debris on streets and public ways at a level acceptable to the City Engineer. Soil, sediment, and debris brought onto streets and public ways must be removed by the end of the work day by machine, broom, or shovel to the

satisfaction of the City Engineer. Failure to remove the sediment, soil, or debris shall be deemed a violation of this ordinance.

p. Proposed Structures – Location (to the extent possible) and identification of any proposed additional buildings, structures, or development on the site.

q. A description of on-site measures to be taken to recharge surface water into the ground water system through infiltration.

r. Future phasing plans and impervious areas if applicable.

SECTION 5: POST CONSTRUCTION

(1) As-Built Plans

All applicants are required to submit actual as-built plans for any structures located on-site after final construction is completed. The plan must show the final design specifications for all storm water management facilities and must be sealed by a Registered Storm Water Inspector licensed to practice in the State of Utah. A final inspection by a City Storm Drain Inspector is required before any performance security or performance guarantee bond will be released. The City Engineer shall have the discretion to adopt provisions for a partial pro-rata release of the performance security or performance guarantee bond on the completion of various stages of development.

In addition, occupation permits shall not be granted until corrections to all BMPs have been implemented and accepted by the City Engineer.

(2) Landscaping and Stabilization Requirements

Any area of land from which the natural vegetative cover has been either partially or wholly cleared by development activities shall be revegetated according to a schedule approved by the City Engineer. The following criteria shall apply to revegetation efforts:

a. Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch, or its equivalent, of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the reseeded area.

b. Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch, or its equivalent, of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

c. Any area of revegetation must exhibit survival of a minimum of seventy- five percent (75%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum seventy-five percent (75%) survival for one (1) year is achieved.

d. In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.

(3) Inspection of Storm Water Management Facilities

Periodic inspections of facilities shall be performed as provided for in Section 5 of this ordinance.

(4) Records of Installation and Maintenance Activities

Parties responsible for the operation and maintenance of a storm water management facility shall make records of the installation of the storm water facility, and of all maintenance and repairs to the facility, and shall retain the records for at least five (5) years. These records shall be made available to the City Storm Water Inspector during inspection of the facility and to the City Public Works Department at other reasonable times, upon request.

(5) Failure to Meet or Maintain Design or Maintenance Standards

If a responsible party fails or refuses to meet the design or maintenance standards required for storm water facilities under this ordinance, the City Public Works Department, after reasonable notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the storm water management facility becomes a danger to public safety or public health, the City Public Works Department shall notify, in writing, the party responsible for maintenance of the storm water management facility. Upon receipt of that notice, the responsible person shall have fifteen (15) days to effect maintenance and repair of the facility in an approved manner.

In the event that corrective action is not undertaken within that time, the City Public Works Department may take necessary corrective action. The cost of any action by the City under this section shall be charged to the responsible party.

SECTION 6: WAIVERS

(1) General

Every applicant shall provide for post construction storm water management as required by this ordinance, unless a written request is filed to waive this requirement. Request to waive the storm water management plan requirements shall be submitted to the City Public Works Department for approval.

(2) Conditions for Waiver

The minimum requirement for storm water management may be waived, in whole or in part, upon written request of the applicant; provided that at least one (1) of the following conditions applies:

a. It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this ordinance.

b. Alternative minimum requirements for on-site management of storm water discharges have been established in a storm water management plan that has been approved by the City Engineer.

c. Provisions are made to manage storm water by an off-site facility. The off-site facility must be in place and must be designed to provide the level of storm water control that is equal to, or greater than, that which would be afforded by on-site practices. Further, the facility must be operated and maintained by an entity that is legally obligated to continue the operation and maintenance of the facility.

(3) Downstream Damage, Etc. is Prohibited

In order to receive a waiver, the applicant must demonstrate to the satisfaction of the City Engineer that the waiver will not lead to any of the following conditions downstream:

a. Deterioration of existing culverts, bridges, dams, and other structures;

b. Degradation of biological functions or habitat;

c. Accelerated streambank or streambed erosion or siltation;

d. Increased threat of flood damage to public health, life, or property.

(4) Land Disturbance Permit Not to Be Issued Where Waiver Requested

No land disturbance permit shall be issued where a waiver has been requested until the waiver is granted. If no waiver is granted, the plans must be resubmitted with a storm water management plan.

SECTION 7: EXISTING LOCATIONS AND DEVELOPMENTS

(1) Requirements for All Existing Locations and Developments

The following storm water and erosion requirements shall apply to all locations and developments at which land disturbing activities have occurred previous to the enactment of this ordinance:

a. Denuded areas must be vegetated or covered under the standards and guidelines specified in the BMP manuals and on a schedule acceptable to the City Engineer.

b. Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.

c. Drainage ways shall be properly covered in vegetation or secured with rip-rap, channel lining, etc. to prevent erosion.

d. Trash, junk, rubbish, etc. shall be cleared from drainage ways.

e. Storm water runoff shall be controlled to the extent reasonable to prevent pollution of local waters. Such control measures may include, but are not limited to, the following:

1. Ponds
2. Detention pond
3. Extended detention pond
4. Wet pond
5. Alternative storage measures
6. Constructed wetlands
7. Infiltration systems
8. Infiltration/percolation trench
9. Infiltration basin.
10. Catch basin inserts/media filter
11. Sand filter
12. Filter/absorption bed
13. Filter and buffer strips

14. Open channel
15. Swale

(2) Requirements for Existing Problem Locations

The City Engineer shall, in writing, notify the owners of existing locations and developments of specific drainage, erosion, or sediment problems affecting such locations and developments, and the specific actions required to correct those problems. The notice shall also specify a reasonable time for compliance.

(3) Inspection of Existing Facilities

The City Public Works Department may, to the extent authorized by state and federal law, establish inspection programs to verify that all storm water management facilities, including those built before, as well as after the adoption of this ordinance, are functioning within design limits. These inspection programs may be established on any reasonable basis, including, but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of the municipalities UPDES storm water permit; and joint inspections with other agencies inspecting under environmental or safety laws.

Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other BMPs.

(4) Upon application for a business license, the City SD Inspector shall inspect the proposed occupation site for compliance with provisions of this ordinance. The City SD Inspector may also conduct a review or inspection of storm water compliance upon annual business license renewal application.

(5) Corrections of Problems Subject to Appeal

Corrective measures imposed by the City Storm Drain Inspector under this section are subject to appeal under Section 11 of this ordinance.

SECTION 8: ILLICIT DISCHARGES

(1) Scope

This section shall apply to all water generated on developed or undeveloped land entering the municipality’s separate storm sewer system.

(2) Prohibition of Illicit Discharges

No person shall introduce or cause to be introduced into the municipal separate storm sewer system any discharge that is not composed entirely of storm water. The commencement, conduct, or continuance of any non-storm water discharge to the municipal separate storm sewer system is prohibited except as described as follows:

a. Uncontaminated discharges from the following sources:

1. Water line flushing or other potable water sources,
2. Landscape irrigation or lawn watering with potable water,
3. Diverted stream flows,
4. Rising ground water,
5. Uncontaminated groundwater infiltration,
6. Uncontaminated pumped groundwater,

7. Discharges from potable water sources,
8. Foundation drains,
9. Air conditioning condensate,
10. Irrigation and secondary water,
11. Springs,
12. Water from crawl space pumps,
13. Footing drains,
14. Lawn watering runoff,
15. Individual residential car washing,
16. Flows from riparian habitats and wetlands,
17. Dechlorinated swimming pool discharges,
18. Residential street wash water,
19. Dechlorinated water reservoir discharges,
20. Discharges or flows from emergency fire-fighting activities.

(3) Prohibition of Illicit Connections

a. The construction, use, maintenance, or continued existence of illicit connections to the separate municipal storm sewer system is prohibited.

b. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(4) Reduction of Storm Water Pollutants by the Use of Best Management Practices

Any person responsible for a property or premises which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid UPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed in compliance with the provisions of this section.

(5) Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation, has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into storm water, or the municipal separate storm sewer system, shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials, the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the City Public Works Department, in person or by telephone or facsimile, no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the City Public Works Department within three (3) business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years.

SECTION 9: ENFORCEMENT

(1) Civil Enforcement Authority

The City Storm Drain Inspector shall have the authority to issue Corrective Action Notices, Notices of

Violation, and Stop Work Orders and to impose the civil penalties provided in this section.

With the approval of the Storm Water Pollution Prevention Plan and the issuance of a Land Disturbance Permit, the City Storm Drain inspector shall be permitted to enter and inspect facilities subject to this ordinance at all reasonable times and as often as necessary to determine compliance. Failure to comply with the terms of this ordinance may result in punitive actions by Highland City pursuant to Section 9 (2) of this ordinance.

(2) Notification of Civil Violation

a. Corrective Action Notice

Whenever the City Storm Drain Inspector finds that any permittee or any other person discharging storm water has violated or is violating this ordinance or a permit or order issued hereunder, the City Storm Drain Inspector may serve upon such person a Corrective Action Notice. Within seven (7) days from the issuance of the Corrective Action Notice, the site must be brought into full compliance with the Storm Water Pollution Prevention Plan (SWPPP). Failure to comply with the Corrective Action Notice within seven (7) days will result in the issuance of a Notice of Violation. Additionally, the site operator will be subject to fines and penalties as specified in Section 10.

b. Notice of Violation

When the City Storm Drain Inspector finds that any person has violated or continues to violate this ordinance or a permit or a Corrective Action Notice, he may issue an order to the violator directing that, following a specified time period, Best Management Practices (BMPs) be installed or procedures implemented and properly operated. Failure to comply with the Notice of Violation by the Site Operator may result in additional fines and issuance of a Stop Work Order.

c. Stop Work Orders

When the City Storm Drain Inspector finds that any person has violated or continues to violate this ordinance or any permit or order issued hereunder, the City Storm Drain Inspector may issue a Stop Work Order for all such violations and direct those persons in noncompliance to:

1. Comply forthwith: or

2. Take such appropriate remedial or preventative action as may be
needed to properly address a continuing or threatened violation, including halting operating and terminating the discharge.

(3) Conflicting Standards

Whenever there is a conflict between any standard contained in this ordinance and in the BMP manuals adopted by the municipality under this ordinance, the strictest standard shall prevail.

SECTION 10: PENALTIES

(1) Criminal Penalties

Under the authority provided in the Utah Code, any person violating the provisions of this ordinance is guilty of a Class "B" and may be subject to the penalties associated with a Class "B" pursuant to state law. Criminal action may be initiated without prior notice or warning to violator. Each day of violation

shall constitute a separate criminal violation.

(2) Civil Penalties

In assessing a civil penalty, the City Public Works Department may consider:

a. The harm done to the public health or the environment;

b. Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;

c. The economic benefit gained by the violator;

d. The amount of effort put forth by the violator to remedy this violation;

e. Any unusual or extraordinary enforcement costs incurred by the municipality;

f. The amount of penalty established by ordinance or resolution for specific categories of violations; and

g. Any equities of the situation which outweigh the benefits of imposing any penalty or damage assessment.

(3) Recovery of Damages and Costs

In addition to the civil penalty in subsection (2) above, the municipality may recover:

a. All damages proximately caused by the violator to the municipality, which may include any reasonable expenses incurred in investigating violations of, and enforcing compliance with, this ordinance; or any other actual damages caused by the violation.

b. The costs of the municipality's maintenance of storm water facilities when the user of such facilities fails to maintain them as required by this ordinance.

(4) Other Remedies

The municipality may bring legal action to enjoin the continuing violation of this ordinance; and the existence of any other remedy, at law or equity, shall be no defense to any such actions. In addition to the penalties established in this ordinance, the City may refuse to renew business licenses or other permits while such a violation continues.

(5) Remedies Cumulative

The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action, civil or criminal, that one (1) or more of the remedies set forth herein has been sought or granted.

SECTION 11: APPEALS

Pursuant to Utah Code Annotated, Title 10 Chapter 9a, any person aggrieved by the imposition of a civil penalty or damage assessment as provided by this ordinance, may appeal said penalty or damage assessment to the municipality's governing body, as provided by the ordinances of Highland City.

SECTION 12: SEVERABILITY

If any provision or clause of this chapter, or its application thereof to any person or circumstance, is held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other sections, provisions, clauses, or applications which can be implemented without the invalid provision, clause, or application. To this end, the provisions of this chapter are declared to be severable.