

Appendix G

Pollution Prevention and Good Housekeeping for Municipal Operations

Municipal Facility Inventory, Assessment & Prioritization

ID	Facility Name	Priority	Contact name	Phone/email	Agency	Address
1	Midvale Public Works Complex Operations	High	Leon Barrett	385-466-4129	Operations	7125 S. 600 W.
2	Midvale Public Works Complex Fleet	High	Greg Norman	385-466-0475	Fleet	7120 S. 600 W.
3	Midvale Public Works Complex Sanitation	High	Pam Roberts	385-466-0342	Sanitation	7125 S. 600 W.
5	Parks Operations West Jordan	High	Wayne Johnson/Art Lovato	385-466-1844	Parks & Recreation	300 S. 153 W.
6	Solid Waste Management (and RE Salt Lake City)	High	Tom Burton	385-466-0361	Landfill	8030 W. California Ave.
6	Decker Station South Salt Lake City	High	Tom Burton	385-466-4377	Landfill	3300 S. 604 W.
001	Salt Lake City					
	Government Center Parking Structure	Medium	Rory Payne	385-466-0332	Facilities	2001 State Street
	Salt Lake County Government Center	Medium	Rory Payne	385-466-0332	Facilities	2001 State Street
	Abrams Hall	Low	Jeff DeWitt	385-466-1040	Center for the Arts	173 W. South Temple
	Ross Wagner Performing Arts	Low	Jeff DeWitt	385-466-1040	Center for the Arts	300 S. 153 W.
	Central Theater	Low	Jeff DeWitt	385-466-1040	Center for the Arts	200 S. 50 W.
	Clark Planetarium	Low			Clark Planetarium	250 S. 400 W.
	Discovery Center	Low			Discovery Center	100 S. 444 E.
	Salt Palace Convention Center	Low	Al Whitman	385-466-2235	Salt Palace	100 W. Temple
	Utah Park Pool	Low	Wayne Johnson	385-466-1844	Parks & Recreation	200 S. 600 W.
	Swanage Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	2100 S. 1300 E.
	Temper Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	2400 E. Heritage Way
	Northwest Recreation Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	300 N. 1300 W.
	Central City Recreation Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	615 S. 300 E.
	Fairmont Aquatics Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	1544 E. Sugarmont Drive
	Salt Lake City Public Health Center	Medium	Ricardo Flores/Ron Lund	385-466-4209/385-466-3902	Health Department	810 S. 200 E.
	South Park Public Health Center	Low	Ricardo Flores/Tamara Gray	385-466-4209	Health Department	782 N. Redwood Blvd.
	Utah Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	700 S. 251 E.
	10th East Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	257 S. 1000 E.
	Sunday Anderson Westside Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	600 S. 868 W.
	Friendly Neighborhood Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	1892 S. 300 E.
	Children's Justice Center	Low	Jodi Fall	385-466-4580	Youth Services	287 11th Avenue
	Salt Lake County Probation Services	Low			Criminal Justice	1300 S. 145 E.
002	South Salt Lake City					
	James Madison Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3300 S. 1100 W.
	General Holm Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3800 S. 1050 W.
	Harmony Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3700 S. Main Street
	Columbus Library	Low	Lynn Andrew	801-244-7937	Library Services	2500 S. 500 E.
	South Main Health Clinic	Low	Ricardo Flores/Tamara Gray	385-466-4209	Health Department	5650 S. Main
	Columbus Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	2531 S. 400 E.
	Youth Services Center	Low	Ayn Stoddard	385-466-4503	Youth Services	177 W. Price Avenue
	Chapman Row House	Low	Ayn Stoddard	385-466-4503	Youth Services	3660 S. West Temple
	Special Operations/Evidence Building	Medium			Criminal Justice	2510 S. 700 W.
	AJC	Medium	John Ficker	385-466-9621	Criminal Justice	3415 S. 900 W.
	Shaw's Office Building	Low	John Ficker	385-466-9621	Criminal Justice	3385 S. 900 W.
	Onyx Jail	Low			Criminal Justice	3148 S. 1100 W.
003	Utah Valley					
	Magna Fitness & Recreation Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3790 S. 8400 W.
	Pleasant Green Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3270 S. 8400 W.
	Magna Pool	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3620 S. 8400 W.
	Hercules Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3978 E. Drive Lane
	Magna Library	Low	Lynn Andrew	801-244-7937	Library Services	3500 S. 8336 W.
	Magna Senior Center	Low	Wayne Johnson	385-466-1844	Aging & Adult Services	7200 S. 8228 W.
	Magna Salt City	Low	Leon Barrett	385-466-4129	Coastlines	4100 S. 8000 W.
004	Utah Valley City					
	SLCO Records Management and Archives	Low	Darrell Passay	385-466-0622	Archives	4505 S. 5600 W.
	Aspen Ice Center	Medium	Wayne Johnson	385-466-1844	Parks & Recreation	2100 S. 3083 W.
	Redwood Recreation Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3060 S. 1 Lane
	Redwood Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3060 S. 1650 W.
	Decker Lake Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	2700 S. 2000 W.
	Winter Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	3600 S. 5000 W.
	Utah Valley Library	Low	Lynn Andrew	801-244-7937	Library Services	3650 S. 2885 W.
	Hunter Library	Low	Lynn Andrew	801-244-7937	Library Services	4100 S. 4740 W.
	Ellis B. Wilson Public Health Center	Low	Ricardo Flores/Tamara Gray	385-466-4209	Health Department	4524 S. 5600 W.
	Hecron Home Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	4590 S. 3600 W.
005	Timberline					
	Woodbrook Golf Course	Medium	Nate Hildred	801-208-1193	Parks & Recreation	4187 S. 1300 W.
	Milpaca Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	5400 S. 1150 W.
	Valley Regional Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	5100 S. 2700 W.
	Southridge Park	Low	Wayne Johnson	385-466-1844	Parks & Recreation	5015 S. 4015 W.
	Timberline Recreation Center	Low	Wayne Johnson	385-466-1844	Parks & Recreation	4948 S. 7200 W.
	Timberline Outdoor Pool	Low	Wayne Johnson	385-466-1844	Parks & Recreation	4948 S. 7200 W.
	Utah Softball Complex	Low	Wayne Johnson	385-466-1844	Parks & Recreation	4900 S. 1950 W.
	Valley Regional Softball Complex	Low	Wayne Johnson	385-466-1844	Parks & Recreation	5135 S. 2725 W.
	Timberline Library	Low	Lynn Andrew	801-244-7937	Library Services	4870 S. 7200 W.
	Timberline Senior Center	Low	Bill Oplin	385-466-3181	Aging & Adult Services	4743 S. Plymouth View Drive

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JVMunicipal Permit
#UTS00001
Salt Lake County

Date: _____ Time: _____

Site: _____

Assessor(s): _____

Question #	A Multiplier		B Weight			Ax B Totals
	(x1) Y	(x0) N	3 H	2 M	1 L	
1						
2						
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4						
5						
6						
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MAY 2015
FORM
(SBURGON)

SCORE:
x/18

Narrative Rationale

Additional Notes:

SCORING:
IF: 0 to 10 NOT HIGH PRIORITY
IF: 11 to 18 HIGH PRIORITY
AND CLEAR NARRATIVE RATIONALE

Y=YES
N=NO
H=HIGH
L=LOW

Questions:

1. Amount of urban pollutants stored at the site? _____
2. The identification of improperly stored materials? _____
3. Activities that shall be performed outside? _____
4. Proximity to waterbodies? _____
5. Poor housekeeping practices? _____
6. Discharge of pollutants to impaired waterbodies? _____
7. Narrative rationale? Anything else weighted according to finding and rationale? _____

Pictures Taken? Y/N Attach here with descriptions:

High Priority Facility SOPs

Stormwater Pollution Prevention Plan Salt Lake County Midvale Public Works Facility

Prepared for

Salt Lake County Public Works

April 2016

CH2MHILL®

4246 S. Riverboat Rd. Suite 210
Taylorsville, UT 84123
(385) 474-8509

CH2M HILL, INC.

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Acronyms and Abbreviations

AST	Aboveground Storage Tank
BMPs	Stormwater Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWA	Clean Water Act
DWQ	Utah Division of Water Quality
MS4	Municipal Separate Storm Sewer System
OWS	Oil Water Separator
RQ	Reportable Quantities
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
SWPPT	Stormwater Pollution Prevention Team
UPDES	Utah Pollutant Discharge Elimination System
UST	Underground Storage Tank

Document Revision History

The SWPPP will be amended whenever there is a change in design, construction, operations, or maintenance procedures that have the potential to result in the discharge of significant quantities of pollutants to the stormwater system. The SWPPP must also be amended if the procedures or controls prove to be ineffective in eliminating or significantly minimizing pollutants from potential sources. Each time the SWPPP is amended or updated, the date of the latest revision will be recorded on the document revision history table below.

Date	Description	Author
1999	Initial	EWP Engineering
March 2011	Update	Stantec
April 2016	Update	CH2M

Certification

In accordance with the Utah Division of Water Quality regulations, the following statement certifies this report:

"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."

Scott Baird
Engineering & Flood Control Division Director

Pam Roberts
Wasatch Front Waste and Recycling Division

Kevyn Smeltzer
Operations Division Director

Greg Nuzman
Fleet Division Director

Introduction

This Storm Water Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of the Salt Lake County Utah Pollutant Discharge Elimination System (UPDES) Permit to Discharge Municipal Storm Water (UT000001). The Salt Lake County UPDES Permit requires pollution prevention measures at equipment yards and maintenance shops, and the Salt Lake County Division of Engineering and Flood Control has determined implementation of a SWPPP to encompass all activities at this facility is the best method to meet this permit condition. This SWPPP provides an update to the previous SWPPP for the Salt Lake County Public Works Facility in Midvale (EWP Engineering, 1999 & Stantec, 2011).

This SWPPP is designed to address all activities at this facility that have the potential to impact stormwater quality.

1.1 Purpose

The purpose of the Stormwater Pollution Prevention Plan (“the Plan”) is to establish measures, both structural and nonstructural, for minimizing potential pollution from stormwater runoff. Pollution will be minimized through the following procedures:

- Identifying and eliminating potential pollution sources
- Visual inspecting potential stormwater pollution sources
- Training employees
- Establishing preventive maintenance measures
- Implementing good housekeeping practices
- Establishing a Pollution Prevention Team responsible for implementing and reviewing
- Using structural controls when feasible
- Minimizing erosion

1.2 Site Description

The Salt Lake County Public Works Facility consists of three Divisions and one Special District: Operations, Fleet Management, Flood Control and Wasatch Front Waste and Recycling. This facility provides services relating to road construction, fleet maintenance, street maintenance, snow and ice control, waste and recycling collection and storm drain maintenance. These services are provided for multiple agencies including:

- Holladay City
- Unincorporated Salt Lake County
- Utah Transit Authority
- Taylorsville City
- University of Utah
- Unified Police Department

This facility covers approximately 25 acres of land north of 7200 South and west of Interstate-15 (Figure 1), the majority of which is paved with asphalt. The facility includes administration buildings, public works activities, temporary debris and waste storage, fuel tanks, and parking lots. Various activities require use of materials that are kept onsite, including herbicides, paints, solvents, vehicle fluids, salt, sand, etc. The facility implements and maintains stormwater best management practices (BMPs) that are addressed herein.

For the purposes of this SWPPP, activities that have the potential to impact stormwater quality have been identified and evaluated for implementation of best management practices (BMPs). Stormwater BMP implementation and maintenance is the focus of this SWPPP with the intent to minimize the discharge of stormwater pollutants. Given that this facility discharges directly to the Jordan River, stormwater management is of particular importance.

Salt Lake County is evaluating updates to the current yard. Stormwater considerations will be taken into account during the design phase of these updates.

1.3 Pollution Prevention Team

The stormwater pollution prevention team (SWPPT) is responsible for developing the SWPPP and assisting the facility manager in its implementation, maintenance and revision. The team personnel and responsibilities are provided in Table 3-1.

Table 1-1. Stormwater Pollution Prevention Team

Individual	Title
Leon Berrett, P.E.	Associate Director and SWPPT Lead
Rich Judson	Flood Control Division Manager
Greg Nuzman	Fleet Maintenance Division Manager
Michael Allan	Sanitation Division Manager
Dan Drumiler	Salt Lake County Stormwater Manager

1.4 Facility Activities

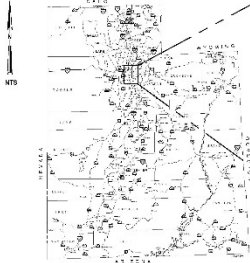
Activities that occur at this facility include those that have the potential to impact stormwater quality. Activities occurring onsite are categorized and presented in Table 3-2. Further details on these activities and control measures implemented are provided in Chapter 3.0.

Table 1-2. Facility Activities

Activity	Description	Potential Contaminants/Sources
Vehicle and Equipment and Storage Areas	Parking lots	Vehicle fluids
	Truck Barn	Truck fluids
	"North 40" Parking	Vehicle fluids
Fueling Areas	2,000 gal AST	Diesel
	4-12,000 gal USTs	Gasoline and diesel
Material Storage	Salt Storage	Salt
	Sand Storage	Sand, sediment
	Outdoor Sand Storage	Sand, sediment
	5,000 gal AST	Used oil
	3 - 250 gal ASTs	New and used oil products
	1 - 200 gal AST	New and used oil products
	1 - 100 gal AST	New and used oil products
	3 - 1,000 gal ASTs	New and used oil products
	Striping Shop	Roadway paint, curing compounds, miscellaneous supplies
"North 40" Storage	Supply storage, garbage containers, vehicle fluids	

Table 1-2. Facility Activities

Activity	Description	Potential Contaminants/Sources
	Heavy Duty Shop	Vehicle fluids
	Totes and Barrels	Paint
	Small Containers	Oil, soap, solvent, paint
Vehicle Equipment and Cleaning Areas	Truck and Car Wash Areas	Sediment, soaps
	Wasatch Front Waste and Recycling District (WFWR)	
	Garbage Truck Cleanout	Debris from trucks
Vehicle Equipment and Maintenance Areas	Lube Pit Vaults	Vehicle fluids
	Maintenance Island	Vehicle fluids
Disposal Areas	Vactor Truck Dump	Vactor and street sweeping wastes
Notes:		
AST – Aboveground Storage Tank		
UST – Underground Storage Tank		



LOCATION MAP

**SALT LAKE COUNTY
PUBLIC WORKS COMPLEX
PROJECT LOCATION**



VICINITY MAP

FIGURE 1: LOCATION MAP



Potential Stormwater Pollution Sources

Potential stormwater pollutant sources include indoor and outdoor storage, maintenance activities and other activities that have the potential to impact stormwater quality. All of these areas and activities have the potential to contribute pollutants to stormwater either due to exposure to precipitation or due to connection to the storm drain system. BMPs are necessary at these locations to minimize impacts to stormwater quality. Each source location is described in this section, including implemented stormwater BMPs.

2.1 Site Drainage

Surface drainage is controlled by a series of gutters, catch basins and storm drain lines that flow to the northwest section of the site, into an outfall west of 700 West; conveyance continues through a pipe to the Jordan River. Figures 2 and 3 show the location of the storm drainage system and general direction of stormwater flow within the Salt Lake County Midvale Facility.

2.2 Summary of Potential Pollutant Sources

The sources listed below have the potential to impact stormwater quality. These sources were identified by interviews with County employees, site visits and the Spill Prevention, Control and Countermeasure (SPCC) Plan; locations of each are shown in Figures 2. Each source is discussed in detail below and summarized in Table 3, including implemented control measures. Implemented control measures include Best Management Practices (BMPs), which are discussed in further detail in Section 4.

2.2.1 Fuel Loading and Unloading Activities

The fueling station (4) is comprised of vehicle fueling areas, concrete pads and a fuel dispensing area. Four 12,000 gallon underground storage tanks (USTs) are located in the west end of the facility under the concrete pad of the fueling station, containing gasoline and diesel. Monthly precision tank tightness tests are conducted and the interstitial space between the double-walled fiberglass piping is monitored continuously for leaks with a liquid sensor. The tanks meet current compliance standards with spill containment and overfill prevention devices. One 2,000 gallon aboveground storage tank (AST), containing diesel, is also located in this area. This tank is double-walled and operates under the SPCC plan. Good housekeeping measures are implemented. This area will be redesigned with the plans for the new yard to either minimize exposure to precipitation or provide treatment.

2.2.2 Material Transfer Activities

The transfer of material occurs throughout the facility. Buildings receive paint, solvents, and oils etc. and outdoor storage areas receive salt, sand, containers, and fuels etc. Some of these materials can be considered hazardous. Waste piles and sumps are cleaned and disposed causing risk of stormwater pollution. The risk of an accidental spill or release while transferring hazardous materials is real and measures are taken to eliminate and or contain the risk where possible.

2.2.3 Outdoor Storage Activities

Salt Storage (1): A permanent, covered salt storage unit is located in the northeast part of the facility. The area near the entrance is sloped towards the shed so that salt residual from the loading area is kept at a minimum. Good housekeeping measures are implemented. After incoming salt is left by belly dump trucks, front end loaders are used to push the salt into the storage shed. Salt is also pushed back into the storage

shed after snow removal operations require the filling of snow plow trucks with salt which can cause salt to be spilled in the loading area. Street sweepers are also used to pick up excess salt when needed.

Sand Storage (2&3): A permanent sand pile is located in the northwest part of the facility. The sand pile is covered. Good housekeeping measures are implemented.

Above-ground Storage Tanks (5-7): Eight ASTs are located at this facility. One 5,000 gallon double-walled used oil tank and 2 – 1,000 gallon tanks are located in the new fleet shop; secondary containment is provided. Five smaller tanks (3 – 250 gallon, 1 – 200 gallon, 1 - 100 gallon) are located inside the Fleet Shop. The tanks can be visually inspected at all times. Interior perimeter concrete secondary containment would contain any release from the ASTs. The spilled fluid would be absorbed by the use of absorbent material and/or the vacuum truck, and disposed in accordance with the SPCC plan.

Totes & Barrels (8): Various containers containing paint are located at the facility. These are generally kept inside and routine inspections are conducted. The design of the new yard will consider additional BMPs for these containers.

Parking and Storage Areas (9): Parking and storage areas are provided for all four divisions. Surface drainage is directed to catch basins, which convey runoff into the drainage system. Street sweeping is conducted periodically. The parking lot for the new administration building drains to a detention basin, drainage from the detention basin goes to the municipal storm drain system.

Maintenance Island (13): The maintenance island is located on the south side of the sanitation truck shed. The area drains to the storm drain system. The island is covered and good housekeeping measures are implemented.

“North 40” Public Works and Fleet Parking and Storage (15): This area is used for several purposes: vehicle parking, supply storage, and empty, clean garbage containers. Good housekeeping measures are implemented.

2.2.4 Chemical Use in Buildings

Heavy Duty Shop & Sump (11): Various containers of motor fluids are kept in the Heavy Duty Shop; no exposure to precipitation. Good housekeeping measures are implemented. A 500 gallon sump is located in this building, and is pumped twice per year.

Truck Barn (14): The truck barn is used for storage, no maintenance is conducted in this building, and there are no floor drains in the building. Plug outlets that flow to exterior storm drain.

Totes and Barrels (8): The roadway paint shop houses totes, equipment, and trucks used to apply roadway paint throughout the county. No floor drains exist in the building. Paint cleaning wash waters are kept in a tote and removed when full. Paint wash waters are not allowed to enter the stormwater conveyance system.

Various Small Containers: The facility utilizes various small containers of oil, soap, solvents, and cleaners using portable pumps and other equipment. In addition, two 55-gallon drums of Form Release oil is kept on-site; secondary containment is provided. If any spill occurs, immediate collection with absorbent material will be used.

2.2.5 Cleaning and Waste Storage Areas

Waste material Storage (10): Waste materials from street sweeping and vector truck solids are placed in a contained area with a berm to mitigate storm water runoff. Good housekeeping measures are implemented.

Truck & Car Wash Areas (12): A truck wash area consists of four truck bays for washing, with trench drains that drain into a sump that is connected to the sanitary system. The sump is cleaned out on a monthly basis. Another vehicle wash area is provided for cars and is located to the west of the fueling islands. This area

drains to the sanitary system. Approximately 2,400 vehicles are washed in these areas every year. Good housekeeping measures are implemented.

Sanitation Truck Cleanout (16): Debris is removed from sanitation trucks in the area north of the Heavy Duty Shop and to the east of the main parking lot. The debris is removed from the trucks hoppers and then re-dumped into the truck. Good housekeeping measures are implemented, including weekly sweeping.

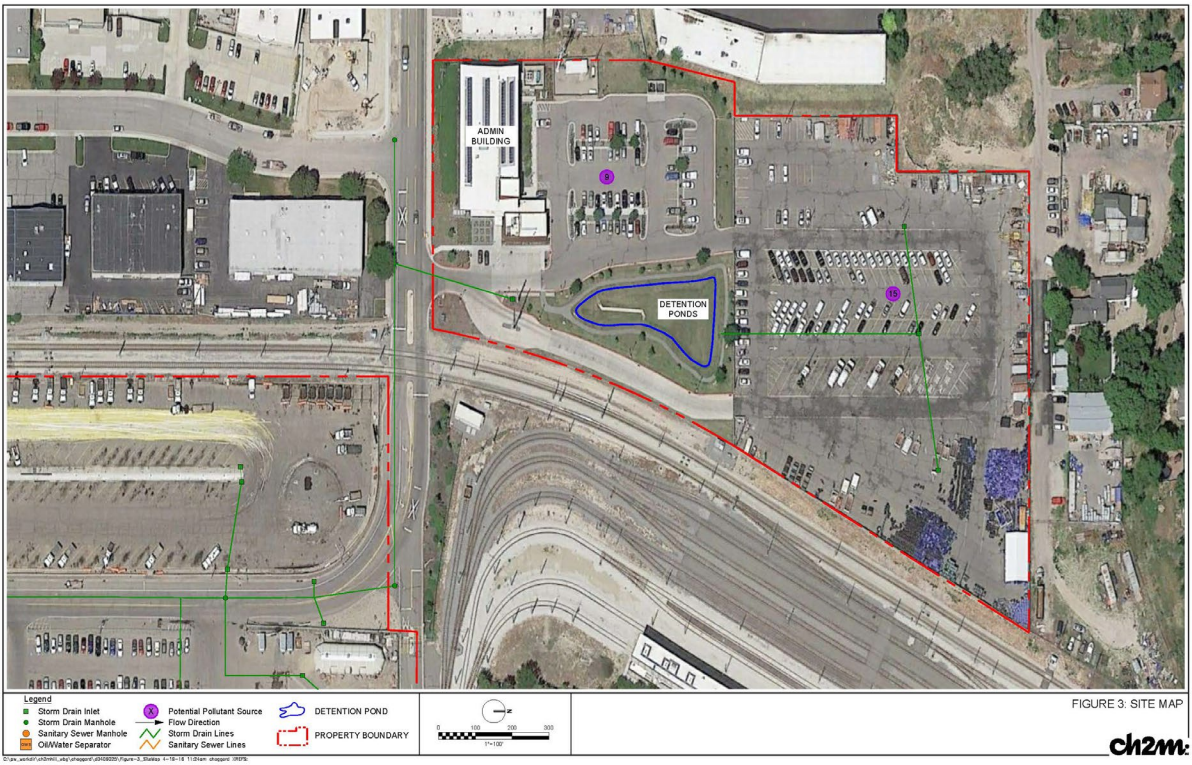
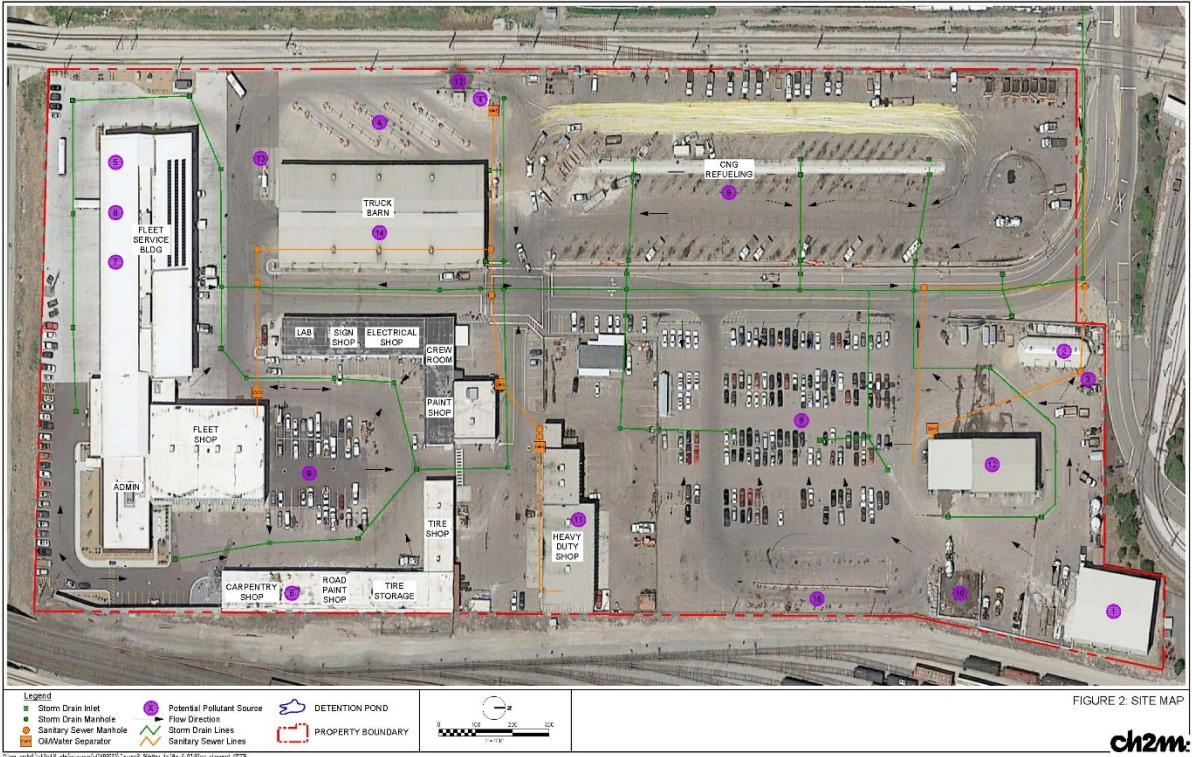
Table 4-1. Potential Pollutant Sources and Control Measures

Site ID	Description	Division	Potential Pollutant	Quantity	BMP
1	Salt Storage	Operations	Salt	Varies	Covered, Good Housekeeping
2	Sand Storage	Flood Control	Sand	Varies	Covered, Good Housekeeping
3	Outdoor Sand Storage	Flood Control	Sand	Varies	Good Housekeeping
4	Fueling Station	Fleet	Fuels, Auto Fluids	Varies	Good Housekeeping
4	AST	Fleet	Diesel	2,000 gal	Secondary containment SPCC Plan
4	USTs	Fleet	Gasoline/Diesel	48,000 gal	Secondary containment, SPCC Plan, Leak detection system
5	AST	Fleet	Used Oil	5,000 gal	Secondary containment, SPCC Plan
6	ASTs	Fleet	Oil Products	1,050 gal	Covered, Secondary containment, SPCC Plan
7	AST	Fleet	Oil Products	1,000 gal	Covered, Secondary containment, SPCC Plan
8	Totes & Barrels	Operations	Water-based Roadway Paint	Varies	Good Housekeeping
9	Parking & Storage Areas	All	Auto Fluids	N/A	Good Housekeeping, Street sweeping, Detention pond
10	Waste Materials Storage	Operations	Street sweep and vactor truck solids, debris and litter from county roads, green waste	Varies	Contained berm area, Cleaned as necessary
11	Heavy Duty Shop	Fleet	Motor Fluids	Varies	Covered, Good Housekeeping
11	Heavy Duty Shop Sump	Fleet	Oil Products	500 gal	Pumped twice/year
12	Truck & Car Wash Areas (2)	Fleet & Operations	Sediment , Auto Fluids	Varies	OWS to sanitary system, Good Housekeeping
13	Maintenance Island	Fleet	Auto Fluids, Grease	Varies	Good Housekeeping
14	Truck Barn	Sanitation	Oil Storage	Varies	No discharge, Good Housekeeping
15	"North 40" Parking Lot & Storage	All	Auto Fluids	N/A	Good Housekeeping
16	Sanitation Truck Cleanout	Sanitation	Debris, Garbage	N/A	Good Housekeeping, Swept weekly
	Transfer of Materials	All	Debris, Salt, Petrochemical Fluids	Varies	Good Housekeeping, Proper Material Transfer Techniques

SECTION 2 – POTENTIAL STORMWATER POLLUTION SOURCES

Table 4-1. Potential Pollutant Sources and Control Measures

Site ID	Description	Division	Potential Pollutant	Quantity	BMP
	Various Small Containers	All	Oil, Soap, Solvents	Varies	Good Housekeeping



2.3 Inventory of Exposed Areas

Substances related to industrial activities such as process chemicals, raw materials, fuels, pesticides, fertilizers and hazardous substances, may be discharged to a receiving water when exposed to precipitation. The identification of these materials and their associated storage areas helps determine where potential stormwater contamination may occur.

Table 4-2 presents an inventory of exposed materials at the facility. The table also indicates if the existing management controls appear to meet the UPDES permit criteria. The justification for whether or not the permit criteria are met is indicated in the “Controlled” column as either not exposed, contained, meets other permit requirements, or BMPs implemented.

Table 4-2. Inventory of Exposed Material

Area	Quantity of Material	Controlled	UPDES Compliant?
Outdoor Sand Storage	Varies	Good Housekeeping	YES
Fueling Area	Varies	Good Housekeeping, SPCC Plan	NO (a cover is recommended)
AST	2,000 gallons	Double-walled Tank, SPCC Plan	YES
Totes & Barrels	Varies	Good Housekeeping	YES
Tar Pot Cleaning Area	Varies	Good Housekeeping	YES
Tar Pot Sump	<1,000 gallons	Good Housekeeping	YES
Parking & Storage Areas	Varies	Good Housekeeping New lot drains to detention pond	YES
Car Wash Area	Varies	Sanitary Sewer System	YES
Truck Wash Area	Varies	Good Housekeeping	
“North 40” Parking & Storage	Varies	Good Housekeeping	YES
Street Sweep Waste Material Storage	Varies	Good Housekeeping	YES
Various Small Containers	Varies	Good Housekeeping	YES

2.4 Spills and Leaks

Documentation of all significant spills or leaks that have occurred within the last three years is an important component to this SWPPP. A significant spill, as defined in *EPA Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices*, includes, but is not limited to:

“...releases of oil or hazardous substances in excess of reportable quantities (RQ) under Section 311 of the CWA (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).”

The Midvale Facility currently implements an SPCC Plan. Records of spills are maintained with the SPCC Plan.

2.5 Sampling Data

Stormwater sampling is not required at this facility. However, per the MS4 permit, visual examination of stormwater coming from the facility is required on a quarterly basis. Specific precipitation criteria must be met for this monitoring. Refer to Section 5.0 for detailed monitoring requirements.

Measures and Controls

Measures and controls identified herein are general BMPs that serve to minimize stormwater pollution to the maximum extent practicable at this facility. BMPs can be both structural and non-structural measures; all with the intent to reduce stormwater pollution. These BMPs include, good housekeeping, preventive maintenance, spill prevention and response, inspections, and employee training. This section provides a more detailed discussion of stormwater BMPs used at each potential pollutant source at the facility.

3.1 Good Housekeeping

Good housekeeping practices maintain and ensure a clean work environment to reduce the possibility of pollutants entering stormwater runoff. This BMP is used in all areas of the facility. Good housekeeping measures conducted facility wide include:

- Stormwater prevention equipment is regularly inspected, maintained, and cleaned.
- Inside floors are cleaned regularly to maintain a clean work environment.
- Areas with the potential to contaminate stormwater are maintained, properly cared for, and regularly inspected for conditions that might allow pollutants to enter stormwater.
- Any spilled material is immediately cleaned up and disposed of in accordance with regulatory requirements.
- Parking lots, driveways, and outdoor traffic areas are swept regularly to maintain a clean facility.

3.2 Preventive Maintenance

Preventive maintenance provides for the upkeep of the storm drains and conveyance systems and BMPs to minimize the discharge of stormwater pollutants. A preventive maintenance program is implemented and incorporates an inspection program. Personnel responsible for inspections of pollution prevention equipment are trained in spill prevention and response and in measures to minimize stormwater pollution. Pollution prevention equipment is tested, inspected, and maintained as necessary. Deficiency reports are filed with a representative of the Pollution Prevention Team, and addressed based on immediacy.

Table 5-1. Preventative Maintenance Schedule

Stormwater Management	Inspection schedule	Maintenance schedule
Stormwater system	Quarterly	As needed
Conveyance	Quarterly	Annual
Catch basins	Quarterly	As needed
Detention pond	Quarterly	As needed
Manholes (2) prior to leaving property		
Oil water separators	Monthly or as needed	Monthly or as needed
USTs	Quarterly	As needed per SPCC Plan
ASTs	Quarterly	As needed per SPCC Plan

3.3 Spill Prevention and Response Procedures

Spill prevention and response will be in accordance with the SPCC Plan maintained by the facility. The SPCC Plan is hereby made part of this Plan by reference. In general, if petroleum products or listed hazardous substances are released to the environment in excess of the amounts identified in 40 CFR 117 and 40 CFR 302, the Facility Supervisor or other designated Pollution Prevention Team member is required to notify the following entities within 24 hours of the release:

- National Response Center: (800) 424-8802
- Utah Division of Water Quality: (801) 538-6146 or 24-hour answering service at (801) 536-4123

A release is defined as including, but not limited to, any spilling, leaking, pumping, pouring, emptying, emitting, discharging, dumping, addition, escaping, leaching, or unauthorized disposal of oil or hazardous substance that enters or threatens to enter waters of the State.

3.4 Inspections

Areas and equipment with the potential to pollute stormwater runoff are visually inspected on a frequent, regular basis. Evaluations are conducted to ensure that measures presented in this Plan are implemented in accordance with the terms of the MS4 permit. Inspections are logged, including the date of the inspection, personnel who performed the inspection, and related observations. Facility personnel conduct informal inspections of all work and storage areas on a weekly basis per MS4 permit requirement 4.2.6.6.1. The Stormwater Pollution Prevention Team conducts formal, quarterly comprehensive inspections of storage areas (including storage tank areas), shops, BMPs, stormwater controls, and stormwater conveyances. The quarterly inspections are completed using the inspection log listed in Appendix C.

Weekly inspections are performed by shop personnel and Quarterly inspections are performed by members of the Stormwater Pollution Prevention Team or a designated employee who has completed training on the details of this Plan and general permit requirements. All noncompliance issues are reported immediately to Leon Berrett, P.E., or a designated representative in his absence, so that appropriate response action and agency notification can occur.

In addition to this quarterly inspection, the Pollution Prevention Team conducts inspections of the storm drain system including catch basins on an as-needed basis, generally following a rain event.

3.5 Employee Training

Salt Lake County provides stormwater training for appropriate personnel regarding the components of stormwater regulations, the Municipal Separate Storm Sewer Systems (MS4) permit and the SWPPP. Stormwater training is incorporated into existing safety meeting/training sessions. The training sessions occur on an annual basis.

The training includes:

- Good housekeeping practices
- Spill prevention and response procedures
- Material storage and handling practices
- New stormwater regulations or pollution prevention measures

The training program prepares personnel to effectively minimize and/or eliminate pollutants from entering the storm drain system. The goal of the program is to train personnel to prevent contaminants from entering stormwater and to respond safely and effectively. The employees should also understand how to recognize and report potential stormwater contamination situations.

3.6 Record Keeping and Internal Reporting Procedures

All applicable records will be kept onsite in the central files. Records including observations, field logs, certifications, and reports will be retained for a minimum of three years. Certification and report signatures will be completed by a responsible corporate officer. All noncompliance issues will be reported to the Pollution Prevention Team as soon as possible and addressed within 30 days.

All records relating to implementation of the SWPPP will be maintained for a minimum of three years. This includes all inspections, monitoring, training, maintenance and incidents.

3.7 Non-Stormwater Discharges

Federal law and the UPDES permit prohibit almost all non-stormwater discharges unless specifically permitted under the MS4 permit. Non-stormwater discharges that may occur at the facility and are authorized by the MS4 permit and do not require a special discharge permit include the following:

- Firefighting activities or fire hydrant flushing
- Water line flushing
- Uncontaminated groundwater
- Landscape irrigation
- Potable water
- Uncontaminated water from sumps and secondary containments

3.8 Sediment and Erosion Control

All areas of the facility are either paved with asphalt or concrete or are maintained as landscaped vegetation. As a result, minimal erosion is expected from the site. If construction activities take place at the facility in the future a UPDES Construction permit will be obtained as per the DWQ requirements and the following measures may be implemented to help reduce the amount of soil erosion resulting from construction activities:

- Vegetate or revegetate disturbed soil as soon as possible after construction with common vegetative covers such as grass, trees, shrubs, bark, mulch, or straw.
- Implement structural control practices, such as silt fence, straw bale barrier, gravel filter berms, storm drain inlet protection, sediment traps or basins, surface roughening of slopes, or other measures deemed necessary during construction to minimize the potential for soil erosion and sediment runoff.

3.9 Stormwater Exposure Control

This section describes specific source control strategies for industrial activities that may contribute to stormwater contamination. These practices should be followed where practicable to prevent or minimize contamination of stormwater.

The only area where excess risks of contaminants being conveyed with stormwater at this facility is from the fueling island. The DWQ recommends these types of areas have a cover to prevent stormwater from mixing with drips and spills. This area is visually monitored daily and cleaned and swept as needed. The SWPPT is considering actions to cover and/or rebuild the fueling islands or treat these discharges as soon as possible.

Material and Waste Storage Areas

The following BMPs are used to assist in reducing stormwater contamination:

- Storage areas are covered where practical.

- Storage containers for all materials must be clearly labeled and maintained in good condition.
- Materials are unloaded from delivery vehicles, stored, and used indoors where possible. In addition, petroleum products or other chemicals and materials that could contaminate stormwater are stored within the facility when feasible.

Loading and Unloading Areas

The following list includes source control BMPs that are implemented to reduce the potential of stormwater contamination from loading and unloading areas:

- Minimize stormwater run-on and runoff through construction, maintenance, and use of berms, ditches, storage facilities, or collection and treatment systems for these areas.
- Ensure that an SPCC Plan is in place and can be followed.
- Properly licensed and permitted used-oil transporters must be employed to remove the used oil for proper disposal offsite. Facility personnel must be present during transfers of used oil from the used-oil storage tank to tanker trucks.
- Provide level grades and gravel surfaces to retard flows, increase infiltration, and limit the spread of spills.
- Locate shipping and receiving activities where spills or leaks can be contained.
- Conduct shipping and receiving activities in covered or protected areas where practicable to minimize exposure to precipitation by conducting activities while no precipitation or runoff occurs or completing work indoors or by using roof overhangs, awnings, or weather curtains.
- Immediately clean up any spilt material.

3.10 Management of Runoff

Storm drainage for the facility area is conveyed via a series of pipes, catch basins and oil/water separators as shown in Figure 2. The system drains the facility area and routes the flow to the northwest part of the site. The stormwater is conveyed via a pipe to the Jordan River. To summarize, the following BMPs are implemented with the intent to reduce pollutants in the discharge of stormwater from this facility:

- Good housekeeping measures
- Preventative Maintenance
- Covered materials and activities
- Secondary containment
- SPCC Plan
- Inspections
- Visual observations
- Training
- These measures are considered sufficient to manage stormwater at this facility. The design of sumps or additional controls to control stormwater from the truck wash area is being evaluated and designed.

. Implementation of additional BMPs will be evaluated during each annual site inspection as discussed in Section 5.0.

Comprehensive Site Evaluation and Inspections

Quarterly site inspections are required for “high priority” facilities such as this one identified in the MS4 permit. The inspections are intended to be comprehensive in order to identify any problem areas; the SWPPT Leader or designee will perform the inspection. This inspection provides a basis for evaluating the effectiveness of the SWPPP, and should include:

- • Inspection of stormwater drainage areas for evidence of or the potential for, pollutants entering the drainage system
- • Inspection of equipment needed to implement the SWPPP such as spill response equipment
- • Observation of structural measures, secondary containment, catch basins, etc. for proper operation
- • Evaluation of the effectiveness of stormwater pollution prevention measures and BMPs
- • Revision of the SWPPP to reflect new construction areas, changes in the stormwater drainage system, changes in BMPs, etc.
- • Implementation of changes to the drainage system as required
- • Identification of any incidents of noncompliance
- • Report results of visual observations (refer to Chapter 6)
- Complete and sign the Inspection Form (Appendix B)

Based on the results of this inspection, deficiencies in pollution control structures or procedures will be corrected as soon as practicable. The SWPPP will be revised and updated as necessary to reflect any changes at the facility.

SECTION 5

Monitoring

Quarterly visual monitoring of stormwater quality is conducted during a qualifying storm. This monitoring is intended to identify obvious indicators of stormwater pollution, identify the potential source, and implement appropriate BMPs.

5.1 Visual Monitoring

For the quarterly visual monitoring, observations should be conducted within the first 30 minutes of a qualifying storm event or as soon as practical. A qualifying storm event is defined as being greater than 0.1 inches in magnitude that produces runoff and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The examinations will be conducted on runoff in the manholes prior to leaving the property, and include documenting the color, odor, clarity, settled solids, floating solids, suspended solids, foam, oil sheen, and any other pertinent characteristic observed. If adverse conditions do not allow for the collection of stormwater samples, this will be documented and maintained with the SWPPP.

5.2 Visual Monitoring Periods

Visual examinations of stormwater quality will be conducted during the following periods:

- January – March
- April – June
- July – September
- October - December

5.3 Examination reports

Results of visual observations will be documented using the form in Appendix C. Details regarding the storm event, examinations, nature of the discharge (i.e., runoff or snow melt), is recorded during each monitoring event. These reports must be kept onsite with the SWPPP.



**STORM WATER POLLUTION PREVENTION PLAN
SALT LAKE VALLEY SOLID WASTE
MANAGEMENT FACILITY
6030 WEST CALIFORNIA AVE.
SALT LAKE CITY, UT 84104**

Prepared for:



March 25, 2010

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A Report Prepared For:

Salt Lake Valley Solid Waste Management Facility
6030 West California Ave.
Salt Lake City, UT 84104

**STORM WATER POLLUTION PREVENTION PLAN
SALT LAKE VALLEY SOLID WASTE
MANAGEMENT FACILITY
SALT LAKE COUNTY, UTAH**

File No.: 54629.009

Prepared by:



Krista Kinsey, E.I.T.
Staff Engineer



Kerry L. Ruebelmann, P.G.
Regional Manager

KLEINFELDER WEST, INC.
849 West Levoy Drive, Suite 200
Salt Lake City, Utah 84123
(801) 261-3336

March 25, 2010



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- E Preventive Maintenance and Inspection Records
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- H Storm Water Discharge Monitoring Reports (DMRs)
- I Storm Water Sampling Protocol



1.0 INTRODUCTION

The Salt Lake Valley Solid Waste Management Facility (SLVSWMF) is located at 6030 West and 1300 South Street, approximately 9 miles west of downtown Salt Lake City (Figure 1). The Facility is owned and operated by Salt Lake City and Salt Lake County, and currently receives approximately 80 percent of the municipal and industrial waste generated in Salt Lake County.

The active landfill cells began receiving waste in July 1993. The active landfill cell is being constructed sequentially in 11 modules and will eventually encompass approximately 450 acres. Each module is being built with composite clay/synthetic liner on the bottom and a leachate collection and recovery system above the liner. As adjoining modules are constructed, their liners are joined to form one continuous landfill cell liner.

Under the Utah Water Quality Act, storm water discharges from land disposal units that receive municipal industrial wastes are regulated by the Utah Department of Environmental Quality, Division of Water Quality (DEQ/DWQ). The SLVSWMF is permitted to discharge storm water to Lee Creek in accordance with the provisions of Utah Pollutant Discharge Elimination System (UPDES) General Permit for Storm Water Discharges Associated with Industrial Activity No. UTR000074 (the Permit). This Permit is effective March 1, 2008 to December 31, 2012. A copy of the Permit is included in Appendix A.

The SLVSWMF is required to maintain a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Part III and Appendix II.L of the Permit, and to monitor storm water discharges from the site quarterly in accordance with Part V and Appendix II.L of the Permit. The SWPPP must be amended whenever there is a change in design, construction, operation or maintenance which will have a significant effect on potential discharge of pollutants to waters of the State, or whenever the plan proves to be ineffective in meeting its objectives.



2.0 GENERAL PERMIT COVERAGE

2.1 PERMIT COVERAGE

The SLVSWMF is authorized to discharge under the Utah Pollutant Discharge Elimination System (UPDES) Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities, Permit No. UTR000074 (the Permit). The Permit became effective on March 1, 2008 and the authorization to discharge under this permit expires at midnight on December 31, 2012. Storm water discharges from the SLVSWMF are covered in Appendix II.L.1 of the Permit, as provided in Table 1, Part I of the Permit. A copy of the Permit is included in Appendix A of this SWPPP.

The SLVSWMF must submit an NOI to the DWQ for renewal prior to termination of the Permit to ensure continued coverage.



3.0 SPECIAL PERMIT CONDITIONS

3.1 NON-STORM WATER DISCHARGES

Under Part II.A.2.b of the Permit, the SLVSWMF is authorized to discharge non-storm water under provided the non-storm water component of the discharge is in compliance with Part III and Appendix II of the Permit. The SLVSWMF discharges uncontaminated groundwater from underneath the lined landfill area. This action is necessary to ensure the stability and integrity of the landfill liner. That uncontaminated groundwater is pumped to the dewatering trench and is eventually discharged to the flood control ponds on the south side of 1300 South Street. Storm water co-mingles with the uncontaminated groundwater in the dewatering ditch. The uncontaminated groundwater is monitored on a semi-annual basis for specific constituents, as required by Salt Lake County Health Regulation No. 1.

3.2 HAZARDOUS SUBSTANCES OR OIL

Hazardous substances or oil in storm water discharge(s) must be prevented or minimized in accordance with this SWPPP. The Permit does not release SLVSWMF from other reporting requirements, but in the event a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity occurs during a 24-hr period, SLVSWMF must:

- Notify the National Response Center (NRC) as soon as you have knowledge of the discharge,
- This SWPPP must be modified within 14 calendar days of knowledge of the release, and
- Submit documentation to the Utah Division of Water Quality within 14 days of knowledge of the release.

The required modification to the SWPPP and documentation to the DWQ are detailed in Part II.B of the Permit.



3.3 MULTIPLE ANTICIPATED DISCHARGES

At the time this SWPPP was modified, there were no anticipated discharges containing hazardous substances in an amount equal to or in excess of a reportable quantity. This SWPPP must be modified if SLVSWMF anticipates discharges as described in Part II.B.2 of the Permit.

3.4 CO-LOCATED INDUSTRIAL ACTIVITY

At the time this SWPPP was modified, the SLVSWMF did not have co-located industrial activities as described in Part II.C of the Permit. If co-location of activities is present, additional requirements from Appendix II of the Permit may be required and the SWPPP would require modification.



4.0 GENERAL STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

4.1 PROFESSIONAL ENGINEER REVIEW

The DWQ recommends that SWPPP be signed by a State registered Professional Engineer (P.E.) particularly where plans are complex, treatment systems are used and risk to storm water discharges are significant. The SLVSWMF SWPPP is not complex, treatment systems are not used and there are not significant risks to storm water discharges. At the time of this modification, the SWPPP was not signed by a P.E.

4.2 SIGNATURE AND SWPPP REVIEW

This SWPPP must be signed in accordance with the Permit, Part VI.G and retained on-site at the SLVSWMF. The SWPPP must be signed and certified either by a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations. This officer must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or person who manage the system, or those person s 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."

The certification and appropriate signature are contained in Appendix B of this SWPPP.



4.3 KEEPING PLANS CURRENT

The SWPPP must be amended whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective for controlling discharge of pollutants.

4.4 APPENDIX II REQUIREMENTS

The SLVSWMF is subject to the requirements contained in Appendix II.L of the Permit. The SLVSWMF does not have co-located activities and therefore, Appendix II.L is the only additional requirement for the SWPPP.

4.5 SPECIAL POLLUTION PREVENTION PLAN REQUIREMENTS

4.5.1 Additional Requirements for Discharges into or through Municipal Storm Sewer Systems Serving a Population of 100,000 or More

The SLVSWMF does not discharge into a Municipal Storm Sewer System, so the requirements from this section of the Permit are not applicable.

4.5.2 Additional Requirements for Storm Water Discharges from Facilities Subject to EPCRA 313 Requirements

The SLVSWMF does not use "Section 313 Water Priority Chemicals" and is not subject to the reporting requirements of EPCRA Section 313, therefore the SWPPP is not subject to requirements of Part III.E.2 of the Permit.

4.5.3 Salt Storage

At the time of this SWPPP was modified, there was no salt storage at the SLVSWMF. If at some point in the future, the SLVSWMF elects to store salt on the property, appropriate revisions to this SWPPP will be necessary.



4.5.4 Threatened or Endangered Species and Historic Properties

Part III.E.5(2) of the Permit states, "Where applicable, compliance efforts to these laws should be reflected in the SWPPP." At the time this SWPPP was modified, no known threatened or endangered species regulations or historic property regulations were applicable to the facility.



5.0 POLLUTION PREVENTION TEAM

The SWPPP must identify individuals within the facility organization as members of the Pollution Prevention Team (the Team). The Team is responsible for developing the SWPPP and assisting the facility manager with its implementation. The SWPPP must clearly identify the responsibilities of each Team member. All aspects of the SWPPP must fall under the activities and responsibilities of the Team.

The Team at the SLVSWMF will include employees with management, environmental, and design/inspection responsibilities for the facility. The Team Member positions are shown below and contact information for individual team members is provided in Appendix C of this SWPPP.

SLVSWMF Position	SWPPP Team Member Position
Associate Director of Environmental and Technical Services	Pollution Team Manager
Environmental Specialist	Environmental Compliance Team Member
Waste Inspectors/Inspections	Daily Reports

The responsibilities of each team member are as follows.

5.1 POLLUTION TEAM MANAGER

The Pollution Team Manager will be responsible for:

- Evaluating whether ongoing design and construction activities comply with the provisions of this plan;
- Insuring that required maintenance and repairs are completed promptly;
- Overseeing emergency responses to spills and insuring that appropriate notifications are made;



- Providing the resources necessary for the Environmental and Compliance team members to carry out their responsibilities; and
- Providing input and senior review of plans and reports prepared by other team members.

5.2 ENVIRONMENTAL COMPLIANCE TEAM MEMBER

The Environmental Compliance Team Member will be responsible for:

- Insuring that scheduled inspections are performed and documented;
- Updating the SWPPP, as necessary;
- Responding to spills and making appropriate notifications;
- Inspecting and correcting housekeeping practices;
- Insuring that monitoring and reporting is performed as required (Section 10 of the SWPPP);
- Providing landfill personnel with proper training in spill response, good housekeeping and material management practices;
- Ensuring the hazardous waste exclusion program is fully implemented at all times;
- Conducting site compliance evaluations;
- Preparing inspection reports as required; and
- Inspecting the drainage system during construction and operation to verify its ability to channel storm water.



- Monitoring ongoing construction activities to ensure that the drainage system is not damaged or altered;
- Inspecting maintenance and repairs made to the storm water drainage system; and
- Identifying areas where significant erosion of soil is occurring.

5.3 WASTE INSPECTORS

Waste Inspectors at the Facility will be responsible for:

- Identifying areas where significant erosion of soil is occurring,
- Observing the drainage system during construction and operation to verify its ability to channel storm water;
- Observing housekeeping practices; and
- Verbally report potential problems to the Environmental Compliance Team Member.

6.0 POTENTIAL POLLUTANT SOURCES

6.1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

There are eight areas where rainfall can potentially come in contact with pollutants:

- The active (working) face of the landfill;
- The public drop-off area;
- The composting area;
- The household hazardous waste area;
- The aboveground storage tank fueling areas;
- The heavy equipment storage;
- The generator associated with the dewatering ditch; and
- The leachate pond.

The locations of these seven areas are shown on Figure 2. The areas are further described below.

6.1.1 The Active Face

The SLVSWMF maintains a small working face as possible, usually around 150 feet wide by 25 feet tall. The maximum working face is 300 feet wide by 30 feet tall. The working face is sloped toward the interior of the landfill module being filled and each day, the active area is covered with approved cover material. Even with the daily cover, the slope and direction of the face are maintained toward the interior of the landfill module being filled.



6.1.2 The Public Drop-off Area

The public drop-off area is a concrete-lined collection point where wastes brought in by the public are screened, separated if necessary, and then hauled to the active face for disposal. Covered collection bins for recyclable materials are present in the drop off area. This area is maintained constantly when open, and wastes are not allowed to collect or sit in the drop-off area.

6.1.3 The Household Hazardous Waste Area

The household hazardous waste (HHW) area is located adjacent to the public drop-off area. The area is concrete-lined and covered to receive small quantities of HHW such as paint, cleaning chemicals, pesticides, and batteries. These waste materials are sorted and stored in this area in 55-gallon drums or other proper containers until transport to an appropriate facility is arranged.

6.1.4 The Composting Area

The composting area, located in the southwest corner of the active landfill area, is used to compost yard and green waste. The leaves and grass are placed in windrows and are turned as necessary to promote composting.

6.1.5 Aboveground Storage Tank Fueling Areas

The aboveground storage tank fueling areas are located north of maintenance shop, administration building and the scales. The tanks are double-walled which act as secondary containment for the fuel stored. Only personnel trained in oil-handling are allowed to fuel vehicles from these tanks.

One mobile tanker is used at the site to fuel the diesel-powered heavy operating equipment in their location, such as the active face, the public drop-off area and the composting area. Only personnel trained in oil-handling are allowed to operate the mobile tanker to fuel the heavy equipment.



6.1.6 Heavy Equipment Storage

Heavy equipment used at the active face, in the public drop-off area, and the composting area are stored on paved surfaces, when possible, when the equipment is not in use.

6.1.7 Generator and Pump Usage

A generator is used on west edge of the SLVSWMF to power the pump and lift the uncontaminated groundwater to the dewatering trench that discharges into the flood control ponds.

6.1.8 Leachate Ponds

Temporary leachate holding ponds are constructed and bermed on lined landfill modules. Leachate is pumped to these temporary holding ponds and is allowed to evaporate or percolate back into the module.

A leachate collection pond is also located on the northeast corner of the SLVSWMF. While the pond has not received any leachate, nor is it anticipated to receive leachate, if leachate to discharged to the pond it would be allowed to evaporate.

The leachate ponds are constructed in a way that storm water that enters these ponds either evaporates or percolates into the module. Storm water from the temporary leachate collection ponds is not released off-site.

6.1.9 Other

Vehicle and equipment maintenance is performed in an enclosed on-site garage and is, therefore, not exposed to precipitation. Trucks are washed off in a dedicated concrete wash bay behind the maintenance shop which drains to a collection sump and is not released to the flood control ponds.



6.2 INVENTORY OF EXPOSED MATERIALS

The SLVSWMF accepts municipal and industrial waste from within Salt Lake County. The waste stream is similar to EPA's average waste composition from 2008, shown below.

<u>Waste Component</u>	<u>Percent</u>
Paper	31
Glass	5
Other Metals	8
Plastics	12
Rubber/leather	8
Wood	7
Food Waste	13
Yard Waste	13
Other	3
TOTAL	100%

Materials potentially exposed to storm water are described below.

6.2.1. Active Face

Materials exposed on the active face of the landfill are expected to have the approximate composition shown above. Additionally, the SLVSWMF accepts asbestos and infectious wastes for disposal. However, asbestos waste is properly packaged in containers and is disposed in a segregated asbestos area. Infectious wastes are immediately covered after being placed in the landfill.

6.2.2. Public Drop-off Area

Wastes in the public tipping area are likely of the same average composition listed above. Additionally, recyclable materials (copper, aluminum, glass, foam rubber, etc.) are separated and collected in covered bins.



6.2.3 Household Hazardous Waste Area

Wastes in the household hazardous waste area consist of small quantities of paints, cleaning chemicals, pesticides, and batteries. These materials are stored under a steel-framed roof and/or in 55-gallon drums and are subsequently not exposed to storm water.

6.2.4 Composting Area

Wastes in the composting area are expected to be 100% yard or green waste.

6.3 DRAINAGE FROM SOURCE AREAS

6.3.1 Active Face

The location of the working face moves daily as each landfill module is filled in sequential refuse lifts. Storm water run-on is diverted around the working face to the extent possible by temporary berms and "V" ditches. The berms and ditches direct surface water away from the exposed refuse and prevent surface water from ponding against the refuse.

Most, if not all, of the runoff from the working face flows to the interior of the landfill module, percolates through waste in the module, and is captured by the leachate collection and recovery system. There it is treated like landfill leachate and is properly handled according to the Facility's solid waste permit.

A perimeter berm around each module prevents runoff from the module. As waste is added to the module, the outer portion of the module receives intermediate cover to further reduce the potential for runoff from the active area. In case of unexpected or unusual storm conditions that could create significant runoff, a module drain is constructed on top of each perimeter berm. Thus, unexpected runoff would be captured in the module drain that encircles the module. From there, the water would flow to the perimeter drain that encircles the entire landfill cell. The perimeter drain carries water to the settlement/treatment basins, where the sediment load is allowed to settle out and degradation of pollutants, if any, is facilitated by specialized vegetation.

Treated water flowing out of the basins crosses under 1300 South Street and is discharged into ponds used for flood control which discharge to Lee Creek. A drawing of the drainage system and the outfall locations for the SLVSWMF are provided in Figure 2.

The potential pollutants likely to be present in storm water from the active face include sediment and solids.

6.3.2 Public Drop-off Area

Runoff from the public drop-off area flows west and is carried by a concrete-lined drain to the perimeter drainage ditch along the north side of 1300 South Street. It then flows into a settlement/treatment basin which discharges through a culvert under 1300 South Street to the flood control ponds. The area where refuse is stored until transported to the active face is drained to the center and storm water is allowed to evaporate. The storm water associated with this refuse cannot leave the area.

No potential pollutants are identified for this area since there is no runoff from this area.

6.3.3 Household Hazardous Waste Area

Materials stored in the HHW area are covered and therefore not exposed to storm water. Additionally, the HHW area is diked by concrete curbing. Storm water that could run into the HHW area is drained into a sump that is drained by an off-site handler and disposed of as hazardous waste. Runoff from the household hazardous waste area flows south to the perimeter drainage ditch along the north side of 1300 South Street. It then flows into a settlement/treatment basin which discharges through a culvert under 1300 South Street to the flood control ponds.

The potential pollutants likely to be present in storm water from the HHW area include small quantities of paints, metals, oils, antifreeze, etc., however, as already described, the HHW is diked and covered so potential storm water contamination only exists during unloading to the HHW area.



6.3.4 Composting Area

Runoff from the composting area collects in the "clean green pond" where it infiltrates into the soil or is used in the composting process. Due to site topography, this water will not reach the landfill drainage facilities or run off the site due to berms along 1300 South Street and the western landfill perimeter (Figure 2). Standing water in this area, if any, may be sprayed back on the compost piles to promote decomposition.

No potential pollutants are identified for this area since there is no runoff from this area.

6.3.5 Aboveground Fuel Storage

Runoff from the area surrounding the two aboveground storage tanks (ASTs) flows to the southwest to the perimeter drainage ditch along the north side of 1300 South Street. It then flows into a settlement/treatment basin which discharges through a culvert under 1300 South Street to the flood control ponds.

The potential pollutants likely to be present in storm water from the AST area include diesel fuel and gasoline.

6.3.6 Heavy Equipment Storage and Mobile Fuel

Heavy equipment, including loaders, shredders, trucks etc. are stationed on paved surfaces near the compost area, green waste area, and maintenance shop when not in use. Runoff from these areas should drain to the center of the property, but could also flow to the south, along the paved surface into the perimeter drainage ditch along the north side of 1300 South Street. It then flows into a settlement/treatment basin which discharges through a culvert under 1300 South Street to the flood control ponds.

A mobile fuel tanker fuels the heavy equipment at the stationed location. Runoff from this source will follow that of the runoff described for the active face, the public drop-off area the HHW and the composting area.



The potential pollutants likely to be present in storm water from the heavy equipment storage area and the mobile fuel tanker include diesel fuel, oils, antifreeze and other products used in heavy equipment.

6.3.7 Generator (Dewatering Ditch)

A generator used to power the pump which "lifts" the uncontaminated groundwater in the dewatering trench to the trench for discharge in to the flood control ponds. Runoff from the location of where this generator is used would flow into the dewatering trench which drains to the flood control ponds.

The potential pollutants likely to be present in storm water from the AST area include diesel fuel, oils, antifreeze and other products used in heavy equipment.

6.3.8 Leachate Ponds

The leachate ponds on the SLVSWMF property are constructed in manner that storm water would flow into the pond and evaporate and thus there is minimal to no potential for leachate to escape the pond in storm water runoff.

6.4 RISK IDENTIFICATION AND SUMMARY OF POTENTIAL POLLUTANT SOURCES

The SLVSWMF does not use fertilizer, herbicide or pesticides; does not implement land application; does not have open dumping areas, nor uncontrolled leachate systems, so there is no risk associated with these activities and/or materials that were defined in the Permit.

6.4.1 Earth/Soil Moving

Construction and earth moving occurs at the facility. Leaking equipment poses a risk for oils and fuel to be released to storm water and erosion from earth moving poses a risk of sediment and solids



6.4.2 Waste Hauling and Loading/Unloading

Waste that is hauled, loaded and unloaded inappropriately could potentially contribute metals or organic compounds to the storm water, and may raise chemical oxygen demand (COD) or total organic compound (TOC) levels in surface runoff.

6.4.3 Daily, Interim, and Final Cover Material Storage

Daily, interim and final cover materials are stored on undeveloped landfill cells. Potential pollutant sources include sediment and solids.

6.4.4 Temporary Waste Storage Areas

The only temporary waste storage area is the public drop off area, but those wastes are transported to the active face on a daily basis. Waste that remains in this temporary storage area could potentially contribute metals or organic compounds to the storm water, and may raise COD or TOC levels in surface runoff.

6.4.5 Exposure of Active and Inactive Landfill

The active portion of the landfill could potentially contribute metals or organic compounds to the storm water, and may raise COD or TOC levels in surface runoff. The inactive portion of the landfill could potentially erode if not fully vegetated contributing solids to storm water runoff.

6.4.6 Failure or Leaks from Leachate Collection and Treatment Systems

Failures and leaks from the leachate collection system that co-mingle with storm water could potentially contribute metals or organic compounds to the storm water, and may raise COD or TOC levels in surface runoff.

6.4.7 Haul Roads and Vehicle Tracking of Sediments

Haul roads and sediment from vehicle tracking have the potential to pollute storm water with sediment and solids.



6.5 RECORD OF SPILLS AND LEAKS

Spills or leaks of toxic or hazardous pollutants have been noted at the SLVSWMF prior to this SWPPP modification. Spills or leaks would include unauthorized disposal of hazardous wastes, releases of petroleum products from site vehicles or equipment, or leachate seeps from the sides of landfill cells. Eight spills or leaks have been identified since the active landfill cells began receiving waste. The dates, locations, and impacts of the releases are listed in Appendix D.

If significant spills and leaks of toxic or hazardous pollutants occur, those spills and leaks are recorded and added to the list in Appendix E. Releases at the Facility have occurred at various locations and appear to be unrelated in cause. Appropriate action to remediate impacts as a result of each release was taken based on water and soil analytical results. If appropriate, operational procedures were modified to eliminate the possibility of a repeat occurrence.

6.6 HISTORICAL SAMPLING DATA

The historical storm water analytical requirements were the same as the surface water sampling requirements; therefore, all historical sampling data are contained in the semi-annual surface water monitoring reports, under the control of the Pollution Prevention Team Manager.

All available sampling data for leachate generated at this site is provided in semi-annual leachate monitoring reports, under the control of the Pollution Prevention Team Manager.



7.0 STORM WATER MANAGEMENT CONTROLS

7.1 GOOD HOUSEKEEPING PRACTICES

Good housekeeping practices are essential to confine exposed wastes and reduce the time that wastes are exposed.

7.1.1 Exposed Wastes

At the end of each day, a geosynthetic and/or 6-inch soil daily cover is placed over the working face to reduce the time that wastes are exposed to wind, rain, disease vectors, etc. A 12-inch soil cover is applied whenever the active area will not be receiving new waste for a period longer than 30 days. This will reduce the potential for the landfill to contribute pollutants to storm water.

Wastes brought to the public drop-off area are constantly being removed to the active face of the landfill by landfill personnel. Recyclables and household hazardous wastes are placed in covered containers at the site. These activities prevent uncontrolled wastes from accumulating in this area, and reducing the potential for rain to come in contact with wastes at this location.

7.1.2 Litter

The site operator uses a litter collection program to minimize the impacts of litter on storm water runoff from the site. This program consists of various activities designed to reduce windblown litter, as well as other site features and operations that help to reduce windblown litter. Activities specifically designed to reduce amounts of windblown litter include minimizing the size of the active face to reduce the area of wastes exposed to wind, erecting temporary litter fences downwind from the active face, and adjusting the height and length of litter fences to maximize their effectiveness in trapping windblown litter. Other features and operating techniques that reduce windblown litter include constructing perimeter fencing around the landfill site to back up the temporary litter fences, applying daily and intermediate cover, and compacting refuse layers at a maximum thickness of 2 feet to hold freshly deposited refuse to underlying landfill



layers. Site and surrounding areas are observed, but not documented routinely, and any windblown litter found will be collected.

7.1.3 Vehicle/Equipment Leaks

Landfill equipment is moved around the facility to perform construction, maintenance, repairs, waste handling, etc. This equipment is routinely serviced, maintained, and inspected to reduce the chance for oils, coolants, or other products to leak or drip on the ground surface.

7.2 PREVENTIVE MAINTENANCE

Monthly inspections of the landfill drainage system will be performed by landfill personnel. The inspections will document areas where repairs are needed due to blockages, erosion, etc.

Failure of temporary drainage facilities is most likely to occur during heavy, storm-water runoff. Repair of failed facilities is important in areas where erosion of cover soils, or runoff contact with refuse may occur.

The following actions will be taken if blockage or failure of any *temporary* drainage facility occurs, including diversion berms and ditches:

1. Repair failure immediately using on-site soil, hay bales, temporary drainline, or other available materials.
2. When site conditions permit, make permanent repairs to the failed facility, replace or relocate the facility, or install permanent facilities per the site operations plan to prevent future failure.

The following actions will be taken if blockage or failure of any *permanent* drainage facility occurs, including oversized drains, culverts, and lined ditches:

1. Immediately attempt to remove the blockage to restore normal drainage.



2. Repair failure immediately by using on-site soils, hay bales, temporary drainline, or other available materials.
3. When site conditions permit, either make repairs to the failed facility, or replace or relocate the facility to prevent future failure.

Prompt repair or clearing of any permanent drainage facility is important, especially when erosion of cover soils may occur. Based on the nature of the facility failure, investigation into its adequacy may be conducted to minimize the potential for similar, future failures.

Records of the preventive maintenance inspections are retained in Appendix E of this SWPPP.

7.2.1 Chemical and Significant Material Storage

Monthly inspections will be conducted for outdoor chemical and significant material storage; specifically, the ASTs will be inspected for prevention of leaking or rupture.

7.2.2 Leachate Collection and Treatment Systems

Monthly inspections will be conducted to ensure the prevention of leachate and storm water co-mingling.

7.2.3 Final Cover

Monthly inspections will be conducted to maintain the integrity and effectiveness of intermediate and final cover areas. Repairs of these areas will be made, as necessary, to minimize the effects of settlement, sinking and erosion.

7.3 SPILL PREVENTION AND RESPONSE PROCEDURES

Spills, leaks and other unplanned occurrences constitute emergencies and will be handled according to SLVSWMF's Emergency Response/Contingency Plan. Potential spills and leaks include:



- Presence of fluid/leachate seeps from the side slopes of the refuse fill areas;
- Unauthorized discharge of hazardous or toxic materials, including accidental spills of materials authorized on site and illegal discharges by waste haulers; and
- Fuel and oil spills or leaks from ASTs and mobile equipment

7.3.1 Control of Leachate Seeps

The SLVSWMF is constructed with a base liner and, thus, contains a Leachate Collection and Removal System (LCRS). Any leachate production should first be noticed in a collection sump of the LCRS.

Leachate that accumulates during the operating life of the landfill will be removed and, if appropriate, applied to the active face as water for dust control. After closure of landfill areas, leachate collection sumps will continue to be monitored. If necessary, leachate will be removed from collection sumps and disposed of in accordance with applicable regulations and site permits.

In the unlikely event leachate should seep from the landfill side slopes, the following actions will be taken:

1. Leachate seepage shall be contained immediately by constructing a temporary berm/sump in the vicinity of the seeps.
2. Samples of the leachate will be taken for immediate analysis of chemical constituents.

Based on sampling and analysis results of the leachate, a remediation program and schedule will be developed.

The leachate pond located on the northeast corner of the landfill property contains pumps and piping that carry leachate to the pond that are above ground and will be



inspected for leaks when the pond is in use. The pond is lined and the leachate will be maintained at a level low enough to allow precipitation without the pond overflowing.

7.3.2 Control of Hazardous/Toxic Materials

Most spills or releases are likely to occur on the working face of the active landfill cell. A prohibited waste control program designed to detect and deter attempts to dispose of hazardous and other unacceptable wastes is in place at the SLVSWMF. The program is designed to protect the health and safety of employees, customers, and the general public, as well as protect against contamination of the environment. The Environmental Compliance Team Member is in charge of hazardous waste activities.

The site is open for public and private disposal. Signs posted near the site entrance clearly indicate (1) the types of wastes that are accepted; and (2) that hazardous wastes that do not qualify as HHW are not accepted at the site. All vehicles delivering wastes to the site will be stopped at the scale-house. Scale-house personnel will, to the extent possible, visually inspect incoming waste for hazardous materials. Any vehicle suspected of carrying unacceptable materials (liquid waste, sludges, or hazardous waste) that do not qualify as household hazardous wastes will be prevented from entering the disposal site area.

After the load has been inspected at the scale-house, the vehicle is routed to the active disposal area and directed to the appropriate discharge location by site personnel. Waste Inspectors will visually inspect loads at the tipping face. Vehicles carrying non-household hazardous materials will be required to exit the site without tipping their loads. If a discharged load contains non-household hazardous material, the discharger will be required to reload the material and remove it from the landfill site. The discharger will be instructed on how to dispose of the wastes.

If an illegal discharge of hazardous wastes or designated wastes occurs at the landfill and the discharger is not identified, the following actions will be taken:

1. Immediately cordon off area where discharge occurred.
2. Notify discharger, if discharger can be identified, to remove the waste.



3. If discharger can not be identified, identify the discharged material, if possible. If hazardous/toxic, contact a company that manages hazardous/toxic materials to remove the material.
4. Apply absorbent to the material, if necessary.
5. Pack discharged material into 55-gallon drums approved for disposal.
6. Prepare manifest, if required.
7. Contact licensed hauler to transport material to an approved disposal facility.

If the discharge of toxic or hazardous materials is a result of an accidental spill, site personnel will not attempt to clean up a spilled material if its identity is unknown, or if it is known to be hazardous. In such a case the following actions will be taken:

1. Cordon off area where spill occurred. Relocate the working face as required.
2. If possible, identify the spilled material. If the spilled material can be identified as nonhazardous, site personnel will dispose of the material in the landfill. If the spilled material can not be identified as nonhazardous, SLVSWMF will contact a company specializing in hazardous waste handling to clean up the spill.

7.3.3 Fuel and Oil Spills

In some instances, such as a fuel spill, impacted soil may be treated on site to reduce contaminants to acceptable levels. In this case, methods of treating the on-site soil will be discussed with appropriate regulatory agencies.



7.4 INSPECTIONS

Inspections will be performed by the Environmental Compliance Team Members to insure that day-to-day operations and storm water control features comply with this plan and are working to reduce the potential for pollution of storm water runoff.

As an operating landfill in an arid area, the SLVSWMF is required to conduct inspections at least once every 7 at the following locations:

- Areas of the landfill that have not yet been finally stabilized,
- Active land application areas,
- Areas used for storage of materials/wastes that are exposed to precipitation,
- Stabilization and control measures,
- Leachate collection and treatment systems, and
- Locations where equipment and trucks enter and exit the site.

Since the SLVSWMF is located in a semiarid area, during seasonal arid periods, inspections must be conducted at least once every month. Seasonal arid periods are defined in this SWPPP as the months of June, July and August.

These inspections are summarized below.

- Inspections of storm water diversion and drainage facilities: The Compliance Team Member will inspect diversion berms, ditches, culverts, oversized drains, runoff basins and silt fences to insure that they are functioning appropriately and do not need repairs. The inspections will be performed monthly. The inspection observations will be recorded on a Preventive Maintenance Inspection Record (Record). These records will be maintained on-site with this SWPPP.

If the inspection indicates that repairs are needed, a copy of the Record will be given to the Operations Manager and to the Pollution Team Leader. A follow-up inspection will be made within one week to document that the needed repair(s) has/have been made.



- Inspections of operating face activity: The Environmental Compliance Team Member will inspect, at least monthly, the waste handling activities being performed along the working face of the landfill, including the compaction of lifts, placement of daily and intermediate cover, litter control, and compliance with special waste handling procedures and with the hazardous waste exclusion program. The inspectors will record their observations and place the documentation in inspection files maintained by the Environmental Compliance Team Member in Appendix E of the SWPPP. If inspections reveal deficiencies in operations at the working face, a report will be given to the Pollution Team Leader with recommendations for changes. Appropriate training of the employees affected by the changes will be conducted within one month of the noted deficiency. Follow-up inspection(s) will be performed one week after training has been completed.

Records of all the monthly inspections are retained in Appendix E of this SWPPP.

7.5 EMPLOYEE TRAINING

Employees responsible for implementing and overseeing the activities described in this SWPPP, or otherwise responsible for storm water management, will receive annual training in topics critical to the successful implementation of this SWPPP. The training records and dates for the training are provided in Appendix F.

The annual training must include:

- Summary of the SWPPP requirements;
- Individual responsibilities;
- Conducting inspections;
- Spill response;
- Good housekeeping; and
- Material management practices.

7.6 RECORD KEEPING AND INTERNAL REPORTING

The following records and reports must be maintained at the SLVSWMF. The location of the records and reports, within this SWPPP are described below:



- Certification of the SWPPP – Section 4.2 and Appendix B;
- Spills and Leaks – Section 6.5 and Appendix D;
- Preventive Maintenance and Inspections – Section 7.2, Section 7.4 and Appendix E;
- Employee Training – Section 7.5 and Appendix F;
- Comprehensive Annual Compliance Evaluation – Section 8 and Appendix G;
- Discharge Monitoring Reports – Section 10 and Appendix H; and
- The types of wastes disposed of in each cell/module – SLVSWMF Administration Building.

7.7 NON-STORM DISCHARGE

There is one source of non-storm discharge at the landfill. Groundwater, which is pumped from beneath new modules to facilitate construction and is discharged to the perimeter berm and treatment ditches, where it is finally released to the post-treatment flood control ponds south of 1300 South Street.

7.8 SEDIMENT AND EROSION CONTROL

SLVSWMF has, and will have throughout the life of the Facility, areas where erosion must be actively controlled. These include: areas where daily, intermediate, and final cover is placed over waste; temporary soil stockpiles; drainage ditches; and perimeter berms. To control erosion, SLVSWMF has an established drainage and soil erosion control program. The drainage and soil erosion control program consists of three elements: 1) drainage control facilities, 2) design slope lengths, and 3) erosion control vegetation. Each element of this program is implemented and maintained to control soil erosion at the facility.



7.8.1 Permanent Drainage Control Facilities

In order to convey storm water from the landfill areas with minimum erosion, the surface drainage system for the landfill will include diversion berms, ditches, culverts, oversized drains, and energy dissipaters. Temporary storm runoff basins and silt fences will also be used to minimize soil migration from the landfill, as necessary.

All on-site drainage control facilities are designed to carry 25-year, 24-hour storm volumes to collect and control water and prevent flow into active portions of the landfill. Storm water runoff and final storm water drainage control facilities were sized using applicable design criteria from the UDH Roadway Drainage Manual (Utah Department of Transportation, 1984).

7.8.2 Design Slope Length

In order to reduce soil loss from erosion, slope lengths are designed to be less than the maximum lengths as determined by the Universal Soil Loss Equation (USLE) (USDA, 1977). A maximum allowable soil loss of 2 tons per acre per year was used for slope length design.

7.8.3 Erosion Control Vegetation

Final and intermediate cover will be vegetated with compatible plant species to limit erosion and enhance the expected end use for the site. Hay and straw may be used on the steeper gradients to minimize soil erosion during seed germination. This material will be kept moist until the vegetation is established. Temporary silt fences will also be set up to contain excess erosion while the vegetation is newly planted. When the vegetation becomes well established, the landfill surfaces are not expected to be significantly eroded by rainfall and runoff. Silt fences can be removed after the vegetation is well established.



7.9 MANAGEMENT OF RUNOFF

Runoff from the active face of the landfill will be directed via a network of module and perimeter drainage ditches to the settlement/treatment ditches located just north of 1300 South Street.

Water flowing through these settlement/treatment ditches passes through stages which retard flow and encourage settling. The treatment ditches are planted with biofilter vegetation to help clarify and remove potential pollutants from the runoff. The outflow of the treatment ditches then crosses under 1300 South Street and flows into flood control ponds to Lee Creek.



8.0 COMPREHENSIVE ANNUAL SITE COMPLIANCE EVALUATION

The Environmental Compliance Team Member will be responsible for conducting the Comprehensive Annual Site Compliance Evaluation. This evaluation must occur at least annually, but may be conducted more frequently if the Team Manager deems it necessary.

The evaluation must include:

- Visual inspection the areas contributing to a storm water discharge for evidence of, or the potential for, pollutants entering the drainage system;
- Evaluation of measure to reduce pollutant loadings to determine whether they are adequate and properly implemented in accordance with the permit and this SWPPP;
- Identify if additional control to reduce pollutant loadings are necessary;
- Observation of structural storm water measures, sediment and erosion control measures and other pollution prevention measures identified in this SWPPP to ensure they are operating correctly, and
- Visual inspection of the equipment necessary to implement the SWPPP, such as spill response equipment.

Based on the results of this evaluation, the description of pollutant sources in Section 6.0 and measures and control in section 7.0 of this SWPPP shall be revised within 2 weeks of this evaluation. The revision must provide for implementation of any changes to the SWPPP in a timely manner (no more than 12 weeks after this evaluation).

A report of the evaluation must include:

- Summary of the scope of the evaluation;



- Personnel making the evaluation;
- Date of the evaluation;
- Major observations relating to the implementation of the SWPPP with required revisions; and
- Incidents of non-compliance.
 - If there are no incidents of non-compliance, the report must contain certification that the facility is in compliance with the SWPPP and the Permit. The report must be signed in accordance with the Permit, Part VI.G and certified either by a principal executive officer or ranking elected official.

The Comprehensive Annual Compliance Evaluation Reports will be retained, in Appendix G, as part of the SWPPP for at least three years after the date of the evaluation.



9.0 NUMERIC EFFLUENT LIMITATIONS

Part IV of the Permit only applies to activities related to coal storage. The SLVSWMF does not store coal and there are no storm water discharges associated with coal pile runoff.

Appendix II.L of the Permit specifies numeric limitations beyond those in Part IV of the Permit for the pollutants listed below, however, as described in 40 CFR 445.2(b), these numeric limitations are only applicable to contaminated storm water. Contaminated storm water is defined as storm water that comes in contact with the landfill wastes, the waste handling and treatment areas, or landfill waste water.

In practice, and as described in this SWPPP, the SLVSWMF is designed in a manner that does not allow for off-site release of contaminated storm water. In the event the SLVSWMF has an off-site release of contaminated storm water, the discharge must be sampled for the pollutants listed in Appendix II.L of the Permit, which are: BOD5, Total Suspended Solids, Ammonia, Alpha Terpineol, Benzoic Acid, p-Cresol, Phenol, Zinc (Total), pH.



10.0 MONITORING AND REPORTING REQUIREMENTS

Under Appendix II.L of the Permit, the SLVSWMF is subject to different monitoring requirements for contaminated storm water and uncontaminated storm water. Section 9 of the SWPPP outlines the pollutants and sampling required for contaminated storm water. Section 10 outlines the monitoring and reporting requirements for the uncontaminated storm water.

10.1 QUARTERLY ANALYTICAL MONITORING REQUIREMENTS

During the second and fourth year of the Permit, the SLVSWMF must monitor uncontaminated storm water discharges at least quarterly for the following pollutants and their corresponding benchmark concentrations provided in Appendix II.L of the Permit:

Total Suspended Solids (TSS)
Total Recoverable Iron

The following information must be provided with the analytical results:

- Date of the storm event sampled;
- Duration (in hours) of the storm event sampled;
- Rainfall measurements, or estimation (in inches);
- Duration between the storm event and the previous measureable storm event (greater than 0.1 inches of rainfall); and
- Estimate of the total volume (in gallons) of the discharge.

10.1.1 Monitoring Periods

The periods for quarterly monitoring are defined in the Permit as:



- January through March;
- April through June;
- July through September; and
- October through December

10.1.2 Sample Type

A minimum of one grab sample must be collected. The samples must be collected from a storm event that is greater than 0.1 inches in magnitude and occurs at least 72 hours from the previously measurable (greater than 0.1 inch) storm event. Waivers are allowed for this requirement; review Appendix II.L. of the Permit for such waivers.

The grab sample must be collected during the first 30 minutes of the storm water discharge. If it is impracticable to collect the sample in the first 30 minutes, a sample can be collected within the first hour of the discharge of storm water but this must be noted in the monitoring report and a discussion of why it was impracticable to collect the grab sample in the first 30 minutes.

10.1.3 Sample Waiver

If the SLVSWMF is unable to collect the sample during the determined sampling period due to adverse climate conditions, the SLVSWMF can collect a substitute sample from a separate qualifying event in the next sampling period. Adverse weather conditions would include extended frozen conditions, high flooding, etc.

The SLVSWMF may waive monitoring and reporting in the fourth year monitoring period if the average concentration for a pollutant calculated from all monitoring data during the second year monitoring period is less than the cut-off values in the Permit. To file this waiver, review the certification requirements included in Section II.L of the Permit.



10.2 REPORTING

The SLVSWMF must submit a Storm Water Discharge Monitoring Report (DMR) to DWQ, included as Appendix H, for the monitoring results post-marked no later than March 31st of the following year. For each outfall, one DMR must be completed per storm event sampled.

10.3 QUARTERLY VISUAL DISCHARGE MONITORING

The SLVSWMF must perform and document a visual examination of a storm water discharge from each outfall. The examination must occur at least once per quarter (identified in Section 10.3.1), during daylight hours, unless there is insufficient rainfall or snow melt to produce a runoff event.

10.3.1 Monitoring Period

The periods for quarterly visual examinations are defined in the Permit as:

- January through March;
- April through June;
- July through September; and
- October through December.

10.3.2 Sample and Data Collection

The sample examination must be made during the first 30 minutes (or as soon thereafter, but not to exceed 1 hour) of the storm water discharge begins. The samples must be examined on discharges from a storm event that is greater than 0.1 inches in magnitude and occurs at least 72 hours from the previously measurable (greater than 0.1 inch) storm event. The examination must document observation of:

- Color;
- Odor;
- Clarity;
- Floating solids;



- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other indicators of storm water pollution.

10.3.3 Visual Discharge Report

Visual examination reports must be maintained with the SWPPP. The report must include:

- Examination date and time;
- Examination personnel;
- Nature of the discharge (i.e. runoff or snowmelt); and
- Observations as described in Section 7.3.2; and
- Probable sources of observed storm water contamination.

10.3.4 Field Sampling Procedures

The procedures for storm water sampling are provided in Appendix I.



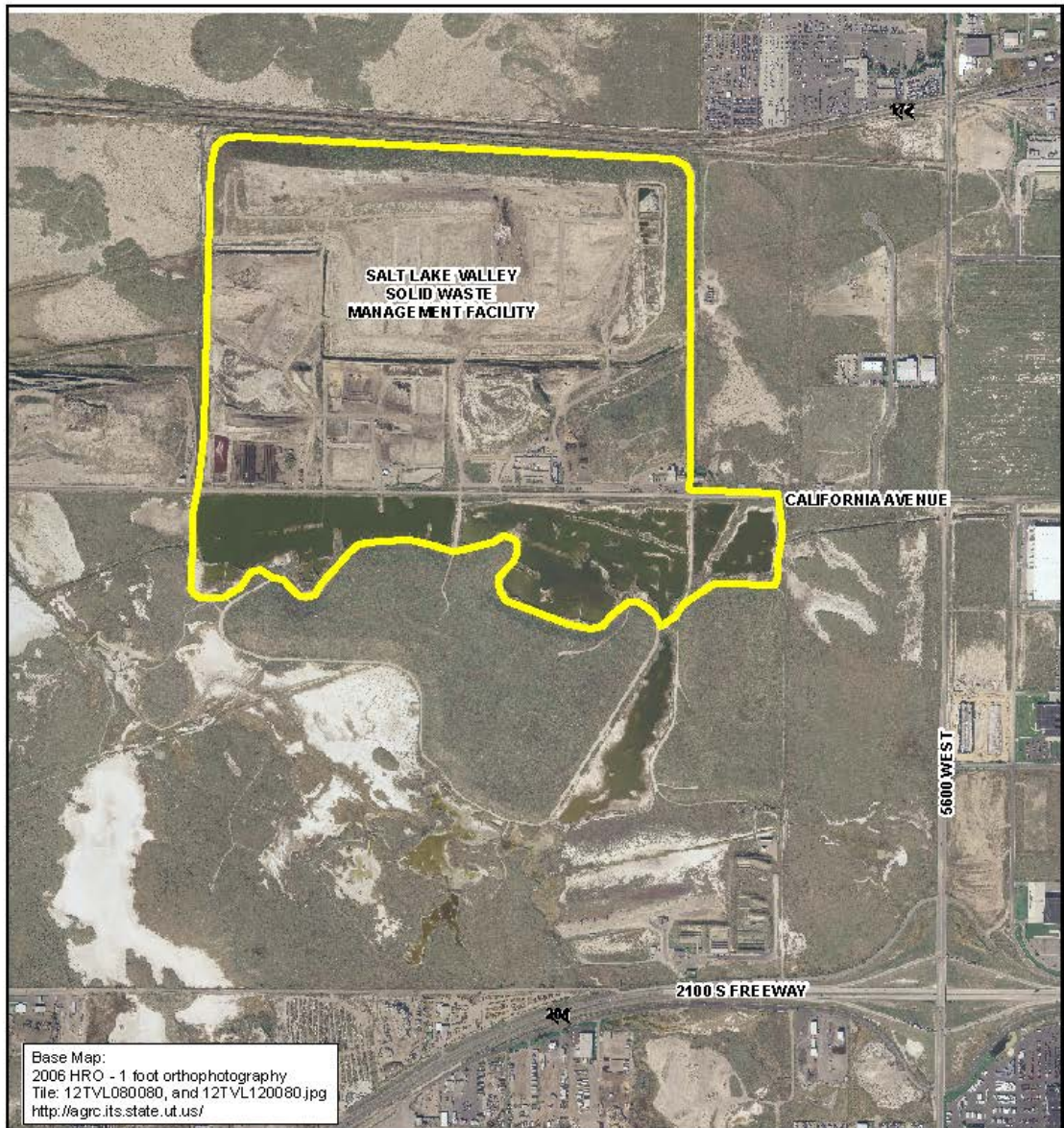
11.0 LIMITATIONS

This SWPPP was prepared in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on limited data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the SLVSWMF and the person in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance.

The work performed was based on project information provided by the SLVSWMF. If the SLVSWMF does not retain Kleinfelder to review any plans and specifications, including any revisions or modifications to the plans and specifications, Kleinfelder assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans and specifications, SLVSWMF must obtain written approval from Kleinfelder's engineer that such changes do not affect our recommendations. Failure to do so will invalidate Kleinfelder's recommendations.

FIGURES



Base Map:
 2006 HRO - 1 foot orthophotography
 Tile: 12TVL080080, and 12TVL120080.jpg
<http://agrc.its.state.ut.us/>

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KLEINFELDER
 949 West LeRoy Drive - Suite 200
 Salt Lake City, Utah 84123-2964
 Ph. (801) 261-3336 Fax (801) 261-3306
www.kleinfielder.com

LOCATION MAP	
SALT LAKE VALLEY SOLID WASTE MANAGEMENT FACILITY 6030 W CALIFORNIA AVENUE SALT LAKE CITY, UTAH	FIGURE 1

Cartography By: S.C.	03/08/2010	Project Number: 54629.009	File Name: SLC10.A038
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**STORM WATER POLLUTION PREVENTION PLAN
SALT LAKE VALLEY TRANSFER STATION
502 WEST 3300 SOUTH
SOUTH SALT LAKE CITY, UTAH**

Prepared for:



March 5, 2010

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THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.**



A Report Prepared For:

Salt Lake Valley Solid Waste Management Facility
6030 West California Ave.
Salt Lake City, Utah 84104

**STORM WATER POLLUTION PREVENTION PLAN
SALT LAKE VALLEY TRANSFER STATION
502 WEST 3300 SOUTH
SOUTH SALT LAKE CITY, UTAH**

File No.: 54629.009

Prepared by:

Krista Kinsey, E.I.T.
Staff Engineer

Kerry L. Ruebelmann, P.G.
Regional Manager

KLEINFELDER WEST, INC.
849 West Levoy Drive, Suite 200
Salt Lake City, Utah 84123
(801) 261-3336

March 5, 2010



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FIGURES

- 1 Location Map
- 2 Site Map

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- A UPDES MSGP
- B Certification of the SWPPP
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- D Spills and Leaks Identified
- E Preventive Maintenance and Inspection Records
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- H Visual Discharge Reports
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1.0 INTRODUCTION

The Salt Lake Valley Transfer Station (the Transfer Station) is jointly owned by Salt Lake City and Salt Lake County and operated by Salt Lake Valley Solid Waste Management Facility (SLVSWMF). The site is located at 502 West 3300 South Street on approximately 6.5 acres, within South Salt Lake City limits. Figure 1 provides a location map showing site location and boundaries.

Under the Utah Water Quality Act, storm water discharges from vehicle maintenance areas at motor freight transportation facilities are regulated by the Utah Department of Environmental Quality, Division of Water Quality (DEQ/DWQ). The Transfer Station is permitted to discharge storm water to East Mill Creek and the Jordan River in accordance with the provisions of Utah Pollutant Discharge Elimination System (UPDES) Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activity (the Permit). A Notice of Intent (NOI) has been filed with the DEQ/DWQ and a copy of subsequent NOI renewals from DWQ are included in Appendix A.

Under the Permit, the Transfer Station is required to maintain a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Part III and Appendix II.P of the Permit, and to monitor storm water discharges from the site quarterly in accordance with Part V and Appendix II.P of the Permit. The SWPPP must be amended whenever there is a change in design, construction, operation or maintenance which will have a significant effect on potential discharge of pollutants to waters of the State, or whenever the SWPPP proves to be ineffective in meeting its objectives.



2.0 GENERAL PERMIT COVERAGE

2.1 PERMIT COVERAGE

The Transfer Station is authorized to discharge under the UPDES MSGP for Storm Water Discharges Associated with Industrial Activities. The Permit became effective on February 1, 2009, and the authorization to discharge under this permit expires at midnight on December 31, 2013. Storm water discharges from the Transfer Station are covered in Appendix II.P.1 of the Permit, as provided in Table 1, Part I of the Permit. A copy of the Permit is included in Appendix A of this SWPPP

The Transfer Station must submit an NOI to the DWQ for renewal prior to termination of the Permit to ensure continued coverage.



3.0 SPECIAL PERMIT CONDITIONS

3.1 NON-STORM WATER DISCHARGES

The Transfer Station does not discharge non-storm water discharges. Other sources of water, such as wash-down waters generated from periodic washing of the tipping room floor, tunnel floor and equipment in the building are contained in holding tanks prior to sampling and discharge to the sanitary sewer system.

3.2 HAZARDOUS SUBSTANCES OR OIL

Hazardous substances or oil in storm water discharge(s) must be prevented or minimized in accordance with this SWPPP. The Permit does not release the Transfer Station from other reporting requirements, but in the event a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity occurs during a 24-hour period, the Transfer Station must:

- Notify the National Response Center (NRC) as soon as you have knowledge of the discharge;
- This SWPPP must be modified within 14 calendar days of knowledge of the release; and
- Submit documentation to the Utah DWQ within 14 days of knowledge of the release.

The required modification to the SWPPP and documentation to the DWQ are detailed in Part II.B of the Permit.

3.3 MULTIPLE ANTICIPATED DISCHARGES

At the time this SWPPP was modified, there were no anticipated discharges containing hazardous substances in an amount equal to or in excess of a reportable quantity. This



SWPPP must be modified if the Transfer Station anticipates discharges as described in Part II.B.2 of the Permit.

3.4 CO-LOCATED INDUSTRIAL ACTIVITY

At the time this SWPPP was modified, the Transfer Station did not have co-located industrial activities as described in Part II.C of the Permit. If co-location of activities is present, additional requirements from Appendix II of the Permit may be required and the SWPPP would require modification.



4.0 GENERAL STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

4.1 PROFESSIONAL ENGINEER REVIEW

The DWQ recommends that the SWPPP be signed by a State registered Professional Engineer (P.E.) particularly where plans are complex, treatment systems are used and risk to storm water discharges are significant. The Transfer Station SWPPP is not complex, treatment systems are not used and there are not significant risks to storm water discharges. At the time of this modification, the SWPPP was not signed by a P.E.

4.2 SIGNATURE AND SWPPP REVIEW

This SWPPP must be signed in accordance with the Permit, Part VI.G and retained on-site at the Transfer Station. The SWPPP must be signed and certified either by a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations. This officer must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or person 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."

The certification and appropriate signature are contained in Appendix B of this SWPPP.



4.3 KEEPING PLANS CURRENT

The SWPPP must be amended whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective for controlling discharge of pollutants.

4.4 APPENDIX II REQUIREMENTS OF THE PERMIT

The Transfer Station is subject to the requirements specified in Appendix II.P of the Permit. The Transfer Station does not have co-located activities and therefore, Appendix II.P is the only additional requirement for the SWPPP.

4.5 SPECIAL POLLUTION PREVENTION PLAN REQUIREMENTS

4.5.1 Additional Requirements for Discharges into or through Municipal Storm Sewer Systems Serving a Population of 100,000 or More

Since the Transfer Station discharges into a Municipal Storm Sewer System serving a population of more than 100,000, the Transfer Station must make this SWPPP available to the municipal system operator upon request.

4.5.2 Additional Requirements for Storm Water Discharges from Facilities Subject to EPCRA 313 Requirements

The Transfer Station does not use "Section 313 Water Priority Chemicals" and is not subject to the reporting requirements of EPCRA Section 313; therefore, the SWPPP is not subject to requirements of Part III.E.2 of the Permit.

4.5.3 Salt Storage

At the time of this SWPPP was modified, there was no salt storage at the Facility. If at some point in the future, the Transfer Station elects to store salt on the property, appropriate revisions to this SWPPP will be necessary.



4.5.4 Threatened or Endangered Species and Historic Properties

Part III.E.5(2) of the Permit states, "Where applicable, compliance efforts to these laws should be reflected in the SWPPP." At the time this SWPPP was modified, no known threatened or endangered species regulations or historic property regulations were applicable to the facility.



5.0 POLLUTION PREVENTION TEAM

The SWPPP must identify individuals within the facility organization as members of the Pollution Prevention Team (the Team). The Team is responsible for developing the SWPPP and assisting the facility manager with its implementation. The SWPPP must clearly identify the responsibilities of each Team member. All aspects of the SWPPP must fall under the activities and responsibilities of the Team.

The Team at the Transfer Station will include Transfer Station employees with management, environmental, and design/inspection responsibilities for the Transfer Station. The Team Member positions are shown below and contact information for individual team members is provided in Appendix C of this SWPPP.

Transfer Station Position	SWPPP Team Member Position
Associate Director of Environmental and Technical Services	Pollution Team Manager
Environmental Specialist	Environmental Compliance Team Member
Waste Inspectors/Inspections	Daily Reports

The responsibilities of each team member are as follows.

5.1 POLLUTION TEAM MANAGER

The Pollution Team Manager will be responsible for:

- Evaluating whether ongoing design and construction activities comply with the provisions of this SWPPP;
- Insuring that required maintenance and repairs are completed promptly;
- Overseeing emergency responses to spills and insuring that appropriate notifications are made;



- Providing the resources necessary for the Environmental and Engineering/Construction Compliance team members to carry out their responsibilities; and
- Providing input and senior review of plans and reports prepared by other team members.

5.2 ENVIRONMENTAL COMPLIANCE TEAM MEMBER

The Environmental Compliance Team Member will be responsible for:

- Ensuring that scheduled inspections are performed and documented;
- Updating the SWPPP, as necessary;
- Responding to spills and making appropriate notifications;
- Inspecting and correcting housekeeping practices;
- Insuring that quarterly monitoring is performed as required (Section 10 of the SWPPP);
- Providing transfer station personnel with proper training in spill response, good housekeeping and material management practices;
- Ensuring the hazardous waste exclusion program is fully implemented at all times;
- Conducting the comprehensive annual site compliance evaluation; and
- Preparing inspection reports as required.
- Monitoring ongoing construction activities to ensure that the drainage system is not damaged or altered; and



- Inspecting maintenance and repairs made to the storm water drainage system.

5.3 WASTE INSPECTORS

Waste Inspectors, while not specifically identified at the Transfer Station will:

- Observe housekeeping practices;
- Observe the storm water drainage system during operation to verify storm water is being appropriately channeled; and
- Verbally reporting potential problems to the Environmental Compliance Team Member.

6.0 POTENTIAL POLLUTANT SOURCES

6.1 SUMMARY OF POTENTIAL POLLUTANT SOURCES

The receipt, tipping and loading of waste is performed within an enclosed building; therefore, there is no potential for rainfall to come in contact with solid waste. Enclosed storage is also provided for household hazardous wastes (such as cleaning chemicals and batteries that are removed from wastes in the drop-off area prior to disposal). Four areas where rainfall can potentially come in contact with pollutants are (1) the location of the 8,000-gallon diesel aboveground storage tank (AST), which is located on the north part of the property, (2) the mobile fueling truck which travels across the facility, (3) the location of the 150-gallon diesel day tank for the back-up generator, located on the west side of the building; and (4) the storage of motor vehicles on the north side of the property (Figure 2). Vehicle and equipment maintenance are performed in an enclosed area within the Transfer Station building and are, therefore, not exposed to precipitation.

6.2 INVENTORY OF EXPOSED MATERIALS

Fuels and oils are exposed to precipitation but are all contained within storage containers at the Transfer Station. Waste is only stored within the building, and therefore, is not exposed to precipitation.

The business operating to the east side of the Transfer Station, a dry concrete bagging operation, uses the paved roads at the Transfer Station property for material haul-in and out. This business also stores soils and aggregates on their property, which has the potential to spill over onto the Transfer Station property that potentially leads to soils and sediment exposed to storm water.

6.3 DRAINAGE FROM SOURCE AREAS

Surface drainage at the Transfer Station is controlled by a paved surface sloped to drains on the eastern and on the northern parts of the property and sloped to detention ponds on the western and southern parts of the property. Water is directed to these



locations where it enters the storm water system (Figure 2). Water entering the drains on the eastern and northern portions of the property ultimately discharges to Mill Creek. Water entering the detention pond on the western portion of the property will infiltrate to the subsurface. Water entering the detention pond on the southern portion of the property will drain to the storm sewer system on 3300 South Street, which discharges to the Jordan River. These areas are shown on the site map, provided as Figure 2.

Drainage in the area of the 8,000-gallon diesel AST as well as the vehicle storage area, drains toward Outfall 1 as shown on Figure 2. Drainage in the area of the 150-gallon diesel day tank will be toward the west and south, in the direction of the detention pond on the western end of the property and the southern end of the property toward Outfall 2 as shown on Figure 2.

6.4 RECORD OF SPILLS AND LEAKS

Only one known leak has occurred at the Transfer Station and it is noted in Appendix D. If reportable spills or leaks occur, they will also be recorded in Appendix D. The record will include the date, location, impact and type of pollutant.

6.5 HISTORICAL SAMPLING DATA

The Transfer Station is not required to perform analytical sampling. At the time this SWPPP was modified, there was no historical sampling data available.



7.0 STORMWATER MANAGEMENT CONTROLS

7.1 HOUSEKEEPING PRACTICES

Good housekeeping practices are essential to confine exposed wastes and reduce the time that wastes are exposed. All areas that may contribute pollutants to storm water (all paved areas) must be maintained in a clean and orderly manner.

7.1.1 Litter

The site operator uses a litter collection program to minimize the impacts of litter on storm water runoff from the site. The Transfer Station is visually surveyed and windblown litter found is collected promptly.

7.1.2 Vehicle and Equipment Storage Areas

The storage of vehicles and equipment awaiting maintenance is within the Transfer Station building; these vehicles will not come in contact with storm water. Should a release occur from a vehicle, the floors of the Transfer Station are sloped to drains that connect to sumps or holding tanks and a release would be contained.

Transfer Station equipment is routinely serviced, maintained, and inspected to reduce the chance for oils, coolants, or other products to leak or drip on the ground surface. The vehicles stored at the north end of the property are used and maintained regularly. If oil, fuel or grease stains are observed during inspections in this vehicle storage area, the pavement will promptly be cleaned to minimize impacts to storm water.

7.1.3 Fueling Areas

The diesel AST is a double-walled 8,000-gallon steel tank. The tank is equipped with overfill protection and spill containment surrounding the fill pipe.



The AST is located on the northern part of the property in an asphalt-paved area. There is not an anticipated significant potential for tank failure that would result in a flow to the paved surface. There is some potential for a spill associated with failure during fuel dispensing, such as failure to properly secure or disconnect a fueling hose, however, the dispensers are controlled by a card reader so that only authorized personnel are allowed to use the fuel dispensers. Spill kits are located at the AST in the event of a spill during fuel dispensing

The Transfer Station uses service trucks to fuel equipment that remain inside the Transfer Station building. There is a minimal potential for a spill as the truck travels around the Transfer Station. Any spill should be immediately bermed and collected with absorbent materials. Fueling will be performed within the Transfer Station building and spills that may occur during fueling will follow the slope of the tipping room or tunnel floors, toward the interior drains. These drains are connected to oil/water separators, followed by 1,000-gallon holding tanks, which would contain the spill. The holding tanks are discharged to the sanitary sewer, not the storm water system, so there are no potential impacts to storm water associated with this activity.

A generator for use as back-up for the electrical system is located north of, and adjacent to, the main building at the Transfer Station (Figure 2). The generator is fueled by a 150-gallon day tank, sitting next to the generator. Both the generator and day tank are on asphalt pavement. There is a potential for a spill if the day tank is damaged or ruptured. Direction of drainage flow would be to the west, toward the storm water drainage system. Any spill should be immediately bermed and collected with absorbent materials.

7.1.4 Material Storage Areas

The Transfer Station will utilize various small containers of petroleum products in connection with routine maintenance of on-site equipment. These include products such as hydraulic oil, motor oil, antifreeze and kerosene. The largest capacity is 55 gallons. These materials are stored within the building. Reasonable potential for a spill exists if the equipment is damaged or over-turned. Should a spill occur in this area, it would follow the sloped floor to a drain that is connected to a 1000-gallon sump, therefore, there is no anticipated to impact to storm water associated with these materials.



7.1.5 Vehicle and Equipment Cleaning Areas

Transfer Station vehicles and equipment will be periodically cleaned on the tipping room floor. The wash-down water generated from cleaning will follow the sloped floor to a drain that is connected to a 1000-gallon holding tank. There is no potential for the wash-down water to come in contact with storm water. The holding tank discharges to the sanitary sewer, not the storm water system, so there are no potential impacts to storm water associated with this activity.

7.1.6 Vehicle and Equipment Maintenance Areas

All maintenance of vehicles will be performed either within the dock area of the Transfer Station or in the tipping room or tunnel floor area. Direction of drainage flow will vary given the particular location. Should a spill occur in the dock area, it would follow the slope of the dock floor toward the drain, which is connected to a sump. Spills that may occur in the tipping room or tunnel areas will follow the slope of the tipping room or tunnel floors, toward the interior drains. These drains are connected to oil/water separators, followed by 1,000-gallon holding tanks, which would contain the spill. Any spill should be immediately bermed and collected with absorbent materials.

Only light maintenance of vehicles is performed at the Transfer Station. The maintenance will be performed inside the loading dock area. The floor of the loading dock is sloped to the center, where it drains to a sump. Any spills or releases that occur during maintenance of vehicles and equipment will drain to this area.

7.1.7 Preventive Maintenance

Quarterly inspections of the Transfer Station drainage system will be performed by the Environmental or Engineering/Construction Compliance Team Members. The inspections will document areas where repairs are needed due to blockages, etc.



The following actions will be taken if blockage or failure of any drainage facility occurs:

- Immediately attempt to remove the blockage to restore normal drainage.
- Repair failure immediately by clearing drains of blockages or using other available materials.
- When site conditions permit, either make repairs to the failed facility, or replace or relocate the facility to prevent future failure.

Prompt repair or clearing of any permanent drainage facility is important. Based on the nature of the facility failure, investigation into its adequacy should be conducted to minimize the potential for similar, future failures.

Records of the quarterly preventive maintenance inspections are retained in Appendix E of this SWPPP.

7.2 SPILL PREVENTION AND RESPONSE PROCEDURES

Spills, leaks and other unplanned occurrences constitute emergencies and will be handled according to Transfer Station's Spill Prevention Control and Counter Measures Plan. Potential spills and leaks include:

- Release of diesel fuel during fuel dispensing of the 8,000-gallon diesel AST, the mobile fueling truck or the 150-gallon diesel day tank, such as failure to properly secure or disconnect a fueling hose.

The Transfer Station is equipped with commercial absorbents, pads and booms to use in containing a discharge. Equipment, personnel and materials to construct berms for temporary containment are always available. Any spill should immediately be bermed to prevent further migration. Should a spill occur within the Transfer Station building, it would be held temporarily by the holding tanks or sump. Collection of the spill with sorbent materials should commence only after its spread has first been halted. Impacted sorbent material will be disposed of at approved facilities.



Granular absorbent materials should be used to collect discharges onto the ground. Discharges that reach water should be collected with absorbent pads and booms. Disposal of used absorbents will be at approved facilities. If the spill is larger than the Transfer Station is capable of handling, an appropriate cleanup contractor will be contacted.

7.3 INSPECTIONS

Quarterly inspections will be performed by the Environmental and Engineering/Construction Compliance Team Members or the Waste Inspectors to insure that day-to-day operations and storm water control features comply with this SWPPP and are working to reduce the potential for pollution of storm water runoff. These inspections are summarized below.

- Inspections of storm water drainage facilities: The Engineering/Construction Compliance Team Member and the Waste Inspectors will inspect drains and detention ponds to insure that they are functioning appropriately and do not need repairs.
- The following areas must be inspected: storage area for vehicles, including equipment awaiting maintenance, fueling areas, vehicle maintenance areas (including areas inside the building), material storage areas (the ASTs, generator, and dock), and vehicle cleaning areas.
- If the inspection indicates that repairs are needed, a copy of the inspection/log will be given to the Operations Manager and to the Pollution Team Leader. A follow-up inspection will be made within one week to document that the needed repairs were made.

Records of the quarterly inspections are retained in Appendix E of this SWPPP.

7.4 EMPLOYEE TRAINING

Employees responsible for implementing and overseeing the activities described in this SWPPP, or otherwise responsible for storm water management, will receive at least



annual training in topics critical to the successful implementation of this SWPPP. Records of this training are maintained in Appendix F of this SWPPP.

The annual training must include:

- Summary of the SWPPP requirements;
- Used oil and fuel management;
- Spill prevention, response and control;
- Fueling procedures;
- Good housekeeping practices; and
- Solvent management, painting procedures, battery management (as applicable).

7.5 RECORD KEEPING AND INTERNAL REPORTING

The following records and reports must be maintained at the Transfer Station. The location of the records and reports are described below.

- Certification of the SWPPP – Section 4.2 and Appendix B;
- Spills and Leaks – Section 6.4 and Appendix D;
- Preventive Maintenance and Inspections – Section 7.1.7, Section 7.3 and Appendix E
- Employee Training – Section 7.4 and Appendix F
- Comprehensive Annual Compliance Evaluation – Section 8 and Appendix G; and
- Visual Discharge Reports – Section 10 and Appendix H of this SWPPP.

7.6 NON-STORM WATER DISCHARGE

There are no sources of non-storm water discharge; therefore, no sampling data or certification of evaluation is required.



7.7 SEDIMENT AND EROSION CONTROL

The Transfer Station facility is paved with asphalt and does not store soils or similar sediment generating material at the site. Therefore, the Transfer Station itself, will not have a need for sediment and erosion control, however, the adjacent business hauls and stores sediment generating material which have the potential to generate sediment in storm water from the Transfer Station property. If soil or sediment generating material is observed on the paved roadway at the Transfer Station, the Environmental Compliance Team Member should take timely action to remove the material from the road surface.

All on-site drainage control facilities are designed to carry 100-year, 24-hour storm volumes to collect and control water.

7.8 MANAGEMENT OF RUNOFF

Runoff from the Transfer Station is controlled by a paved surface sloped to a series of drains on the northern and eastern parts of the property which connect to a storm sewer system which drains to Mill Creek (Figure 2). On the southern part of the facility, paved and grass-covered areas are sloped to detention ponds on the southwest and southern parts of the property (Figure). Water entering the southwestern detention pond infiltrates to the subsurface, whereas water entering the southern detention pond drains to the storm drain system on 3300 South Street, which discharges to the Jordan River.



8.0 COMPREHENSIVE SITE COMPLIANCE EVALUATION

The Environmental Compliance Team Member will be responsible for conducting the Comprehensive Annual Site Compliance Evaluation. This evaluation must occur at least annually, but may be conducted more frequently if the Team Manager deems it necessary.

The evaluation must include:

- Visual inspection the areas contributing to a storm water discharge for evidence of, or the potential for, pollutants entering the drainage system;
- Evaluation of measure to reduce pollutant loadings to determine whether they are adequate and properly implemented in accordance with the permit and this SWPPP;
- Identify if additional control to reduce pollutant loadings are necessary;
- Observation of structural storm water measures, sediment and erosion control measures and other pollution prevention measures identified in this SWPPP to ensure they are operating correctly, and
- Visual inspection of the equipment necessary to implement the SWPPP, such as spill response equipment.

Based on the results of this evaluation, the description of pollutant sources in Section 6.0 and measures and control in section 7.0, if the SWPPP requires revisions, those revisions must be completed within 2 weeks of the evaluation. The revision must provide for implementation of any changes to the SWPPP in a timely manner (no more than 12 weeks after this evaluation).

A report of the evaluation must include:

- Summary of the scope of the evaluation;



- Personnel making the evaluation;
- Date of the evaluation;
- Major observations relating to the implementation of the SWPPP with required revisions; and
- Incidents of non-compliance.
 - If there are no incidents of non-compliance, the report must contain certification that the facility is in compliance with the SWPPP and the Permit. The report must be signed in accordance with the Permit, Part VI.G and certified either by a principal executive officer or ranking elected official.

The Comprehensive Annual Compliance Evaluation Reports will be retained, in Appendix G, as part of the SWPPP for at least three years after the date of the evaluation.



9.0 NUMERIC EFFLUENT LIMITATIONS

Part IV of the Permit only applies to activities related to coal storage. The Transfer Station does not store coal and there are no storm water discharges associated with coal pile runoff. Additionally, Appendix II.P of the Permit does not specify numeric limitations beyond those in Part IV of the Permit; therefore, there are no requirements for numeric limitations associated with the Transfer Station.



10.0 MONITORING AND REPORTING REQUIREMENTS

10.1 QUARTERLY VISUAL MONITORING REQUIREMENTS

The Transfer Station must perform and document a visual examination of a storm water discharge from each outfall. The examination must occur at least once per quarter (identified in Section 10.3.1), during daylight hours, unless there is insufficient rainfall or snow melt to produce a runoff event.

If there is insufficient rainfall or snowmelt to collect a sample, the requirements in Appendix II.P.4 of the Permit must be satisfied.

10.1.1 Monitoring Period

The periods for quarterly visual examinations are defined in the Permit as:

- January through March;
- April through June;
- July through September; and
- October through December.

10.1.2 Sample and Data Collection

The sample examination must be made during the first 30 minutes (or as soon thereafter, but not to exceed 1 hour) of the storm water discharge begins. The samples must be examined on discharges from a storm event that is greater than 0.1 inches in magnitude and occurs at least 72 hours from the previously measurable (greater than 0.1 inch) storm event. The examination must document observation of:

- Color;
- Odor;
- Clarity;
- Floating solids;
- Settled solids;
- Suspended solids;



- Foam;
- Oil sheen; and
- Other indicators of storm water pollution.

10.1.3 Visual Discharge Report

Visual examination reports must be maintained with the SWPPP and are contained in Appendix I. The report must include:

- Examination date and time;
- Examination personnel;
- Nature of the discharge (i.e. runoff or snowmelt); and
- Observations as described in Section 10.1.2; and
- Probable sources of observed storm water contamination.

10.1.4 Field Sampling Procedures

The procedures for storm water sampling are provided in Appendix H.



11.0 LIMITATIONS

This SWPPP was prepared in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on limited data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the Transfer Station and the person in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance.

The work performed was based on project information provided by the Transfer Station. If the Transfer Station does not retain Kleinfelder to review any plans and specifications, including any revisions or modifications to the plans and specifications, Kleinfelder assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans and specifications, Client must obtain written approval from Kleinfelder's engineer that such changes do not affect our recommendations. Failure to do so will invalidate Kleinfelder's recommendations.

FIGURES

PLOTTED: 05 Mar 2010, 11:43am, sccntreba

CAD FILE: L:\2010\Projects\54629\Figures\ LAYOUT: FIGURE 1

SALT LAKE CITY, UTAH



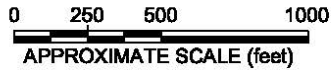
SALT LAKE VALLEY
TRANSFER
STATION

3300 SOUTH

500 WEST

1-15

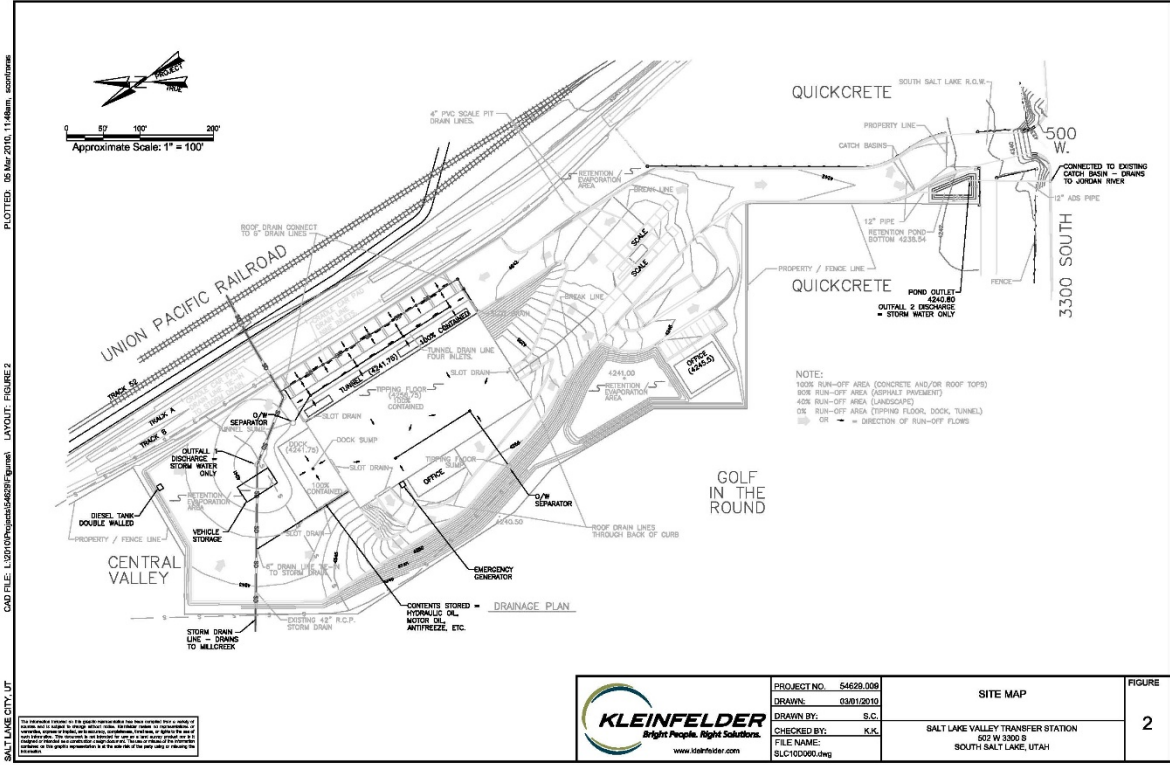
The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, considerations, omissions, or rights for the use of such information. This document is not intended for use as a legal survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or releasing the information.



PROJECT NO.	54629.009
DRAWN:	03/01/2010
DRAWN BY:	S.C.
CHECKED BY:	K.K.
FILE NAME:	SLC10D060.dwg

LOCATION MAP
SALT LAKE VALLEY TRANSFER STATION 502 W 3300 S SOUTH SALT LAKE, UTAH

FIGURE
1



SALT LAKE CITY, UT
 CAD FILE: L:\010\Projects\625\Final.dwg LAYOUT: FIGURE 2
 PLOTTED: 05 Mar 2010 11:48am, scottmcm

The information contained on this graphic representation has been prepared from a study of the site and vicinity. It is subject to change without notice. The engineer assumes no responsibility for the accuracy of the information shown on this graphic representation. It is the user's responsibility to verify the information shown on this graphic representation is as the user has it for the purpose of making the decision.



PROJECT NO. 54629.006
 DRAWN: 03/01/2010
 DRAWN BY: S.C.
 CHECKED BY: K.K.
 FILE NAME: SLC10090.dwg

SITE MAP
 SALT LAKE VALLEY TRANSFER STATION
 602 W 3300 S
 SOUTH SALT LAKE, UTAH

FIGURE
 2



***Escherichia coli* Storm Water Pollution Prevention Plan**

Volume 1 – Big Cottonwood/Creekside Regional Park, Bingham Creek Regional Park, Crestwood Park, Decker Lake Park, and Sugar House Park

Prepared for
Salt Lake County

February 2024

E. coli SWPPP Volume 1

February 2024

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Attachment A – Site Maps/Figures

Attachment B – Inspection, Assessment, and Maintenance Records

Abbreviations

BMP	Best Management Practice
DEQ	Department of Environmental Quality
DWQ	Division of Water Quality
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
MST	Microbial Source Testing
SLCo	Salt Lake County
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UPDES	Utah Pollutant Discharge Elimination System

1 Executive Summary

This Storm Water Pollution Prevention Plan (SWPPP) was prepared for Salt Lake County's Department of Parks and Recreation (Salt Lake County Parks) to satisfy requirements of the Utah Department of Environmental Quality – Division of Water Quality (DWQ) stemming from the [Jordan River Watershed E. coli Total Maximum Daily Load](#) (Jordan River TMDL) and incorporated into affected Utah Pollution Discharge Elimination System (UPDES) permits. Updates to the UPDES permit required the development of SWPPPs to address *E. coli* loading from "high priority" sites with the potential to discharge *E. coli*, including parks owned and operated by Salt Lake County.

This SWPPP addresses *E. coli* loading from the following Salt Lake County park sites:

- Big Cottonwood Park/Creekside Regional Park
- Bingham Creek Park
- Crestwood Park
- Decker Lake Park
- Sugar House Park

Salt Lake County Parks has prepared this SWPPP as an addendum to Salt Lake County's Municipal Separate Storm Sewer System (MS4) permit and existing TMDL Compliance Plan. This SWPPP is intended to fulfill requirement 3.2.2.3 of the MS4 permit. A separate SWPPP document addresses *E. coli* loading from Wheeler Farm.

This SWPPP describes structural and non-structural best management practices (BMPs) implemented or planned by Salt Lake County to limit *E. coli* loading to creeks tributary to the Jordan River. Key BMPs already in place and described in this SWPPP include:

- General education
- Animal feeding management
- Pet waste collection

Additional potential future BMP opportunities include:

- Expansion of existing BMPs (see above)
- Structure BMPs constructed as part of planned park improvements, including:
 - Vegetated buffers
 - Stormwater diversion and treatment

Salt Lake County will continue to implement and report on existing BMPs as described in this SWPPP. Salt Lake County will pursue potential future BMP opportunities as Park redevelopment and/or master planning opportunities occur and as resources (e.g., funding, staff) allow. Salt Lake County will consider potential pollutant reduction benefits beyond *E. coli* (e.g., nitrate, sediment) in the design and construction of future BMPs to maximize overall water quality benefits.

Salt Lake County will amend this SWPPP as necessary to reflect updates in BMP implementation and/or future requirements associated with changes to Salt Lake County's UPDES permit.

2 Facility Descriptions and Contact Information

This SWPPP addresses *E. coli* loading at the following five park locations owned and operated by Salt Lake County identified by Utah DWQ as high priority sites:

- Big Cottonwood Park/Creekside Regional Park
- Bingham Creek Park
- Crestwood Park
- Decker Lake Park
- Sugarhouse Park

The above parks have been identified as high priority sites based on their potential for *E. coli* loading to nearby creeks tributary to the Jordan River.

2.1 Facility Information

Table 2.1-1 includes the address, approximate size, and primary facilities and/or functions of the five parks addressed by this SWPPP.

Table 2.1-1 Summary of Facilities

Park Name	Address	Size (Acres)	Functions/Facilities/Uses ¹
Big Cottonwood/ Creekside Regional Park	4300 South 1300 East, Millcreek, UT 84117	89 acres	<ul style="list-style-type: none"> - Ballfields - Picnic area - Playground - Walking paths
Bingham Creek Regional Park	10200 South 4800 West, South Jordan, UT 84095	160 acres	<ul style="list-style-type: none"> - Multipurpose fields - Picnic area - Playground - Walking paths - Pavilions - Bike trails - Disc golf
Decker Lake Park	2900 Decker Lane, West Valley City, UT 84119	52 acres	<ul style="list-style-type: none"> - Walking paths
Crestwood Park	1675 East Siesta Drive, Cottonwood Heights	58 acres	<ul style="list-style-type: none"> - Picnic area - Playground - Tennis - Walking paths - Outdoor pool
Sugar House Park	2100 South 1330 East, Salt Lake City, UT 84106	110 acres	<ul style="list-style-type: none"> - Pond - Walking paths - Access to Parley's Trail - Sledding hills

Note(s):

(1) Table reflects primary information uses but may not reflect all facilities, uses, or functions occurring at each park.

2.2 Contact Information – SWPPP Team

Table 22.2-1 identifies Salt Lake County staff who are primarily responsible for developing and revising the SWPPP document and implementing the SWPPP, including operating and maintaining structural and non-structural BMPs, and taking corrective actions when required.

Table 2.2-1 SWPPP Implementation Team

Staff Names	Contact Information	Role/Responsibilities
Robert Thompson Watershed Section Manager	RThompson@slco.org 385.468.6642	<ul style="list-style-type: none"> Overseeing development of the SWPPP Modifications to the SWPPP document (cooperative)
Flood Control Engineering Stormwater Program Supervisors	jmikel@slco.org 385.468.6648	<ul style="list-style-type: none"> Inspecting BMPs Implementing corrective actions, as feasible Completing SWPPP reporting requirements
Park Operations	385.468.7275	<ul style="list-style-type: none"> Routine operation and maintenance of BMPs Implementing corrective actions, as feasible Modifications to the SWPPP document (cooperative)

2.3 Site Descriptions

Table 2.1-1 summarizes key information for each site. Programming, features, and other considerations unique to individual park sites that may be relevant to SWPPP implementation are noted in this section.

- Big Cottonwood/Creekside Regional Park
 - Ballfields used for sports leagues and other activities
 - Stormwater detention/flood risk reduction features on site
- Bingham Creek Regional Park
 - Multipurpose fields used for sports leagues and other activities
- Crestwood Park
- Decker Lake Park
 - Stormwater detention/flood risk reduction features on site
- Sugar House Park
 - Stormwater detention/flood risk reduction features on site

Existing and future BMPs must consider park-specific features and programming and be designed to not conflict with intended park uses/functions. Salt Lake County has prepared or is in the process of developing park master plans for the priority park sites described in this SWPPP. Salt Lake County will consider this SWPPP and opportunities to reduce *E. coli* loading when designing and implementing improvements identified in park master plans, as applicable.

2.4 Site Maps

Maps of priority park sites are included as part of this SWPPP as Attachment A:

- Big Cottonwood/Creekside Regional Park
 - Figure 1.0-A Site Overview - North
 - Figure 1.0-B Site Overview - South
 - Figure 1.1 Site Layout 1
 - Figure 1.2 Site Layout 2
 - Figure 1.3 Site Layout 3
 - Figure 1.4 Site Layout 4
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- Bingham Creek Regional Park
 - Figure 2.0 Site Overview
 - Figure 2.1 Site Layout 1
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- Decker Lake Park
 - Figure 4.0 Site Overview
 - Figure 4.1 Site Layout 1
 - Figure 4.2 Site Layout 2
 - Figure 4.3 Site Layout 3
- Sugar House Park
 - Figure 5.0 Site Overview
 - Figure 5.1 Site Layout 1
 - Figure 5.2 Site Layout 2
 - Figure 5.3 Site Layout 3
 - Figure 5.4 Site Layout 4

Maps of priority park sites present the following information, as applicable:

- Park extent and public access restrictions
- Existing BMP locations, including:
 - Animal feeding regulatory signage (see Section 4.1.2)
 - Pet waste collection/regulatory signage (see Section 4.1.3)
 - No camping signage (see Section 4.1.4)
 - Restrooms (see Section 4.2.3)
- Proposed BMP locations

-
- Topography
 - Conceptual flow/runoff directions
 - Streams/creeks
 - Stormwater infrastructure and visual inspection locations

3 Potential Pollutant Sources

Additional UPDES permit requirements related to *E. coli* pollutant loading apply to County parks because parks can include non-point sources of *E. coli* identified in the [Jordan River TMDL](#), including:

- Agricultural activities
- Domestic pets
- Wildlife
- Recreational activities
- Unhoused populations

On-site septic systems can also be a significant source of *E. coli* loading but are not present at the sites described in this SWPPP as those sites include sewer bathroom facilities.

3.1 Agriculture practices

Agricultural activities such as dairy farming, raising livestock and poultry, and producing crops can be sources of *E. coli* loading to waterways through direct deposition of fecal matter from farm animals standing in surface waters and from the runoff of farm-animal waste from pastures and corrals adjacent to surface waters. Land application of manure is a common agricultural practice in Utah and may contribute to *E. coli* loading.

Agriculture and/or livestock activities are not present at the priority park sites addressed by this SWPPP and are not considered to be a source of *E. coli* loading.

3.2 Domestic pets

Improper management of domestic pet waste (primarily dogs) is another source of *E. coli* loading into adjacent waterbodies. Dog waste in the immediate vicinity of a waterway can contribute to local and downstream water quality impacts.

Salt Lake County parks addressed by this SWPPP are frequently used by the public to walk and exercise dogs along trails and in open spaces, some of which are adjacent to creeks and open water. Salt Lake County parks addressed by this SWPPP do not include any off-leash dog play areas (although some users may allow their dogs off leash in violation of park rules).

3.3 Wildlife

Wildlife, especially waterfowl, can be a source of *E. coli* loading to surface waters. Transport of animal waste to surface waters is dependent on animal habitat and proximity to surface waters. Waterfowl and wildlife often deposit waste directly into streams or in the adjacent floodplain where it can be transported to surface waters by runoff during precipitation events. Animal waste deposited in upland areas can also be transported to canals, streams, and rivers, during larger precipitation events.

Waterfowl, including ducks and geese, are known to congregate in County parks. Open spaces adjacent to creeks, ponds, and other water resources can attract large number of waterfowl. Densely vegetated

riparian buffers can limit waterfowl access to creeks and deter large numbers from congregating. Areas used by picnicking park users can also attract waterfowl and other wildlife if food waste is not properly contained.

3.4 Unhoused populations

Transitory unhoused populations camping on County park land can have negative water quality impacts. Without adequate restroom access, human waste is often left behind or dumped directly into creeks contributing to *E. coli* loading. It is challenging to quantify the number of unhoused located in County parks because that number is constantly changing. At the time of SWPPP development, County staff estimate that significant unhoused populations are not present at sites addressed by this SWPPP and are not significant contributors to *E. coli* loading. Salt Lake County will continue to monitor the presence and potential impact of unhoused populations.

3.5 Other Sources

Other sources of *E. coli* loading not discussed in this SWPPP include permitted concentrated animal feeding operations (CAFOs), subsurface sewage treatment systems (SSTS, or septic systems), recreational activities without restroom facilities, and others. The SWPPP omits discussion of these sources because they are not applicable to the priority sites addressed by this SWPPP.

3.6 Identification of Pollutant Sources at Priority Sites

County staff performed site visits to the six priority park sites in October 2023 to inform development of this SWPPP. During site visits, County staff recorded observations related to potential sources of *E. coli* at individual priority park sites (see Table 3.6-1).

Table 3.6-1 Observations of Potential *E. coli* Loading Sources by Site

County Park	Potential <i>E. coli</i> Sources
Big Cottonwood/ Creekside Regional Park	<ul style="list-style-type: none"> • Dog sources near ballfields • Dog access to the creek south of Murray Holladay Road • Evidence of prior unhoused population north of Murray Holladay Road
Bingham Creek Regional Park ¹	<ul style="list-style-type: none"> • Potential dog sources along trails adjacent to Bingham Creek • Potential fowl sources in open areas adjacent to Bingham Creek
Decker Lake Park ²	<ul style="list-style-type: none"> • Fowl sources on and adjacent to Decker Lake • Dog sources along trails adjacent to Decker Lake
Crestwood Park	<ul style="list-style-type: none"> • Potential animal sources from equestrian use • Dog access to Little Cottonwood Creek
Sugar House Park	<ul style="list-style-type: none"> • Fowl sources in/near detention basin on west side of park, adjacent to Parleys Creek • Dog sources along trails adjacent to Parleys Creek

Notes:

Based on qualitative observations from October 2023 site visits.

3.6.1 Microbial Source Testing

The [Salt Lake County Watershed Monitoring Program](#) collects water quality data throughout the Jordan River watershed, including *E. coli* data at some locations upstream and/or downstream of priority park sites addressed by this SWPPP (see also Section 0). In addition to regular *E. coli* monitoring, microbial source testing (MST) was performed on a limited bases for monitoring sites located within the Jordan River watershed. MST assessed the amount of bacteria present contributed by:

- Dogs
- Fowl
- Humans
- Ruminants (e.g., deer, cow)

Table 3.6-2 qualitatively presents the primary sources of *E. coli* to downstream water resources for each priority park site based on limited MST data ([Who Poops Where | Salt Lake County Watershed Program \(arcgis.com\)](#)). Note that the location of sampling sites relative to each park and the large size of the overall tributary watershed relative to each park limit confidence in any conclusions. Further, MST evaluates bacterial load not limited to *E. coli*. Overall, the MST data indicates that wildlife sources (fowl, ruminants) are the primary sources of bacteria with dogs contributing a lesser amount. The BMPs considered to address *E. coli* loading and described in Section 4 are tailored to the estimated sources of bacteria loading.

Table 3.6-2 Assessment of Microbial Source by Site based on MST Data

County Park	Primary Bacteria Source(s)	Secondary Bacteria Source(s)
Big Cottonwood/Creekside Regional Park	Fowl	Dog; Human
Bingham Creek Regional Park ¹	Fowl	Ruminant ³
Decker Lake Park ²	--	--
Crestwood Park	Dog; Fowl; Ruminant	--
Sugar House Park	Fowl	Dog

Notes:

Ruminant sources include deer, elk, cow, and moose.

Data is taken from monitoring locations downstream of parks ([Who Poops Where | Salt Lake County Watershed Program \(arcgis.com\)](#)).

- (1) Closest monitoring location is located immediately upstream of confluence with Jordan River; data is likely not representative of park sources.
- (2) No monitoring location located near or downstream of Decker Lake Park
- (3) Ruminant data is impacted by pasture located upstream of monitoring site.

4 Structural and Non-Structural Best Management Practices

This section of the SWPPP describes existing and planned best management practices (BMPs) performed at priority sites to minimize *E. coli* loading to local waterbodies and the downstream Jordan River. BMPs include structural and non-structural BMPs. This section references BMPs implemented or maintained by other regulatory authorities (e.g., municipalities) although Salt Lake County has limited jurisdiction regarding implementation.

4.1 Non-Structural Best Management Practices

This section of the SWPPP describes non-structural BMPs.

4.1.1 General Education

Routine behavior of County Park users can impact *E. coli* loading from park sites, which occurs as non-point source pollution carried by stormwater runoff. Park users can minimize the potential for *E. coli* by:

- Picking up pet waste (see Section 4.1.3)
- Not feeding ducks, geese, or other animals
- Disposing of food waste to discourage congregation of wildlife
- Reporting site conditions that may contribute to *E. coli* loading (e.g., overflowing waste bins)

Salt Lake County partners with the [Salt Lake County Stormwater Coalition](#) to create and distribute educational materials about best practices for pollution prevention to residents and other audiences. The Stormwater Coalition website includes links to articles and videos that encourage pet waste collection and other simple pollution prevention measures. County staff will continue to cooperate with the Stormwater Coalition to ensure relevant educational materials remain available for residents and others who may visit County parks.

4.1.2 Food Management/Animal Feeding

Wildlife, primarily waterfowl, are a primary source of *E. coli* loading from the priority sites addressed by this SWPPP (see Section 3.6). The presence of accessible food (e.g., picnic areas, open dumpsters) can attract large numbers of waterfowl that leave excrement that is later washed into creeks and other waters. County staff maintain waste collection stations near picnic areas at each priority park site. County staff will continue to manage waste collection, where appropriate, to ensure that containers are not overflowing and that dumpsters are covered.

Salt Lake County will create and install signage prohibiting feeding of wildlife, where appropriate. Signage will be located at picnic or sitting areas near waterbodies where fowl are likely to congregate. The locations of signage prohibiting feeding of animals is shown on the site maps included in Attachment A, as applicable.

4.1.3 Pet Waste Collection/Signage

Pet waste is a significant potential contributor to *E. coli* loading from County parks. Salt Lake County has installed and maintains pet waste collection stations at each of the priority sites addressed by this SWPPP. Salt Lake County provides waste collection bags and disposal bins at each park.

Some priority park sites include “poop fairy” signage (see inset) or other signage encouraging park users to clean up after their dog(s). County staff will install additional signage at priority park sites in areas most critical to *E. coli* loading. Existing waste collection bins are adequate to accept additional waste.

The locations of pet waste collection stations are shown on the site maps included in Attachment A, as applicable.

4.1.3.1 Pet Leash Ordinances

County Ordinance [Title 8.06.010 – Animals](#) requires pets to be leashed in public parks or potentially receive an animal nuisance violation and associated fine. Requiring pets to be leashed limits the opportunity for animals to leave uncollected waste in the park or directly in adjacent waters. Signs noting that pets must be leashed are present at all priority park sites addressed by this SWPPP. The locations of signage communicating pet leash requirements are shown on the site maps included in Attachment A, as applicable.

While County ordinance requires pets be leashed County Parks staff do not perform enforcement actions. The effort required for County Parks staff to initiate enforcement action through local jurisdictions is prohibitive and thus violations are not issued. Municipal ordinances generally also require that pets be leashed in public spaces. Although municipal ordinances exist, local enforcement is lacking.

4.1.3.2 Pet Waste Ordinances

County Ordinance [Title 8.06.010 – Animals](#) requires pet owners to collect and dispose of pet waste in public parks or potentially receive an animal nuisance violation and associated fine. While County ordinance requires pet waste collection, County Parks staff do not perform enforcement actions. The effort required for County Parks staff to initiate enforcement action through local jurisdictions is prohibitive and thus violations are not issued.

Municipal ordinances generally also require pet waste collection (typically as part of garbage and/or nuisance ordinances).



Example of signage encouraging pet waste collection.

4.1.4 No Camping Signage

Municipal ordinances prohibit camping in public park areas, including Wheeler Farm. Salt Lake County has installed and maintains signage in County parks prohibiting camping. The locations of signage prohibiting camping are shown on the site maps included in Attachment A, as applicable.

4.1.5 Habitat Modification

Habitat modification includes alterations made to natural spaces to discourage the presence of wildlife and/or wildlife proximity or access water resources, specifically waterfowl. Habitat modification may include:

- Removing islands from ponds or wetlands
- Reducing mowed areas adjacent to waterbodies where fowl congregate
- Eliminating access routes from upland areas to waterbodies

By limiting the number of fowl present and further distancing them from water resources, habitat modification can limit the amount of *E. coli* carried to streams by stormwater runoff. Dense, vegetated buffers may be an element of habitat modification (see Section 4.2.1).

Presently, Salt Lake County has no plans to implement habitat modification activities for the primary purpose of reducing *E. coli* loading from wildlife. Future reconstruction, renovation, or park improvements efforts, however, may provide opportunity to incorporate design elements that minimize *E. coli* loading from wildlife. Salt Lake County will consider potential habitat modification practices as part of park master planning efforts and incorporate those practices with other intended park uses, as feasible.

4.1.6 Other Non-Structural BMPs Not Considered

Additional non-structural BMPs exist to limit *E. coli* loading particularly from fowl sources. Such practices include:

- **Passive deterrents:** including scarecrows, floating predatory decoys, etc.
- **Active deterrents/hazing:** using dogs or other intense action (e.g., fireworks) to harmlessly disperse waterfowl.
- **Repellents:** use of non-lethal chemicals that are safe for humans/dogs
- **Lethal Action:** hunting, culling, or reproductive control

Salt Lake County generally does not implement any of the above-listed non-structural BMPs because they conflict with the intended uses, programming, and/or public benefits of park spaces (e.g., aesthetic views). County staff have on occasion used fencing to limit wildlife and fowl congregation near waters to limit the potential for *E. coli* loading.

4.2 Structural Best Management Practices

This section of the SWPPP describes structural BMPs.

4.2.1 Vegetated Buffers

Vegetated buffers adjacent to streams and ponds can potentially increase or reduce *E. coli* loading to water resources. Vegetated buffers provided habitat for deer and other wildlife. Dense vegetated buffers, however, can also limit fowl access to streams and provide filtration benefits for stormwater runoff carrying *E. coli* bound to sediment and other pollutants. Dense, vegetated buffers also limit access of dogs to shoreline areas. The primary sources of *E. coli* from priority park sites include fowl and dogs. Thus, Salt Lake County estimates that densely vegetated buffers in parks generally reduce *E. coli* loading and provide a cumulative benefit.

Table 4.2-1 summarizes the current extent of vegetated buffers at priority park sites (as of Fall 2023).

Table 4.2-1 Assessment of Vegetated Buffer Condition

County Park	Summary of Vegetated Buffer(s)
Big Cottonwood/ Creekside Regional Park	On the south bank of Big Cottonwood Creek there is a strong vegetative buffer. On the north bank of Big Cottonwood Creek there is little to no established vegetative buffer. The north bank of the creek is composed of turf and exposed soil.
Bingham Creek Regional Park	Throughout the entirety of the park there is a large vegetative buffer on the north and south bank of Bingham Creek.
Decker Lake Park	There is a vegetative buffer around the entirety of Decker Lake.
Crestwood Park	Throughout the entirety of the park there is a strong vegetative buffer on both the north and south bank of Little Cottonwood Creek.
Sugar House Park	There are sections of vegetative buffer on the south or north bank of Parleys creek. The banks in the lower section of the park adjacent area to the creek are composed of turf and exposed soil.

Notes:

Based on conditions observed during October 2023 field visits.

Salt Lake County seeks to maintain existing vegetated buffer through its regular operations and maintenance activities. Salt Lake County currently has no plans to establish new non-mowed, vegetated buffer in areas where existing buffer is not present. Salt Lake County will consider the extent and condition of vegetated buffer in park master planning efforts and seek opportunities to maximize the benefits of vegetated buffers for restricting access of potential *E. coli* sources (e.g., dogs, waterfowl) and maximizing treatment of stormwater runoff.

4.2.2 Stormwater Diversion and Treatment

E. coli loading from the priority park sites described in this SWPPP occurs primarily from non-point sources transported via stormwater runoff. Some park areas drain directly to creeks, wetlands, or ponds located on-site via overland flow. Other areas drain to the storm sewer system and are conveyed offsite to stormwater infrastructure owned by other MS4s (e.g., cities). All priority park sites are located within the

Jordan River watershed and ultimately drain to the Jordan River. Conceptual drainage directions and known stormwater infrastructure are presented in the site maps included in Attachment A, as applicable.

Much of the runoff from priority park sites is conveyed to adjacent water resources or stormwater systems with little or no on-site stormwater treatment (beyond possible filtration by vegetated buffers adjacent to water resources, see Section 4.2.1). Additional stormwater treatment from low-impact development (LID) practices may reduce the amount of *E. coli*, sediment, nutrients, and other pollutants transported to local water resources and, ultimately, the Jordan River. Potential stormwater treatment practices effective at reducing *E. coli* include:

- Bioretention/Infiltration Basins
- Wetland Basins
- Retention Ponds

Salt Lake County is responsible for maintaining stormwater management infrastructure owned by Salt Lake County consistent with its MS4 permit and County Stormwater Management Plan. Salt Lake County currently has no plans to construct new structural stormwater treatment BMPs specifically to address *E. coli* loading at the priority park sites addressed by this SWPPP. Salt Lake County will consider opportunities to include stormwater treatment as part of park master planning and future redevelopment efforts. Future stormwater management BMPs will be designed consistent with the Utah DEQ [Guide to Low Impact Development in Utah](#).

4.2.3 Restroom Facilities

Salt Lake County maintains restroom facilities at all priority park sites addressed by this SWPPP with the exception of Decker Lake Park (note: a playground and restroom are identified as future improvements in the Decker Lake Park master plan). Restroom facilities are open approximately April through November and closed during the winter due to lack of heating. The restroom at Sugarhouse Park remains open all year to support use of the sledding hill. Salt Lake County will continue to maintain restroom facilities to minimize *E. coli* loading from human sources.

4.3 BMP Prioritization

Sections 4.1 and 4.2 described existing BMPs and planned BMPs to address *E. coli* loading at the six priority park sites addressed by this SWPPP. Not all BMPs are appropriate for each park. Salt Lake County has prioritized implementation of BMPs to maximize the impact on *E. coli* loading from existing staff and financial resources (see Table 4.3-1).

Table 4.3-1 Matrix of BMPs applicable to each priority park site

Priority Park	Best Management Practice (Current and Planned)							
	General Education	Animal Feeding Signage	Pet Waste Signage	Pet Waste Collection	Habitat Modification	Vegetated Buffers	Stormwater Treatment	Restrooms
Big Cottonwood/Creekside Regional Park	X	X+	X+	X+	O	O	O	X
Bingham Creek Regional Park	X	X	X+	X+	X	X	O	X
Decker Lake Park	X	X+	X+	X+	X	X	--	O
Crestwood Park	X	X	X+	X	X	X	--	X
Sugar House Park	X	X+	X+	X+	O	--	--	X

Notes:

X = current practice to be maintained

X+ = current practice to be enhanced or expanded in future

O = future activity to be considered for implementation at time of park development as resources allow

4.4 BMP Implementation

County staff will continue to implement the existing BMPs described in Sections 4.1 and 4.2 (listed with an "X" in Table 4.3-1). Table 4.4-1 summarizes the implementation of existing and planned BMPs. Information includes proposed location, BMP status, schedule, and estimated cost. Specific timelines have not been assigned to potential structural BMPs that may be implemented in coordination with park reconstruction (listed with an "O" in Table 4.3-1).

Table 4.4-1 BMP implementation schedule

Best Management Practice	Location ¹	Status	Schedule	Estimated Cost ²
General education	All sites	Continue existing	Ongoing	--
Animal feeding signage	All sites	Maintain existing and expand ¹	February 2024 and ongoing	\$5k-\$10k
Leash law signage	All sites	Maintain existing	Ongoing	--
No camping signage	All sites	Maintain existing	Ongoing	--
Pet waste collection	All sites	Maintain existing and expand ¹	February 2024 and ongoing	\$5k-\$10k
Expanded street sweeping	All sites	Begin in 2024	Annually	--
Drainage improvements/stormwater treatment	TBD	To be constructed with planned park improvements	TBD	TBD

Notes:

- (1) See planned BMP locations on figures included in Attachment A.
- (2) Costs included in this table reflect costs in addition to existing staffing and operational costs.
- (3) Improvements may be constructed with planned improvements to parks consistent with park master plans.

5 Inspection and Assessment

5.1 Routine and Annual Comprehensive Facility Inspections

County staff will perform monthly and annual inspections of the priority facilities described in this SWPPP. Inspection activities described herein are limited to those relevant to *E. coli* loading and associated BMPs. Additional inspection, documentation, and record keeping may be required consistent with Salt Lake County's general stormwater MS4 permit and are not superseded by this SWPPP.

5.1.1 Routine Facility Inspection

County staff will perform monthly visual inspections of the priority park sites described in this SWPPP. County staff will record the location and qualitatively assess the significance of the following potential *E. coli* sources, if present:

- Evidence of fowl congregation and/or water access
- Evidence of unhoused populations

County staff will note the presence and condition of BMPs addressing *E. coli* loading, including:

- Signage prohibiting camping
- Signage prohibiting off-leash pets
- Signage prohibiting feeding the animals
- Pet waste collection supplies and signage

County staff will inspect BMPs identified in the site maps included in Attachment A.

County staff will record visual inspections on the form(s) in Attachment B. County staff will follow standard operating procedures (SOPs) maintained outside of this SWPPP document, as applicable.

5.1.2 Annual Visual Inspection

County staff will perform annual visual inspections of priority park sites during snowmelt or runoff conditions. County staff will characterize the color, odor, and condition of stormwater runoff consistent with the annual visual inspection form(s) included in Attachment A. County staff will record any site characteristics that may contribute to *E. coli* loading at the time of annual visual inspection.

5.1.3 Comprehensive Facility Inspections

County staff will perform comprehensive inspections of priority park sites described in this SWPPP at least twice annually. Comprehensive inspections may be performed separate or coincident with a storm-event inspection and any additional inspections required as part of Salt Lake County's MS4 stormwater permit, IDDE program, or other applicable regulatory requirements.

Comprehensive inspections will include the items included in routine inspections (see Section 5.1.1). In addition, County staff will note the following:

-
- Condition of shoreline buffers along creeks, ponds and wetlands throughout the park

County staff will record the results of the annual inspection using the visual inspection form and the comprehensive stormwater facility inspection form (as applicable) included in Attachment B. County staff will follow standard operating procedures (SOPs) maintained outside of this SWPPP document, as applicable.

5.2 Analytical Monitoring

Salt Lake County collects water quality data at several in-stream locations within the Jordan River watershed including locations upstream and downstream of the priority park sites described in this SWPPP. Water quality data is available from the Salt Lake County website at: [Data - Watershed | SLCo](#)

Salt Lake County's monitoring program includes the collection of *E. coli* data, typically at monthly intervals. County *E. coli* monitoring is part of a general water quality monitoring program, is not part of the stormwater program, and is above the requirements of the UPDES permit. In-stream monitoring data represent cumulative pollutant loading from upstream watersheds and do not provide resolution necessary to assess performance of BMPs at specific priority park sites.

Generally, Salt Lake County will continue to support DWQ and/or partner monitoring efforts and follow standard monitoring procedures, as applicable.

6 SWPPP Administration and Certification

Salt Lake County Parks will continue to administer this SWPPP, as amended, until otherwise notified by the Utah DWQ.

6.1 SWPPP Modifications

The Utah DWQ may notify Salt Lake County that the SWPPP does not meet one or more of the minimum requirements of Salt Lake County's UPDES stormwater permit. This notification will identify the provisions of the UPDES stormwater permit that are not met in the SWPPP and identify which sections of the SWPPP require modification in order to meet the minimum requirements. Salt Lake County will coordinate with Utah DWQ to make the required changes to the SWPPP, and a written certification will be submitted to the Utah DWQ.

Absent a direct notification from Utah DWQ, Salt Lake County will amend this SWPPP under the following conditions:

- there is a change in design, construction, operation, or maintenance of one or more sites addressed by this SWPPP that has a significant effect on the potential for the discharge of *E. coli* to the waters of the state
- new structural BMPs are constructed at one or more sites to promote the reduction of *E. coli* from stormwater runoff
- new or significantly expanded non-structural BMPs are constructed at one or more sites to promote the reduction of *E. coli* from stormwater runoff

Salt Lake County will not amend the SWPPP to reflect changes in BMP implementation deemed to be minor (e.g., addition of new or expanded signage in parks where signage already exists).

6.2 Records Retention

Salt Lake County will retain records of all inspection information, copies of all reports required by the UPDES stormwater permit, and records of all data necessary to implement this SWPPP for a period of at least three years from the date of the sample, measurement, evaluation or inspection, or report. Records will be provided to the Utah DWQ upon request. This SWPPP will be retained and updated as required.

6.3 SWPPP Certification

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

Name: _____ Title: _____

Signature: _____ Date: _____

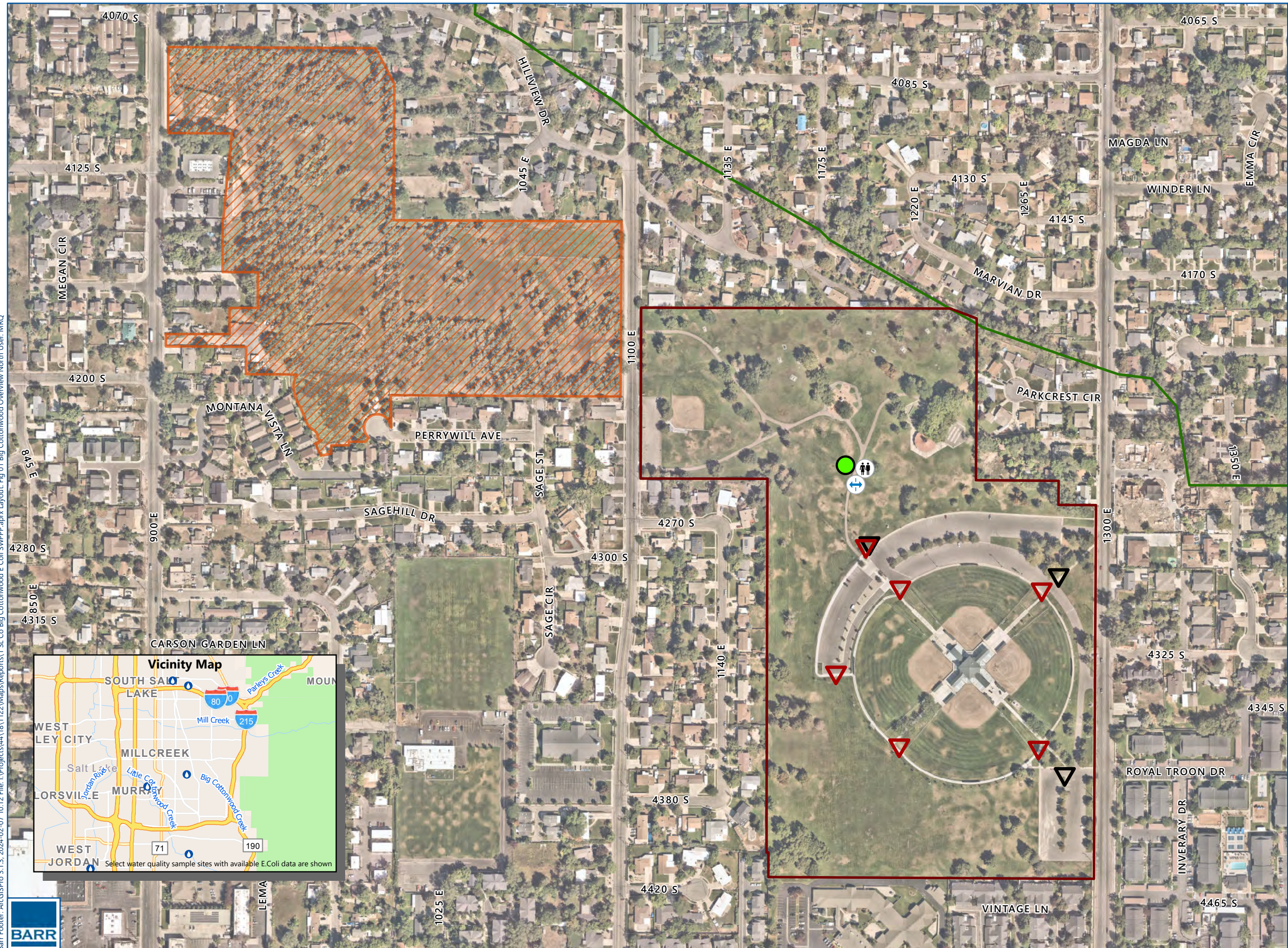
Attachments









Attachment A – Site Maps/Figures

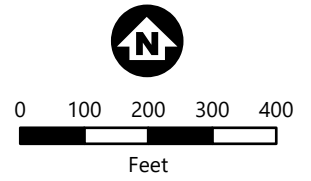
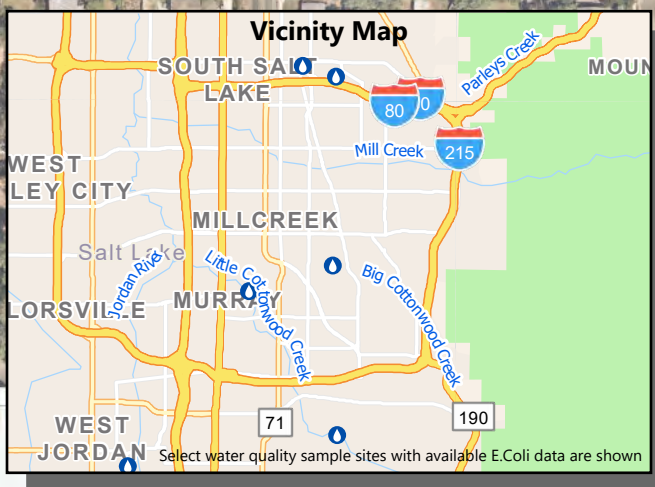
Attachment B – Inspection, Assessment, and Maintenance Records

Attachment A – Site Maps/Figures

Barr Footer: ArcGISPro 3.1.3, 2024-02-07 10:12 File: I:\Projects\4418\1122\Maps\Reports\1_Si_Co_Big_Cottonwood_E_Coli_SWPPP.aprx Layout: Fig 01 Big Cottonwood Overview North User: MRQ



-  Park Parcel
-  Leased Salt Lake County Parcel - No Public Access
-  Visual Inspection Location
-  BMP - Nonpoint (1)
-  Restroom
- Signage Type
-  Pet waste (6)
-  Regulatory (3)
- Waterway
-  Ditch

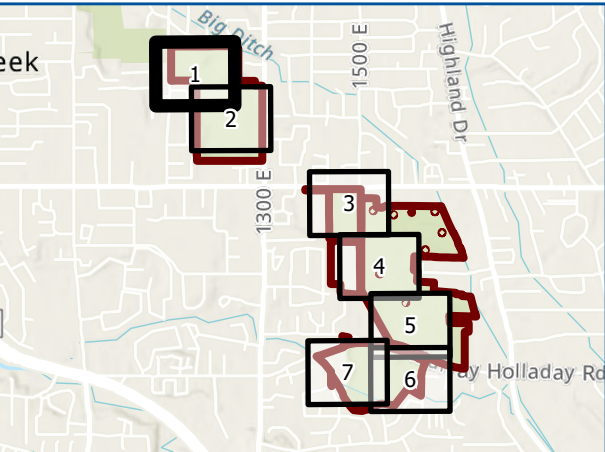


Imagery: NearMap (Aug. 2023)

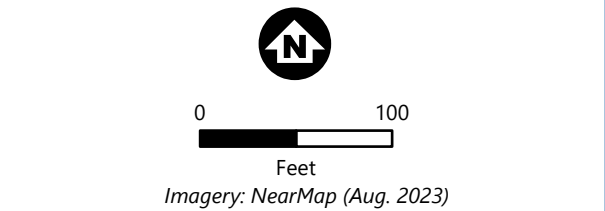
SITE OVERVIEW - NORTH
 Big Cottonwood/
 Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County

FIGURE 1.0-A

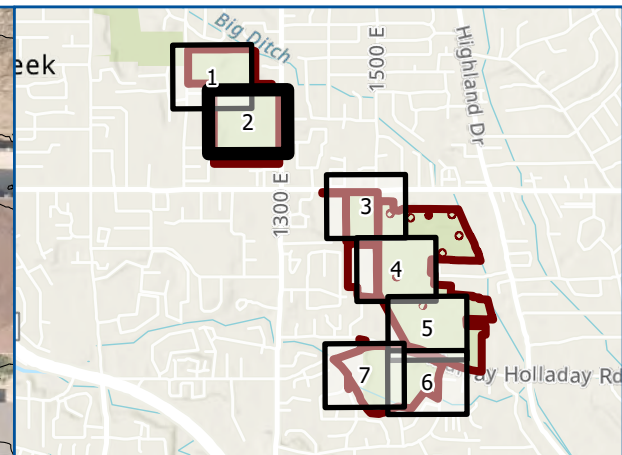
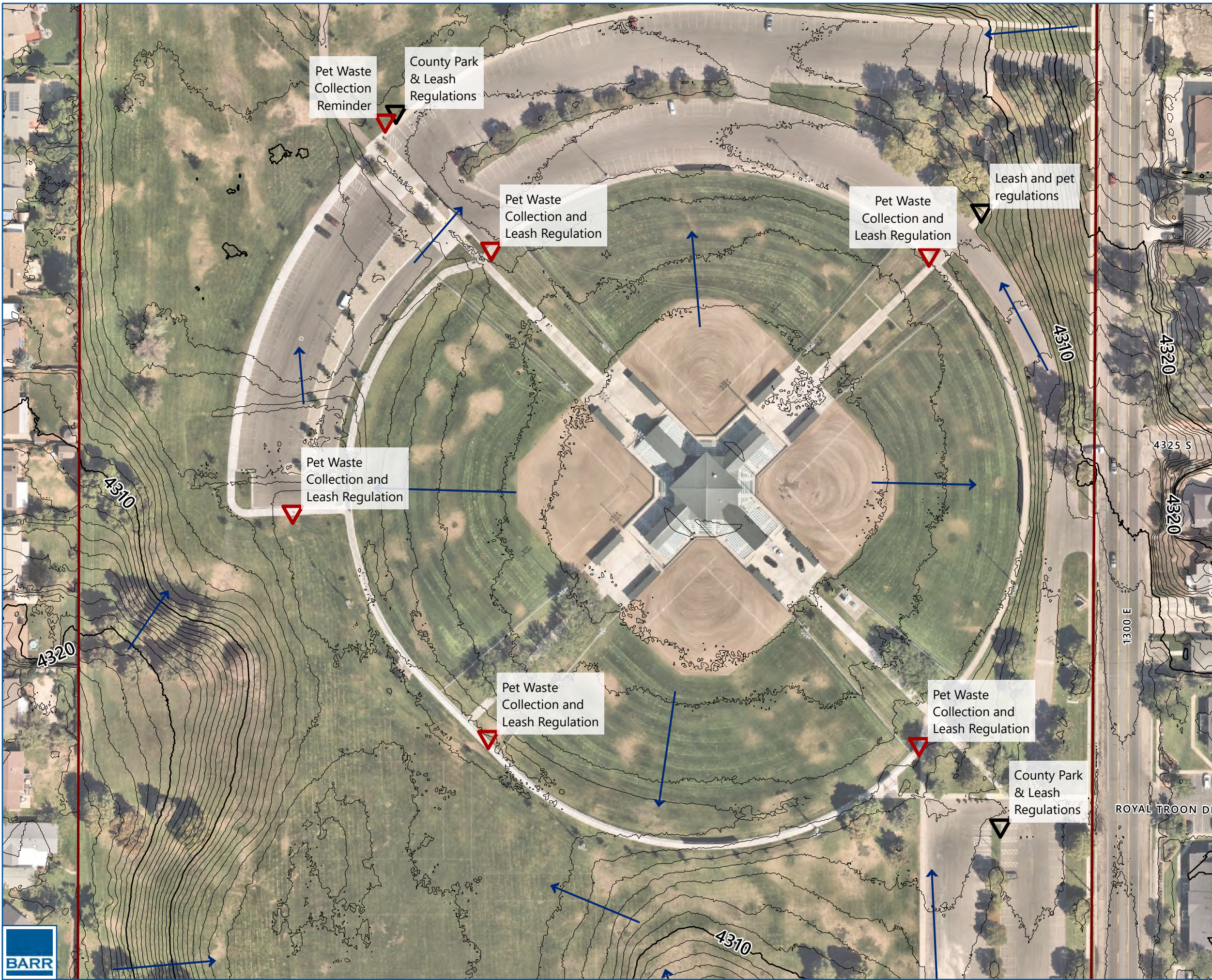




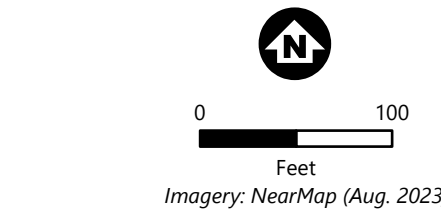
- Park Parcel
- Leased Salt Lake
- County Parcel - No Public Access
- Ditch
- 10ft Contour
- 1ft Contour
- Flow Direction
- BMP - Nonpoint
- Restroom
- Visual Inspection Location
- Signage Type**
- Pet waste
- Regulatory



SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.1

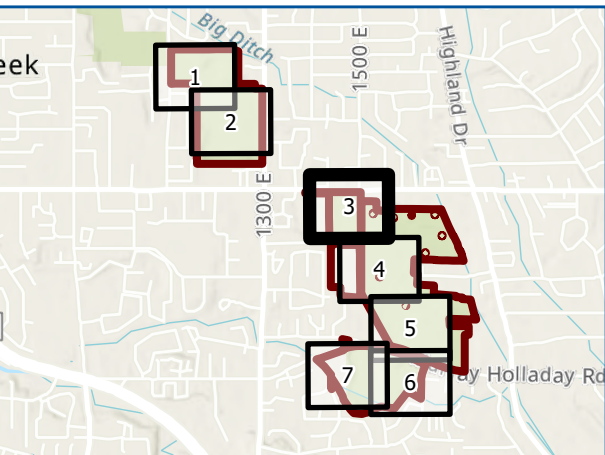


- Park Parcel
- 10ft Contour
- 1ft Contour
- Flow Direction
- Restroom
- Signage Type
- Pet waste
- Regulatory

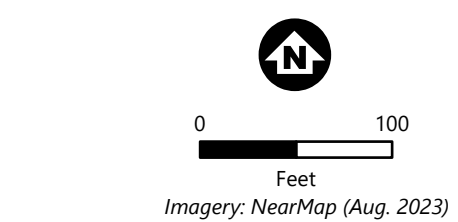


SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.2





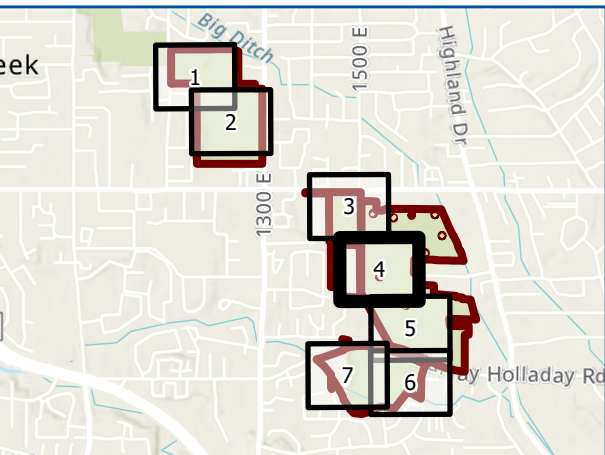
- Park Parcel
- No Public Access
- Concrete/Asphalt
- 10ft Contour
- 1ft Contour
- Flow Direction
- Stormwater Infrastructure
- BMP - Nonpoint
- Restroom
- Signage Type
- Regulatory



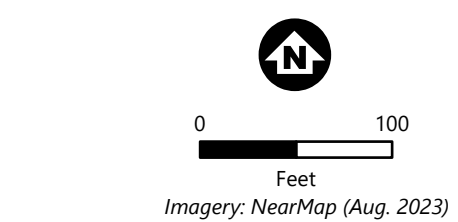
SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.3



Barr Footer: ArcGISPro 3.1.3, 2024-02-07 10:12 File: I:\Projects\4418\11221\Maps\Reports\1_Si_Co_Big_Cottonwood_E_Coli_SWPPP.aprx Layout: Fig 01-X_Big_Cottonwood_Map_Book_User: MRC

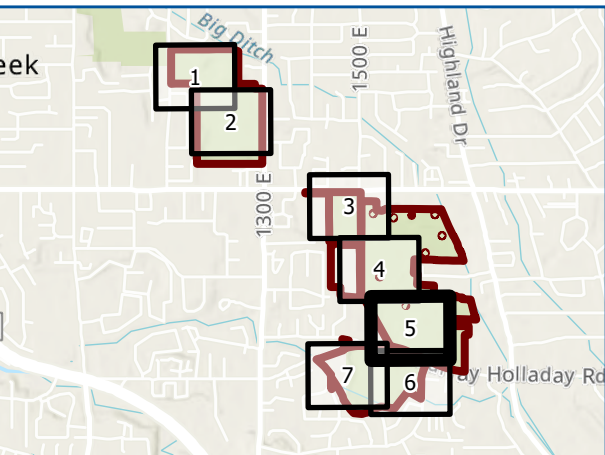


- Park Parcel
- Concrete/Asphalt
- 10ft Contour
- 1ft Contour
- Flow Direction
- Stormwater Infrastructure
- BMP - Nonpoint
- Restroom
- Signage Type
 - Pet waste
 - Regulatory
 - Other

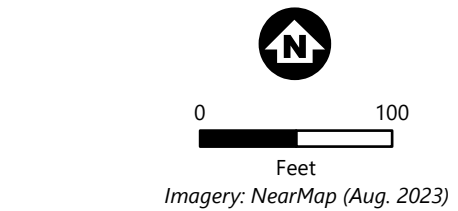


SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.4



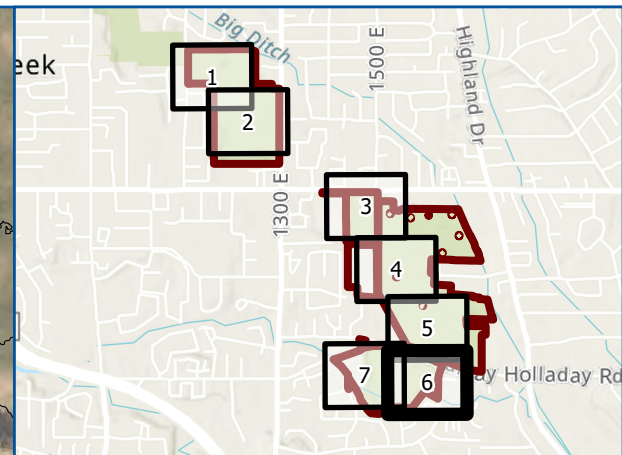


- Park Parcel
- Concrete/Asphalt
- 10ft Contour
- 1ft Contour
- Flow Direction
- Restroom
- Proposed BMP
- Signage Type
- Regulatory

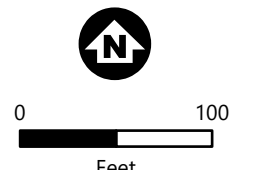


SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.5





- | | |
|---------------------------|---------------------------|
| Park Parcel | Stormwater Infrastructure |
| Concrete/Asphalt | BMP - Nonpoint |
| Stream | Restroom |
| 10ft Contour | Proposed BMP |
| 1ft Contour | Pet waste |
| Watercourse | Regulatory |
| Water Quality Sample Site | |
| Flow Direction | |

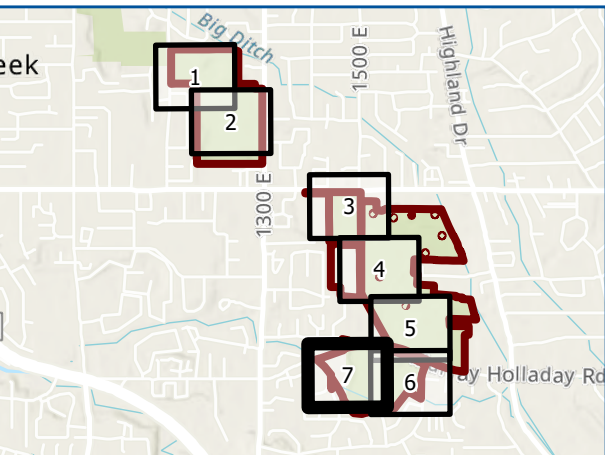


Imagery: NearMap (Aug. 2023)

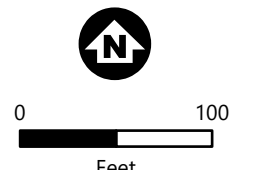
SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.6



Barr Footer: ArcGISPro 3.1.3, 2024-02-07 10:12 File: I:\Projects\4418\1122\Maps\Reports\1_S1_Co Big Cottonwood E.Coli SWPPP.aprx Layout: Fig 01-X Big Cottonwood Map Book User: MRC



- Park Parcel
- Concrete/Asphalt
- Stream
- 10ft Contour
- 1ft Contour
- Watercourse
- Water Quality Sample Site
- Flow Direction
- Stormwater Infrastructure
- Restroom
- Visual Inspection Location

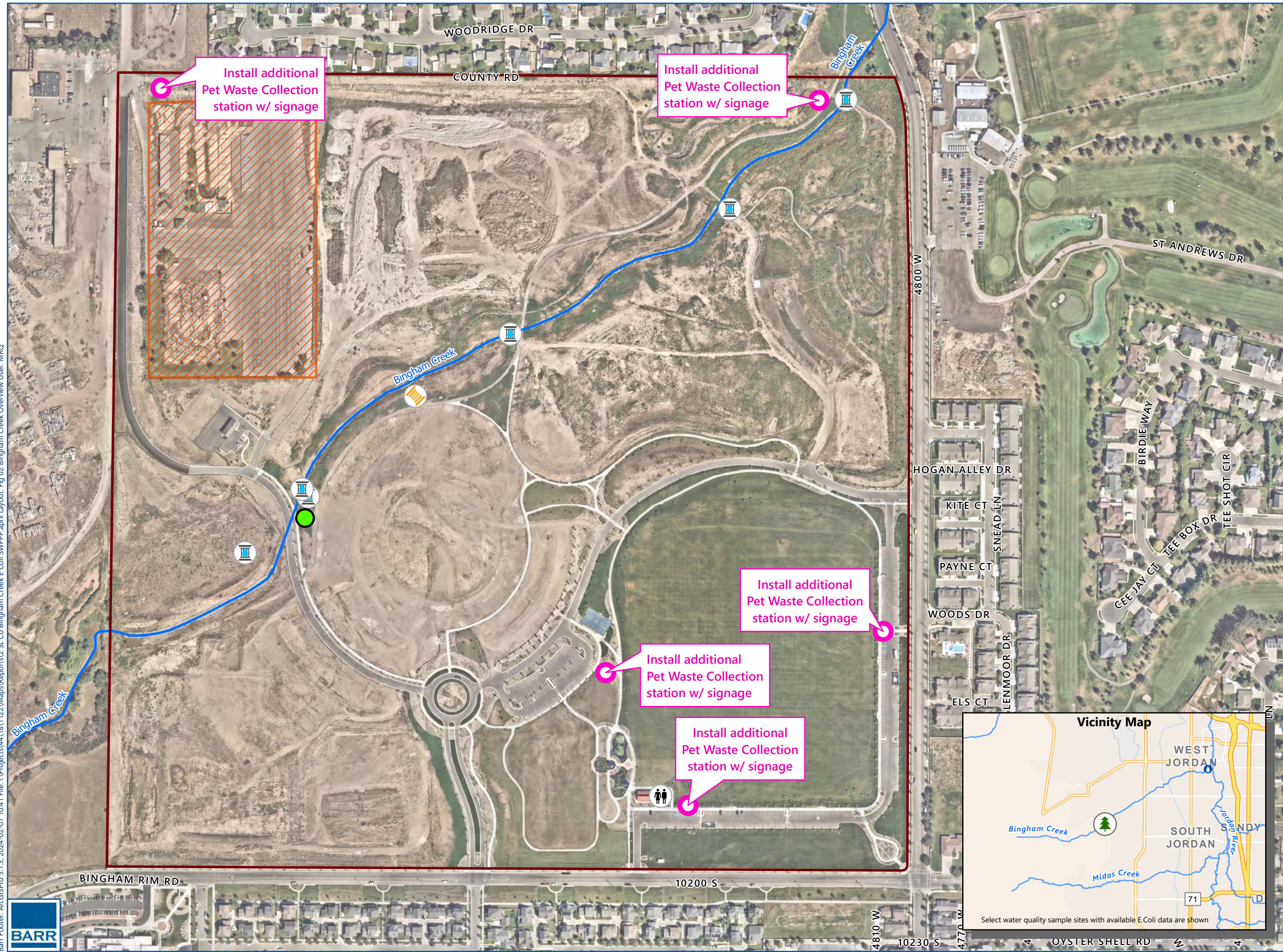


Imagery: NearMap (Aug. 2023)

SITE LAYOUT
 Big Cottonwood/Creekside Regional Park
 E.Coli SWPPP
 Salt Lake County

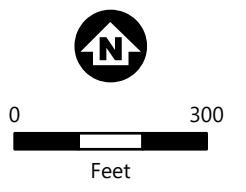
FIGURE 1.7



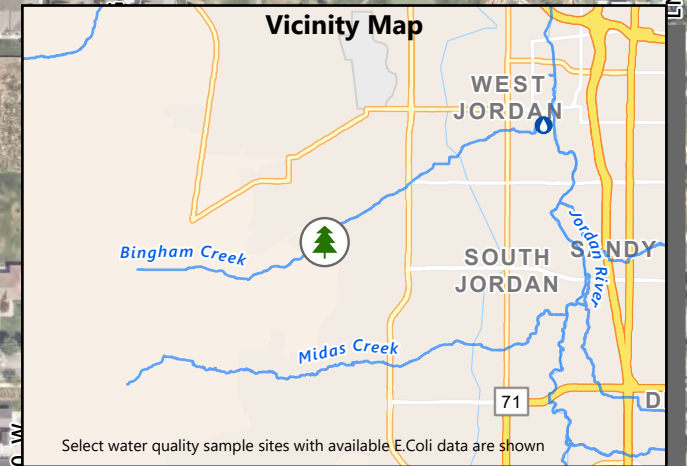


- Park Parcel
- Leased Salt Lake County Parcel - No Public Access
- Stormwater Infrastructure (6)
- BMP - Structural (1)
- Restroom
- Visual Inspection Location
- Proposed BMP
- Waterway
- Stream

Note:
Site topography and contour information not available due to ongoing grading and construction activities through Fall 2023.



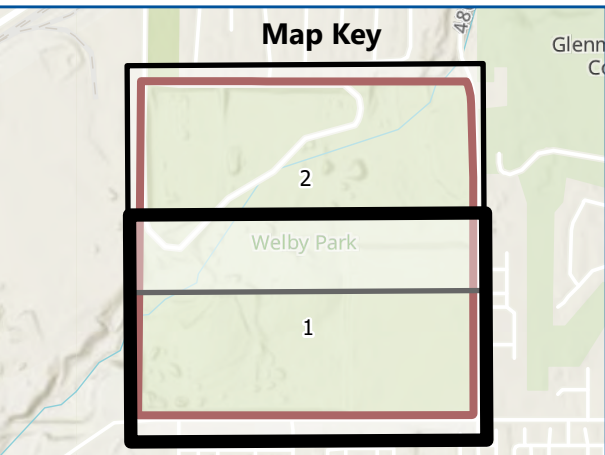
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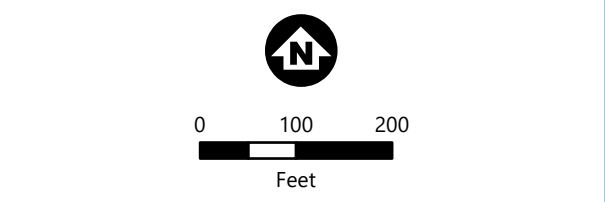
SITE OVERVIEW
Bingham Creek
Regional Park
E.Coli SWPPP
Salt Lake County
FIGURE 2.0



Barr Footer: ArcGISPro 3.1.3, 2024-02-07 10:41 File: I:\Projects\44118\1122\Maps\Reports\2_Sl_Co Bingham Creek E. Coli SWPPP.aprx Layout: Fig 02-X Bingham Creek Park Map Book User: MRC

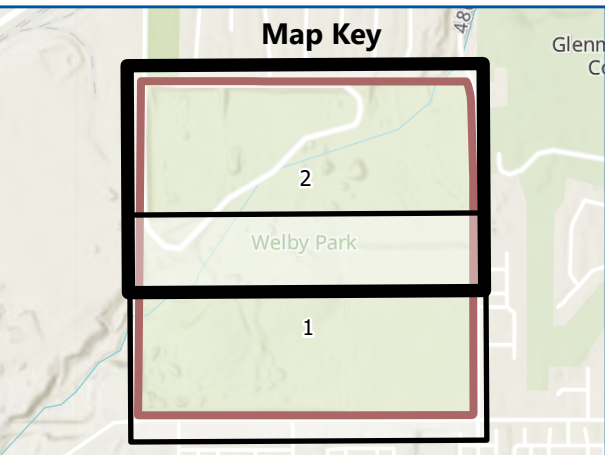
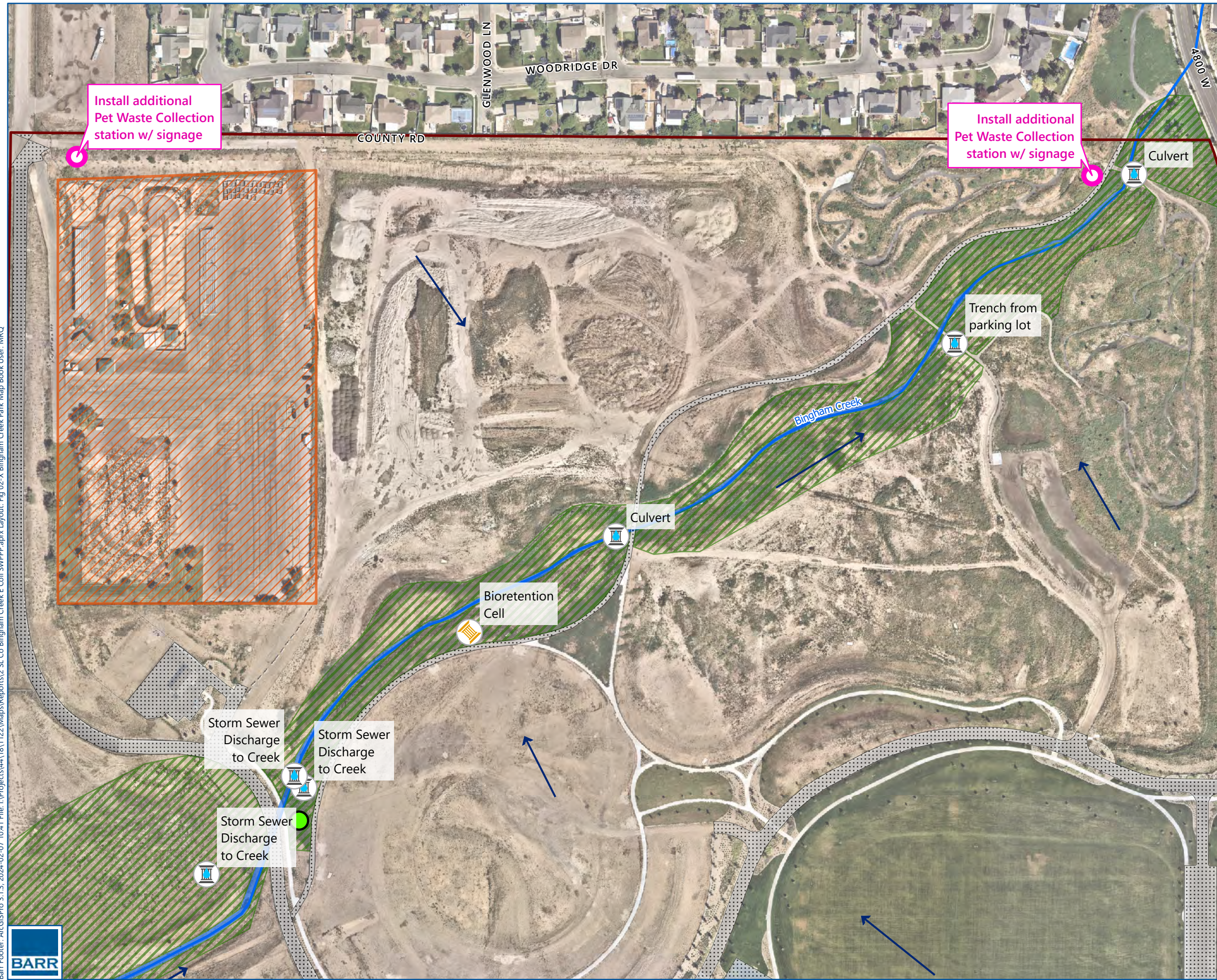


- Park Parcel
 - Leased Salt Lake County Parcel - No Public Access
 - Riparian Buffer
 - Watercourse
 - Concrete/Asphalt
 - Flow Direction
 - Stormwater Infrastructure
 - BMP - Structural
 - Restroom
 - Visual Inspection Location
 - Proposed BMP
- Waterway
- Stream

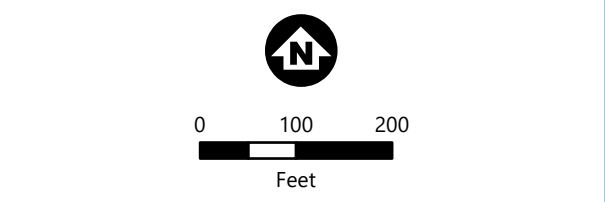


Imagery: NearMap (Aug. 2023)

SITE LAYOUT
Bingham Creek Regional Park
E.Coli SWPPP
Salt Lake County
FIGURE 2.1



- Park Parcel
 - Leased Salt Lake County Parcel - No Public Access
 - Riparian Buffer
 - Watercourse
 - Concrete/Asphalt
 - Flow Direction
 - Stormwater Infrastructure
 - BMP - Structural
 - Visual Inspection Location
 - Proposed BMP
- Waterway
- Stream












Imagery: NearMap (Aug. 2023)

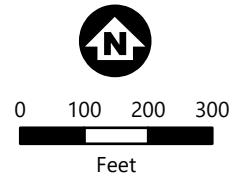
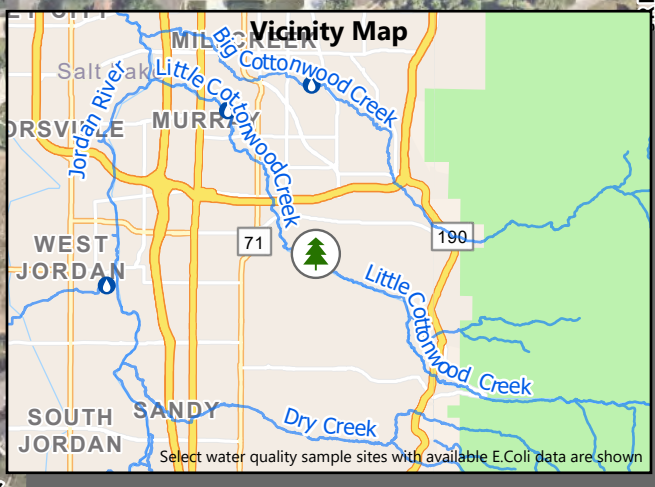
SITE LAYOUT
Bingham Creek Regional Park
E.Coli SWPPP
Salt Lake County
FIGURE 2.2



Barr Footer: ArcGISPro 3.1.3, 2024-01-16 09:20 File: I:\Projects\4418\1122\Maps\Reports\5_Si_Co_Crestwood E.Coli_SWPPP.aprx Layout: Fig 05 Crestwood Park Overview User: MRC



-  Park Parcel
-  Water Quality Sample Site
-  BMP - Fence: Restricted Creek Access
-  Stormwater Infrastructure (1)
-  BMP - Nonpoint (3)
-  Visual Inspection Location
- Signage Type**
-  Pet waste (3)
-  Regulatory (5)
- Waterway**
-  Stream



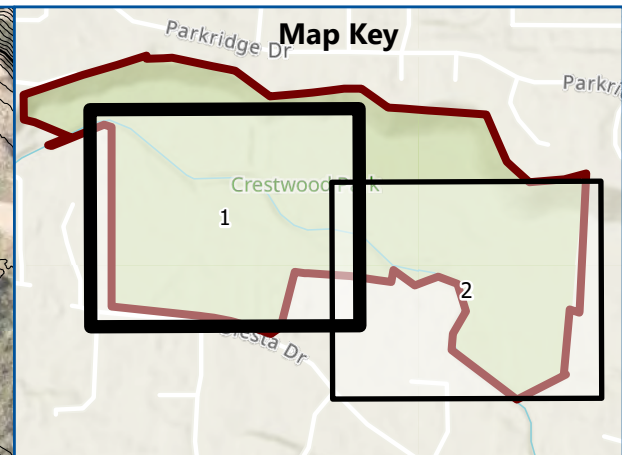
Imagery: NearMap (Aug. 2023)

SITE OVERVIEW
Crestwood Park
E.Coli SWPPP
Salt Lake County

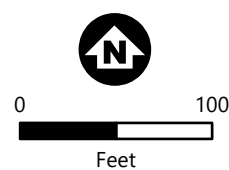
FIGURE 3.0



Barr Footer: ArcGISPro 3.1.3 2024-01-16 09:20 File: I:\Projects\4418\1122\Maps\Reports\5_Si_Co_Crestwood_Park_Map_Book_Book_User_MIQ



- Park Parcel
- Watercourse
- Stream
- 10ft Contour
- 1ft Contour
- Concrete/Asphalt
- Flow Direction
- Drainage Delineation
- BMP - Fence: Restricted Creek Access
- Water Quality Sample Site
- Stormwater Infrastructure
- BMP - Nonpoint
- Visual Inspection Location
- Signage Type**
- Pet waste
- Regulatory
- Restroom

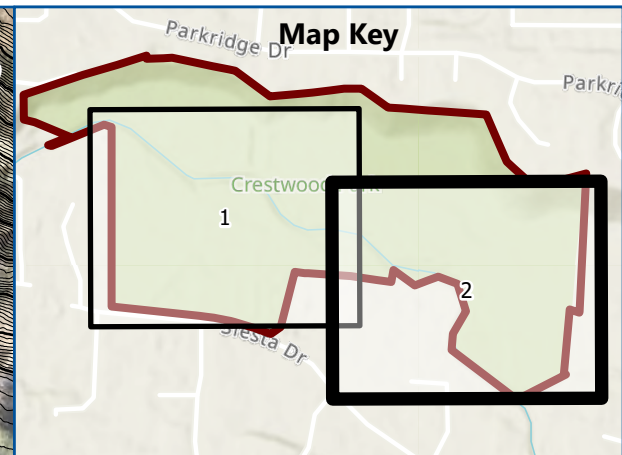


Imagery: NearMap (Aug. 2023)

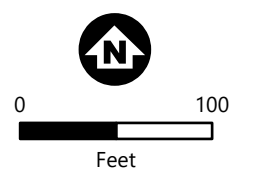
SITE LAYOUT
Crestwood Park
E.Coli SWPPP
Salt Lake County
FIGURE 3.1



Barr Footer: ArcGISPro 3.1.3, 2024-01-16 09:20 File: I:\Projects\4418\11221\Maps\Reports\5_Si_Co_Crestwood_Park_Map_Book_User_MRQ



- Park Parcel
- Watercourse
- Stream
- 10ft Contour
- 1ft Contour
- Flow Direction
- Drainage Delineation
- Visual Inspection Location
- Restroom



Imagery: NearMap (Aug. 2023)

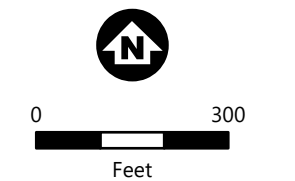
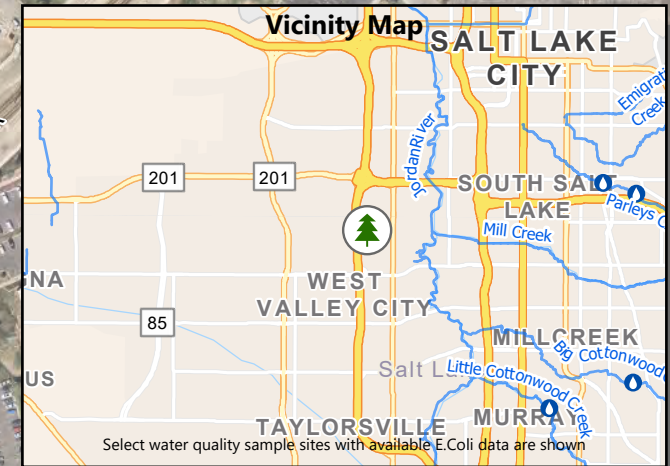
SITE LAYOUT
 Crestwood Park
 E.Coli SWPPP
 Salt Lake County

FIGURE 3.2





- Park Parcel
- Stormwater Infrastructure (6)
- Visual Inspection Location
- Proposed BMP
- Signage Type
- Regulatory (3)
- Waterway
- Drain

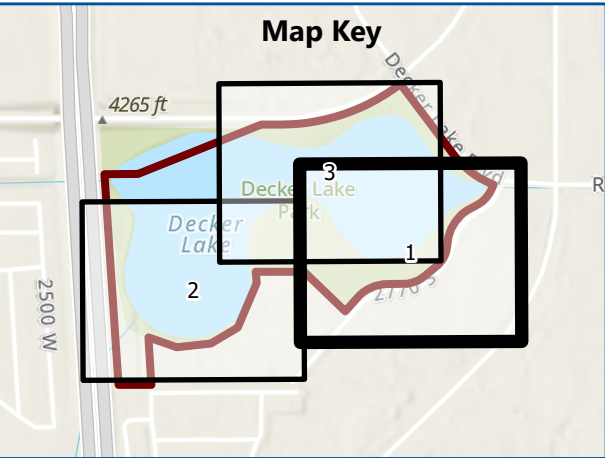


Imagery: NearMap (Aug. 2023)

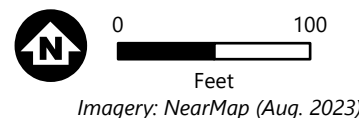
SITE OVERVIEW
 Decker Lake Park
 E.Coli SWPPP
 Salt Lake County

FIGURE 4.0



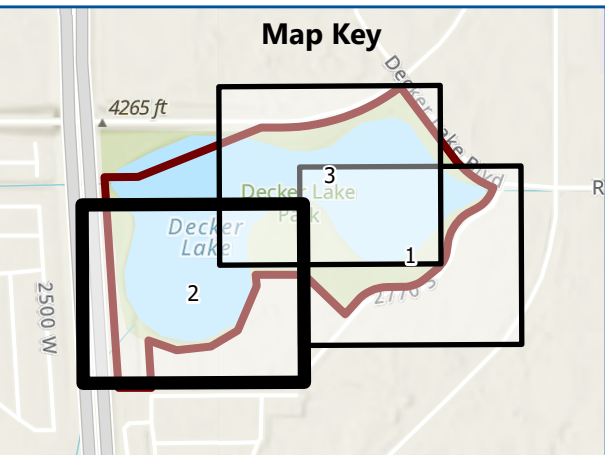


	Park Parcel		Flow Direction
	Riparian Buffer		Stormwater Infrastructure
	Waterbody		Visual Inspection Location
	Concrete/Asphalt		Proposed BMP
	Drain		Signage Type
	10ft Contour		Regulatory
	1ft Contour		

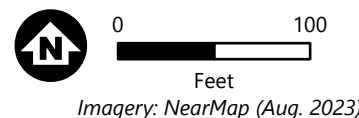


SITE LAYOUT
Decker Lake Park
E.Coli SWPPP
Salt Lake County
FIGURE 4.1



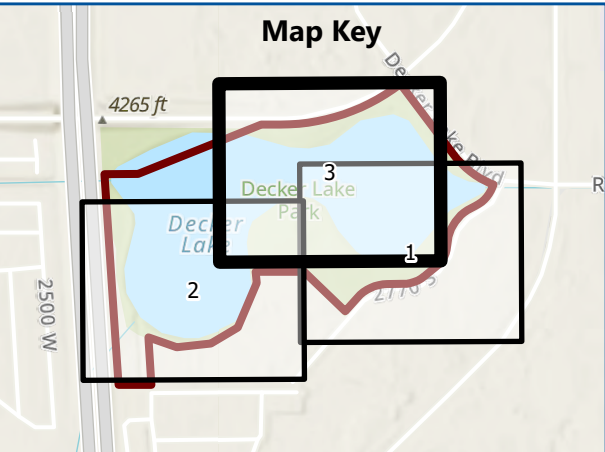


- Park Parcel
- Riparian Buffer
- Waterbody
- Concrete/Asphalt
- Drain
- 10ft Contour
- 1ft Contour
- Flow Direction
- Stormwater Infrastructure

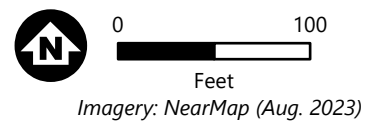


Imagery: NearMap (Aug. 2023)

SITE LAYOUT
 Decker Lake Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 4.2



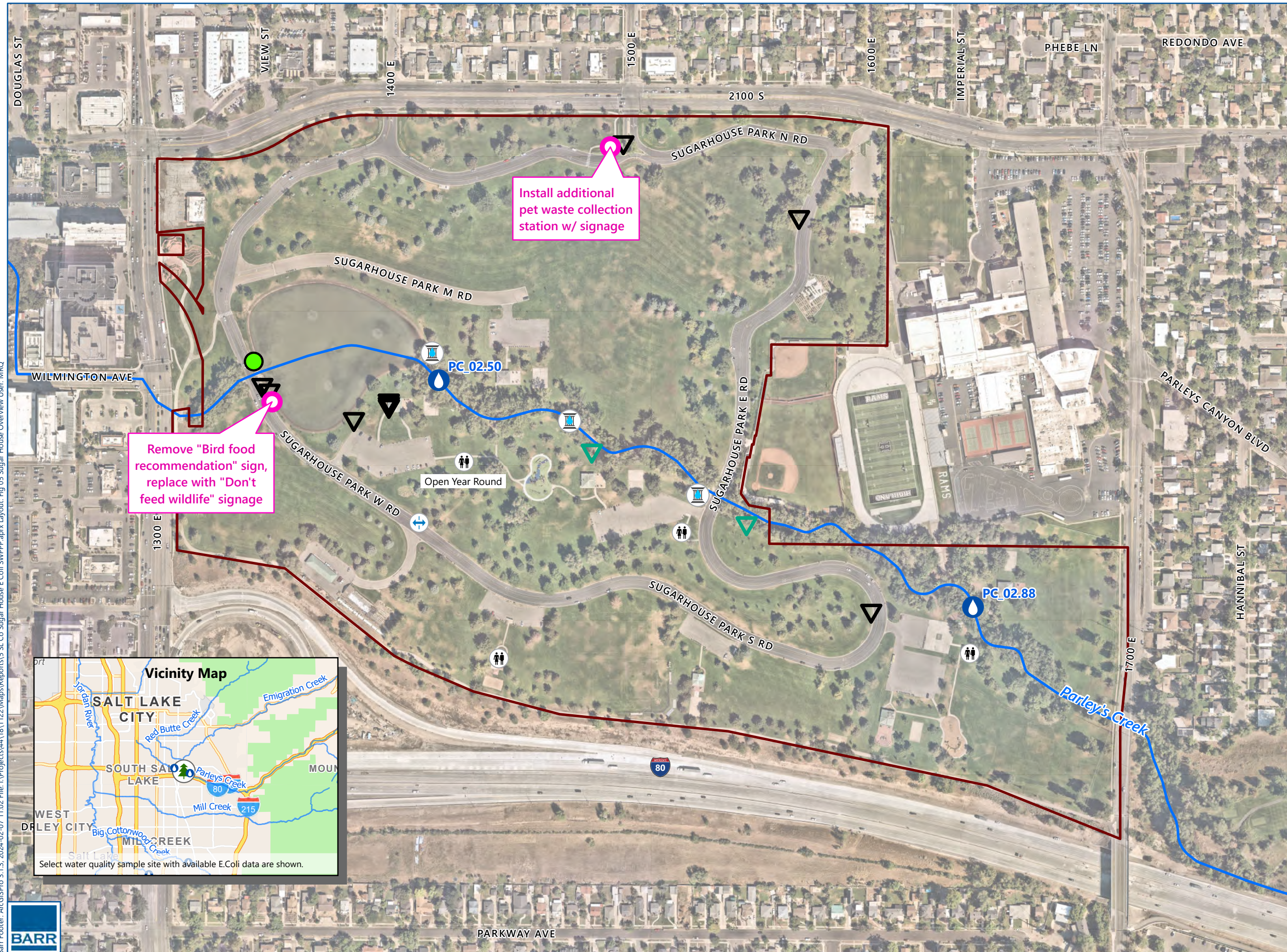
Park Parcel	Flow Direction
Riparian Buffer	Stormwater Infrastructure
Waterbody	Proposed BMP
Concrete/Asphalt	Signage Type
Drain	Regulatory
10ft Contour	
1ft Contour	



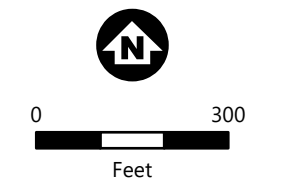
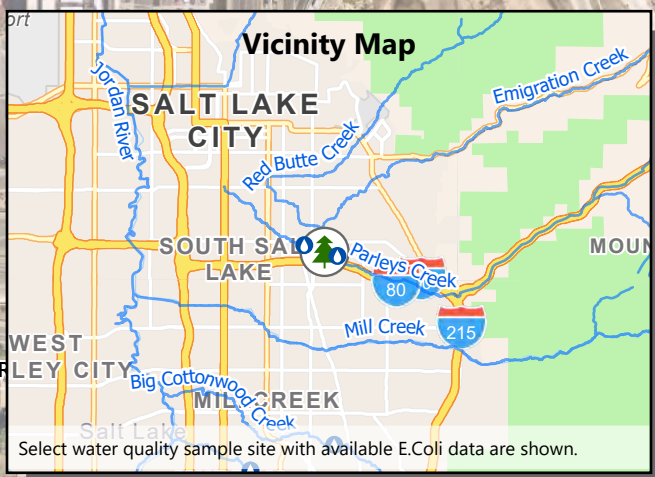
SITE LAYOUT
 Decker Lake Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 4.3



Barr Footer: ArcGISPro 3.1.3, 2024-02-07 11:02 File: I:\Projects\4418\1122\Maps\Reports\5_Sl_Co_Sugar_House_E_Coli_SWPPP.aprx Layout: Fig 05 Sugar House Overview User: MRQ



- Park Parcel
- Water Quality Sample Site
- Stormwater Infrastructure (3)
- BMP - Nonpoint (1)
- Restroom (4)
- Visual Inspection Location
- Proposed BMP
- Signage Type**
- Regulatory (9)
- Other (2)
- Waterway**
- Stream

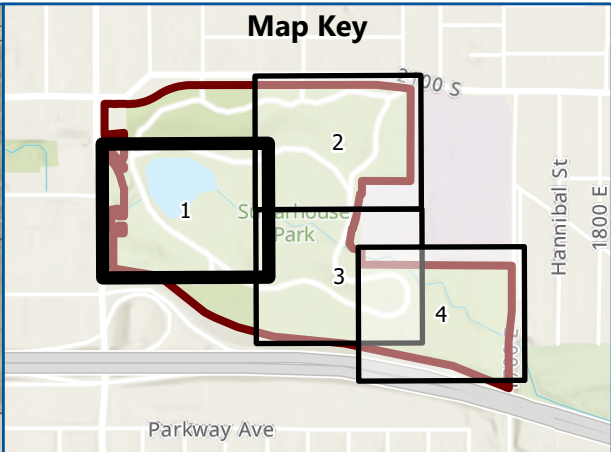
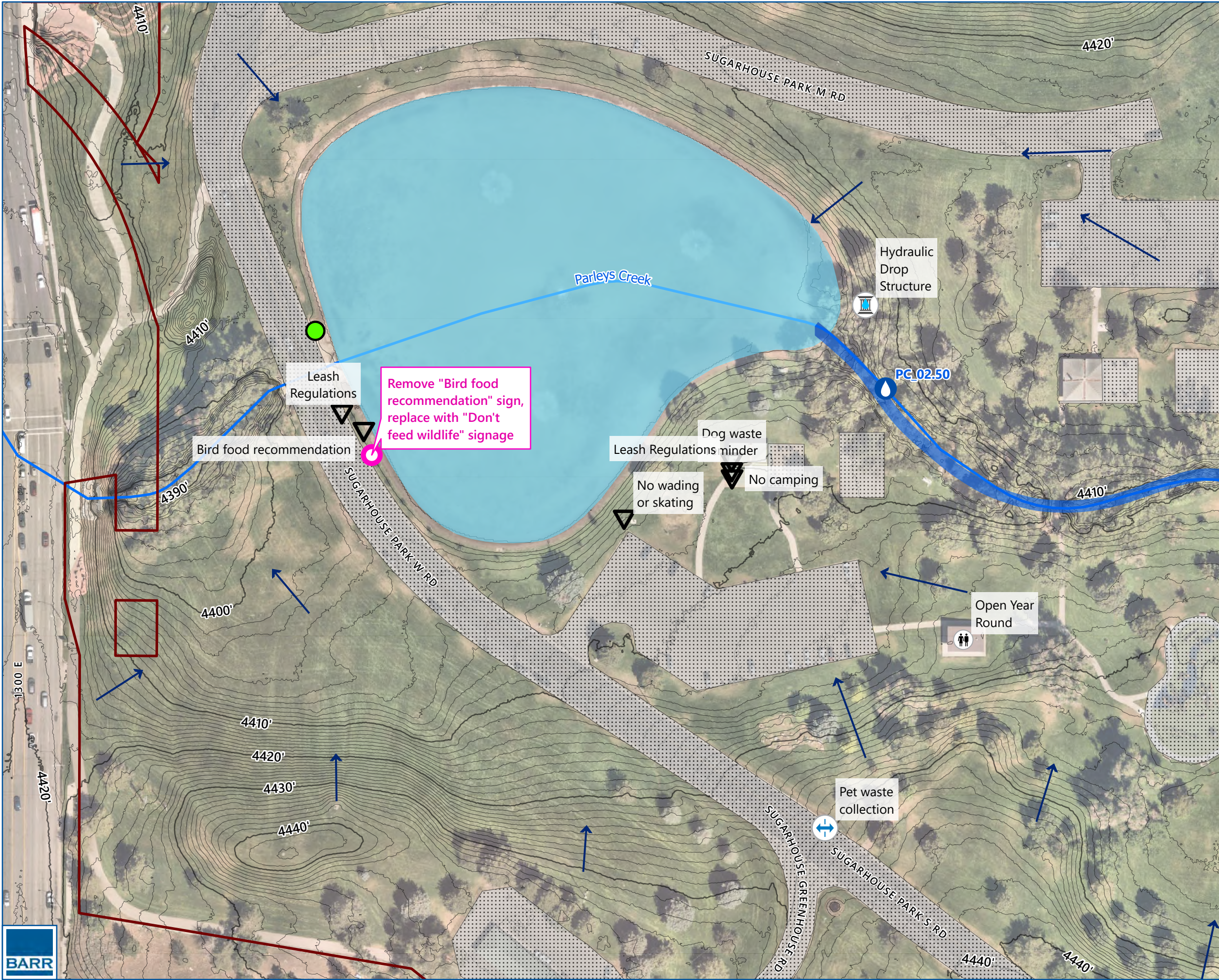


Imagery: NearMap (Aug. 2023)

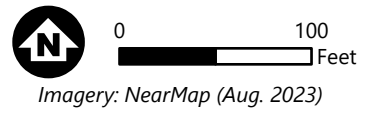
SITE OVERVIEW
 Sugar House Park
 E.Coli SWPPP
 Salt Lake County

FIGURE 5.0



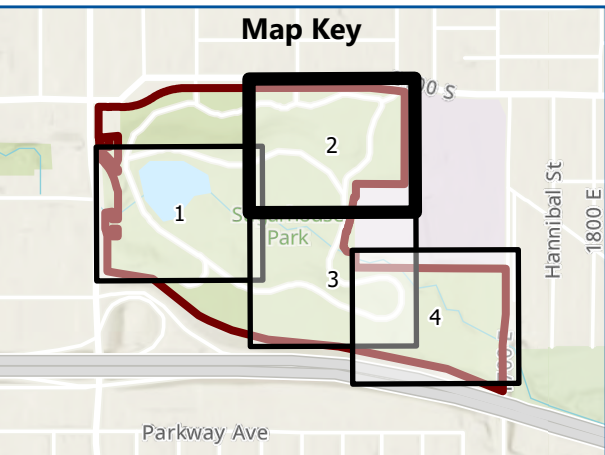


- | | |
|---------------------------|----------------------------|
| Park Parcel | Restroom |
| Waterbody | Stormwater Infrastructure |
| Watercourse | BMP - Nonpoint |
| Concrete/Asphalt | Visual Inspection Location |
| Stream | Proposed BMP |
| 10ft Contour | Signage Type |
| 1ft Contour | Regulatory |
| Flow Direction | |
| Water Quality Sample Site | |



SITE LAYOUT
 Sugar House Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 5.1





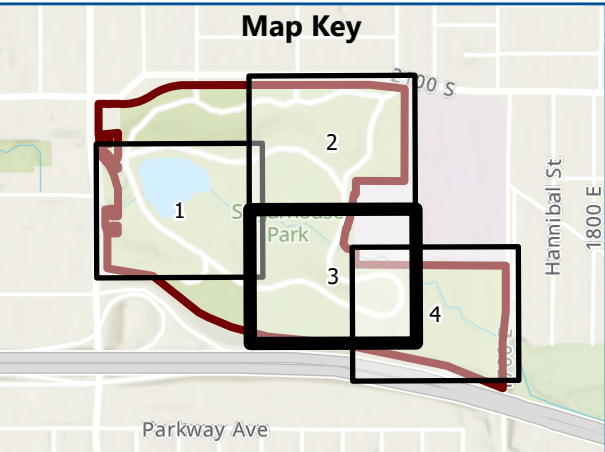
- Park Parcel
- Watercourse
- Concrete/Asphalt
- Stream
- 10ft Contour
- 1ft Contour
- Flow Direction
- Restroom
- Proposed BMP
- Signage Type**
- Regulatory



Imagery: NearMap (Aug. 2023)

SITE LAYOUT
 Sugar House Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 5.2





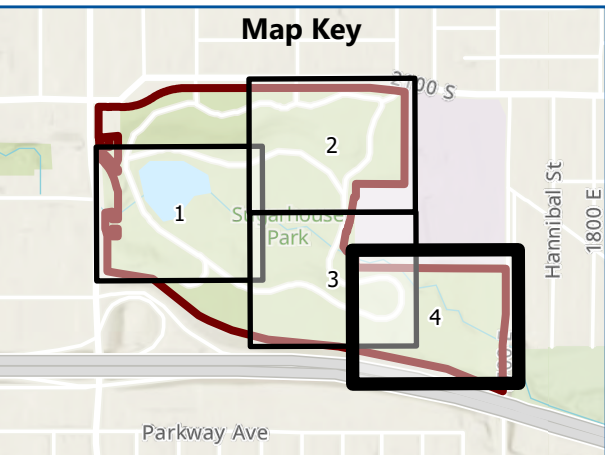
- | | |
|------------------|---------------------------|
| Park Parcel | Restroom |
| Watercourse | Stormwater Infrastructure |
| Concrete/Asphalt | Signage Type |
| Stream | Regulatory |
| 10ft Contour | Other |
| 1ft Contour | |
| Flow Direction | |



Imagery: NearMap (Aug. 2023)

SITE LAYOUT
 Sugar House Park
 E.Coli SWPPP
 Salt Lake County
FIGURE 5.3





- Park Parcel
- Watercourse
- Concrete/Asphalt
- Stream
- 10ft Contour
- 1ft Contour
- Flow Direction
- Water Quality Sample Site
- Restroom
- Signage Type
- Regulatory



Imagery: NearMap (Aug. 2023)

SITE LAYOUT
 Sugar House Park
 E.Coli SWPPP
 Salt Lake County

FIGURE 5.4





***Escherichia coli* Storm Water Pollution Prevention Plan**

Volume 2 – Wheeler Farm

Prepared for
Salt Lake County

February 2024

E. coli SWPPP Volume 2

February 2024

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Attachment A – Site Maps/Figures

Attachment B – Inspection, Assessment, and Maintenance Records

Abbreviations

BMP	Best Management Practice
DEQ	Department of Environmental Quality
DWQ	Division of Water Quality
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
MST	Microbial Source Testing
SLCo	Salt Lake County
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UPDES	Utah Pollutant Discharge Elimination System

1 Executive Summary

This Storm Water Pollution Prevention Plan (SWPPP) was prepared for Salt Lake County's Department of Parks and Recreation (Salt Lake County Parks) to satisfy requirements of the Utah Department of Environmental Quality – Division of Water Quality (DWQ) stemming from the [Jordan River Watershed *E. coli* Total Maximum Daily Load](#) (Jordan River TMDL) and incorporated into affected Utah Pollution Discharge Elimination System (UPDES) permits. Updates to the UPDES permit required the development of SWPPPs to address *E. coli* loading from "high priority" sites with the potential to discharge *E. coli*, including parks owned and operated by Salt Lake County.

This SWPPP addresses *E. coli* loading specifically from the following Salt Lake County park:

- Wheeler Farm

Salt Lake County Parks has prepared this SWPPP as an addendum to Salt Lake County's Municipal Separate Storm Sewer System (MS4) permit and existing TMDL Compliance Plan. This SWPPP is intended to fulfill requirement 3.2.2.3 of the MS4 permit.

This SWPPP describes structural and non-structural best management practices (BMPs) implemented or planned by Salt Lake County to limit *E. coli* loading to creeks tributary to the Jordan River. Key BMPs already in place and described in this SWPPP include:

- General education
- Animal feeding management
- Pet waste collection
- Camping prohibitions
- Restroom facilities

Additional potential future BMP opportunities include:

- Expansion of existing BMPs (see above)
- Structure BMPs constructed as part of planned park improvements, including:
 - Vegetated buffers
 - Stormwater diversion and treatment

Salt Lake County will continue to implement and report on existing BMPs as described in this SWPPP. The Salt Lake County will pursue potential future BMP opportunities as Park redevelopment and/or master planning opportunities occur and as resources (e.g., funding, staff) allow. Salt Lake County will consider potential pollutant reduction benefits beyond *E. coli* (e.g., nitrate, sediment) in the design and construction of future BMPs to maximize overall water quality benefits.

Salt Lake County will amend this SWPPP as necessary to reflect updates in BMP implementation and/or future requirements associated with changes to Salt Lake County's UPDES permit.

2 Facility Descriptions and Contact Information

This SWPPP addresses *E. coli* loading at the following park location owned and operated by Salt Lake County identified by Utah DWQ as a high priority site:

- Wheeler Farm

The above park has been identified as high priority site based the potential for *E. coli* loading to Little Cottonwood Creek and the downstream Jordan River.

2.1 Facility Information

Table 2.1-1 includes the address, approximate size, and primary facilities and/or functions of Wheeler Farm.

Table 2.1-1 Summary of Facilities

Park Name	Address	Size (Acres)	Functions/Facilities/Uses ¹
Wheeler Farm	6351 South 900 East Murray, Utah 84121	75 acres	<ul style="list-style-type: none">- Working farm- Livestock/stables- Education center- Farmers Market- Pavilions- Picnic area- Playground- Walking paths

Note(s):

(1) Table reflects primary information uses but may not reflect all facilities, uses, or functions occurring at each park.

2.2 Contact Information – SWPPP Team

Table 2.2-1 identifies Salt Lake County staff who are primarily responsible for developing and revising the SWPPP document and implementing the SWPPP, including operating and maintaining structural and non-structural BMPs, and taking corrective actions when required.

Table 2.2-1 SWPPP Implementation Team

Staff Names	Contact Information	Role/Responsibilities
Robert Thompson Watershed Section Manager	RThompson@slco.org 385.468.6642	<ul style="list-style-type: none"> • Overseeing development of the SWPPP • Modifications to the SWPPP document (cooperative)
Flood Control Engineering Stormwater Program Supervisors	jmikel@slco.org 385.468.6648	<ul style="list-style-type: none"> • Inspecting BMPs • Implementing corrective actions, as feasible • Completing SWPPP reporting requirements
Park Operations	Varies	<ul style="list-style-type: none"> • Routine operation and maintenance of BMPs • Implementing corrective actions, as feasible • Modifications to the SWPPP document (cooperative)

2.3 Site Descriptions

Wheeler Farm covers approximately 75 acres in the City of Murray, Utah. Wheeler Farm is bisected by Little Cottonwood Creek which flows from south to north through the park. The area east of the creek includes walking and equestrian trails, picnic areas, and natural and open spaces. The Area west of the creek includes most of the built infrastructure, including parking lots, playground, outdoor education center, farmers market space, and farm facilities.

A central feature of the park is a working farm. Farm facilities are concentrated on the north part of the park west of Little Cottonwood Creek and include:

- Animal pens/shelters/stables
- Milking barn
- Blacksmith workshop
- Covered equipment storage
- Fuel storage

Animals housed at Wheeler Farm include:

- Chickens
- Rabbits
- Goats
- Sheep
- Cows

Wheeler Farm is host to school trips, summer camps, and other educational programming. Existing and future BMPs must consider park-specific features and programming and be designed to not conflict with intended park uses/functions. Salt Lake County prepared a master plan for Wheeler Farm in 2016. Salt

Lake County will consider this SWPPP and opportunities to reduce *E. coli* loading when designing and implementing improvements identified in park master plans, as applicable.

2.4 Site Maps

Maps of Wheeler Farm are included as part of this SWPPP as Attachment A:

- Figure 1.0 Wheeler Farm Site Overview
- Figure 1.1 Wheeler Farm Site Layout 1
- Figure 1.2 Wheeler Farm Site Layout 2
- Figure 1.3 Wheeler Farm Site Layout 3
- Figure 1.4 Wheeler Farm Site Layout 4

Maps of Wheeler Farm present the following information, as applicable:

- Park extent and public access restrictions
- Existing BMP locations, including:
 - Animal feeding regulatory signage (see Section 4.1.2)
 - Pet waste collection/regulatory signage (see Section 4.1.3)
 - No camping signage (see Section 4.1.4)
 - Restrooms (see Section 4.2.3)
- Proposed BMP locations
- Topography
- Conceptual flow/runoff directions
- Streams/creeks
- Stormwater infrastructure and visual inspection locations

3 Potential Pollutant Sources

Additional UPDES permit requirements related to *E. coli* pollutant loading apply to County parks because parks can include non-point sources of *E. coli* identified in the [Jordan River TMDL](#), including:

- Agricultural activities
- Domestic pets
- Wildlife
- Recreational activities
- Unhoused populations

On-site septic systems can also be a significant source of *E. coli* loading but are not present at the site described in this SWPPP as those sites include sewer bathroom facilities.

3.1 Potential *E. coli* Sources

The following sections describe potential *E. coli* pollutant sources applicable to Wheeler Farm. Table 3.1-1 describes specific potential pollutant sources noted by County staff during site visits performed in October 2023 to inform development of this SWPPP.

Table 3.1-1 Observations of Potential *E. coli* Loading Sources by Site

County Park	Potential <i>E. coli</i> Sources
Wheeler Farm	<ul style="list-style-type: none">• Ruminant (e.g., cow) sources from farm facilities located northwest of Little Cottonwood Creek• Potential animal sources from equestrian use• Fowl sources in open areas and on/adjacent to wetlands• Dog access to Little Cottonwood Creek

Notes:

Based on qualitative observations from October 2023 site visits.

3.1.1 Agriculture Practices/Facilities

Agricultural activities such as dairy farming, raising livestock and poultry, and producing crops can be sources of *E. coli* loading to waterways through direct deposition of fecal matter from farm animals standing in surface waters and from the runoff of farm-animal waste from pastures and corrals adjacent to surface waters. Land application of manure is a common agricultural practice in Utah and may contribute to *E. coli* loading.

Agricultural and livestock-related activities occur at Wheeler Farm. Animals are housed on site in enclosed and open pens and graze in pasture areas. The animal pens are located at the north end of the park, on the east and west side of Little Cottonwood Creek (see Figure 1.4 in Attachment A). Chickens and peacocks may roam outside of pens. Other animals also move between pastures and accessory facilities (e.g., milking barn).

Stormwater runoff from the animal pen and pasture areas may be conveyed overland to Little Cottonwood Creek or drain to stormwater infrastructure without treatment. *E. coli* in waste from livestock may be conveyed in stormwater runoff, contributing to downstream *E. coli* loading.

3.1.2 Domestic pets

Improper management of domestic pet waste (primarily dogs) is another source of *E. coli* loading into adjacent waterbodies. Dog waste in the immediate vicinity of a waterway can contribute to local and downstream water quality impacts.

Wheeler Farm is frequently used by the public to walk and exercise dogs along trails and in open spaces, some of which are adjacent to creeks and open water. Salt Lake County parks addressed by this SWPPP do not include any off-leash dog play areas (although some users may allow their dogs off leash in violation of park rules).

3.1.3 Wildlife

Wildlife, especially waterfowl, can be a source of *E. coli* loading to surface waters. Transport of animal waste to surface waters is dependent on animal habitat and proximity to surface waters. Waterfowl and wildlife often deposit waste directly into streams or in the adjacent floodplain where it can be transported to surface waters by runoff during precipitation events. Animal waste deposited in upland areas can also be transported to canals, streams, and rivers, during larger precipitation events.

Waterfowl, including ducks and geese, are known to congregate in Wheeler Farm. Open spaces adjacent to creeks, ponds, and other water resources can attract large number of waterfowl. Densely vegetated riparian buffers can limit waterfowl access to creeks and deter large numbers from congregating. Areas used by picnicking park users can also attract waterfowl and other wildlife if food waste is not properly contained.

3.1.4 Unhoused populations

Transitory unhoused populations camping on County park land can have negative water quality impacts. Without adequate restroom access, human waste is often left behind or dumped directly into creeks contributing to *E. coli* loading. It is challenging to quantify the number of unhoused located in County parks because that number is constantly changing. At the time of SWPPP development, County staff estimate that a significant unhoused population is not present at Wheeler Farm and is not a significant contributor to *E. coli* loading. Salt Lake County will continue to monitor the presence and potential impact of unhoused populations.

3.1.5 Other Sources of *E. coli* Loading

Other sources of *E. coli* loading not discussed in this SWPPP include permitted concentrated animal feeding operations (CAFOs), subsurface sewage treatment systems (SSTS, or septic systems), recreational activities without restroom facilities, and others. The SWPPP omits discussion of these sources because they are not applicable to Wheeler Farm.

3.1.6 Microbial Source Testing

The [Salt Lake County Watershed Monitoring Program](#) collects water quality data throughout the Jordan River watershed, including *E. coli* data at some locations upstream and/or downstream of priority park sites addressed by this SWPPP (see also Section 5.2). In addition to regular *E. coli* monitoring, microbial source testing (MST) was performed on a limited bases for monitoring sites located within the Jordan River watershed. MST assessed the amount of bacteria present contributed by:

- Dogs
- Fowl
- Humans
- Ruminants (e.g., deer, cow)

Table 3.1-2 qualitatively presents the primary sources of *E. coli* to downstream water resources for each priority park site based on limited MST data ([Who Poops Where | Salt Lake County Watershed Program \(arcgis.com\)](#)). Note that the location of sampling sites relative to each park and the large size of the overall tributary watershed relative to each park limit confidence in any conclusions. Further, MST evaluates bacterial load not limited to *E. coli*. Overall, the MST data indicates that wildlife sources (fowl, ruminants) are the primary sources of bacteria with dogs contributing a lesser amount. The BMPs considered to address *E. coli* loading and described in Section 4 are tailored to the estimated sources of bacteria loading.

Table 3.1-2 Assessment of Microbial Source by Site based on MST Data

County Park	Primary Bacteria Source(s)	Secondary Bacteria Source(s)
Wheeler Farm	Dog, Fowl	Human, Ruminant

Notes:

Ruminant sources include deer, elk, cow, and moose.

Data is taken from monitoring locations downstream of parks ([Who Poops Where | Salt Lake County Watershed Program \(arcgis.com\)](#)).

3.2 Potential Sources of Other Pollutants (non *E. coli*)

This SWPPP was developed to address *E. coli* loading (see Section 1). As a working farm, however, the activities and/or facilities present at Wheeler Farm have the potential to contribute other pollutants to downstream resources. Potential non-*E. coli* pollutant sources at Wheeler Farm include:

Fuel Storage – Fuel tanks are located at the north end of Wheeler Farm west of Little Cottonwood Creek (see Figure 1.4 in Attachment A). Fuel is contained in sealed tanks and Wheeler Farm staff use reasonable measures to prevent spills or leaks. Stormwater runoff may carry pollutants from fuel spills or leaks to downstream resources.

Equipment Storage – Equipment necessary to manage facilities at Wheeler Farm is stored on site in enclosed structures (see Figure 1.4 in Attachment A). Use of equipment across the site creates

the potential to move contaminants like sediment and *E. coli* in animal waste. Equipment maintenance also creates the potential for pollutant loading from oil, fuel, and other fluids.

Animal pens – Several animal pens are located at the north end of Wheeler Farm west of Little Cottonwood Creek (see Figure 1.4 in Attachment A). In addition to being a source of *E. coli* loading (see Section 3.1.1), animal pens also have the potential to contribute significant sediment and nutrient load to downstream resources.

3.2.1 Spills and Leaks

Salt Lake County will record any significant (25 gallons or more) spills and leaks of hazardous pollutants, that occurred in the prior three years. Significant spills and leaks are required to be reported to Utah DWQ if discharged to a waterbody (e.g., Little Cottonwood Creek) or MS4. Spills and leaks at Wheeler Farm are not anticipated to contribute significantly to *E. coli* loading as animal waste and other *E. coli* sources are not stored in liquids.

There have been no significant spills or leaks in the 3 years prior to development of this SWPPP. Salt Lake County will update **Error! Reference source not found.** in the event that a qualifying leak or spill does occur.

Table 3.2-1 Description of Past Spills and Leaks

Date	Description	Corrective Action

Salt Lake County will continue to carryout its roles and responsibilities related to illicit discharge detection and elimination (IDDE) as described in Salt Lake County Stormwater Management Plan. This SWPPP does not replace or supersede roles and responsibilities related to IDDE.

4 Structural and Non-Structural Best Management Practices

This section of the SWPPP describes existing and planned best management practices (BMPs) performed at Wheeler Farm to minimize *E. coli* loading to local waterbodies and the downstream Jordan River. BMPs include structural and non-structural BMPs. This section references BMPs implemented or maintained by other regulatory authorities (e.g., municipalities) although Salt Lake County has limited jurisdiction regarding implementation.

Note: Salt Lake County will continue to implement best management practices to address pollutants other than E. coli consistent with Salt Lake County Stormwater Management Plan, MS4 permit requirements, and other applicable plans. This may include, but is not limited to, illicit discharge detection and elimination (IDDE) efforts, construction stormwater management, staff training and education, and good housekeeping practices. These and other relevant programs remain applicable and are not described in this SWPPP.

4.1 Non-Structural Best Management Practices

This section of the SWPPP describes non-structural BMPs.

4.1.1 General Education

Routine behavior of County Park users can impact *E. coli* loading from park sites, which occurs as non-point source pollution carried by stormwater runoff. Park users can minimize the potential for *E. coli* by:

- Picking up pet waste (see Section 4.1.3)
- Not feeding ducks, geese, or other animals
- Disposing of food waste to discourage congregation of wildlife
- Reporting site conditions that may contribute to *E. coli* loading (e.g., overflowing waste bins)

Salt Lake County partners with the [Salt Lake County Stormwater Coalition](#) to create and distribute educational materials about best practices for pollution prevention to residents and other audiences. The Stormwater Coalition website includes links to articles and videos that encourage pet waste collection and other simple pollution prevention measures. County staff will continue to cooperate with the Stormwater Coalition to ensure relevant educational materials remain available for residents and others who may visit Wheeler Farm and other County parks.

4.1.2 Food Management/Animal Feeding

Wildlife, primarily waterfowl, are a primary source of *E. coli* loading from Wheeler Farm (see Section 3.1.6). The presence of accessible food (e.g., picnic areas, open dumpsters) can attract large numbers of waterfowl that leave excrement that is later washed into creeks and other waters. County staff maintain waste collection stations near picnic areas at Wheeler Farm. County staff will continue to manage waste collection, where appropriate, to ensure that containers are not overflowing and that dumpsters are covered.

Salt Lake County will install (as needed) and maintain signage prohibiting feeding of animals, where appropriate. Signage will be located at picnic or sitting areas near waterbodies where fowl are likely to congregate. The locations of signage prohibiting feeding of animals is shown on figures included in Attachment A, as applicable.

4.1.3 Pet Waste Collection/Signage

Pet waste is a significant potential contributor to *E. coli* loading from Wheeler Farm. Salt Lake County has installed and maintains pet waste collection stations at Wheeler Farm including collection bags and disposal bins.

Wheeler Farm includes signage (see inset) encouraging park users to clean up after their dog(s). County staff will install additional signage at priority park sites in areas most critical to *E. coli* loading. Existing waste collection bins are adequate to accept additional waste.

The locations of existing and planned pet waste collection stations are shown on figures included in Attachment A, as applicable.

4.1.3.1 Pet Leash Ordinances

County Ordinance [Title 8.06.010 – Animals](#) requires pets to be leashed in public parks or potentially receive an animal nuisance violation and associated fine. Requiring pets to be leashed limits the opportunity for animals to leave uncollected waste in the park or directly in adjacent waters. Signs noting that pets must be leashed are present at Wheeler Farm. The locations of signage communicating pet leash requirements are shown on figures included in Attachment A, as applicable.

While County ordinance requires pets be leashed County Parks staff do not perform enforcement actions. The effort required for County Parks staff to initiate enforcement action through local jurisdictions is prohibitive and thus violations are not issued. Municipal ordinances generally also require that pets be leashed in public spaces. .

4.1.3.2 Pet Waste Ordinances

County Ordinance [Title 8.06.010 – Animals](#) requires pet owners to collect and dispose of pet waste in public parks or potentially receive an animal nuisance violation and associated fine. While a County ordinance requires pet waste collection, County Parks staff maintaining Wheeler Farm do not perform enforcement actions. The effort required for County Parks staff to initiate enforcement action through local jurisdictions is prohibitive and thus violations are not issued.



Example of signage encouraging pet waste collection.

Municipal ordinances generally also require pet waste collection (typically as part of garbage and/or nuisance ordinances).

4.1.4 No Camping Signage

Municipal ordinances prohibit camping in public park areas, including Wheeler Farm. Salt Lake County has installed and maintains signage in Wheeler Farm prohibiting camping. The locations of signage prohibiting camping are shown on figures included in Attachment A, as applicable.

4.1.5 Habitat Modification

Habitat modification includes alterations made to natural spaces to discourage the presence of wildlife and/or wildlife proximity or access water resources, specifically waterfowl. Habitat modification may include:

- Removing islands from ponds or wetlands
- Reducing mowed areas adjacent to waterbodies where fowl congregate
- Eliminating access routes from upland areas to waterbodies

By limiting the number of fowl present and further distancing them from water resources, habitat modification can limit the amount of *E. coli* carried to streams by stormwater runoff. Dense, vegetated buffers may be an element of habitat modification (see Section 4.2.1).

Presently, Salt Lake County has no plans to implement habitat modification activities for the primary purpose of reducing *E. coli* loading from wildlife. Future reconstruction, renovation, or park improvements efforts, however, may provide opportunity to incorporate design elements that minimize *E. coli* loading from wildlife. Salt Lake County will consider potential habitat modification practices as part of park master planning efforts and incorporate those practices with other intended uses at Wheeler Farm, as feasible.

4.1.6 Other Non-Structural BMPs Not Considered

Additional non-structural BMPs exist to limit *E. coli* loading particularly from fowl sources. Such practices include:

- **Passive deterrents:** including scarecrows, floating predatory decoys, etc.
- **Active deterrents/hazing:** using dogs or other intense action (e.g., fireworks) to harmlessly disperse waterfowl.
- **Repellents:** use of non-lethal chemicals that are safe for humans/dogs
- **Lethal Action:** hunting, culling, or reproductive control

Salt Lake County generally does not implement any of the above-listed non-structural BMPs because they conflict with the intended uses, programming, and/or public benefits of park spaces (e.g., aesthetic views). County staff have on occasion used fencing to limit wildlife and fowl congregation near waters to limit the potential for *E. coli* loading.

4.2 Structural Best Management Practices

This section of the SWPPP describes structural BMPs.

4.2.1 Vegetated Buffers

Vegetated buffers adjacent to streams and ponds can potentially increase or reduce *E. coli* loading to water resources. Vegetated buffers provided habitat for deer and other wildlife. Dense vegetated buffers, however, can also limit fowl access to streams and provide filtration benefits for stormwater runoff carrying *E. coli* bound to sediment and other pollutants. Dense, vegetated buffers also limit access of dogs to shoreline areas. The primary sources of *E. coli* from Wheeler Farm include fowl and dogs. Thus, Salt Lake County estimates that densely vegetated buffers in parks generally reduce *E. coli* loading and provide a cumulative benefit.

Table 4.2-1 summarizes the current extent of vegetated buffers at Wheeler Farm.

Table 4.2-1 Assessment of Vegetated Buffer Condition

County Park	Summary of Vegetated Buffer(s)
Wheeler Farm (October 2023)	Throughout the entirety of the park there is a vegetative buffer on the east and west bank of Little Cottonwood Creek. The ponds have a limited vegetative buffer with some areas being composed of concrete or exposed soil.

Notes:

Based on conditions observed during October 2023 field visits.

Salt Lake County seeks to maintain existing vegetated buffer through its regular operations and maintenance activities. Salt Lake County currently plans to seek funding opportunities to improve and establish new non-mowed, vegetated buffer at Wheeler Farm where existing buffer is not currently present. Salt Lake County will consider the extent and condition of vegetated buffer in Wheeler Farm master planning efforts and seek opportunities to maximize the benefits of vegetated buffers for restricting access of potential *E. coli* sources (e.g., dogs, waterfowl) and maximizing treatment of stormwater runoff.

4.2.2 Stormwater Diversion and Treatment

E. coli loading from Wheeler Farm occurs primarily from non-point sources transported via stormwater runoff. Some parts of Wheeler Farm drain directly to creeks, wetlands, or ponds located on-site via overland flow. Other areas drain to the storm sewer systems and are conveyed offsite to stormwater infrastructure owned by other MS4s (e.g., cities). Wheeler Farm is located within the Jordan River watershed and ultimately drains to the Jordan River. Conceptual drainage directions and known stormwater infrastructure are presented in figures included in Attachment A, as applicable.

Much of the runoff from Wheeler Farm is conveyed to adjacent water resources or stormwater systems with little or no on-site stormwater treatment (beyond possible filtration by vegetated buffers adjacent to

water resources, see Section 4.2.1). Additional stormwater treatment from low-impact development (LID) practices may reduce the amount of *E. coli*, sediment, nutrients, and other pollutants transported to local water resources and, ultimately, the Jordan River. Potential stormwater treatment practices effective at reducing *E. coli* include:

- Bioretention/Infiltration Basins
- Wetland Basins
- Retention Ponds

Salt Lake County is responsible for maintaining stormwater management infrastructure owned by Salt Lake County consistent with its MS4 permit and County Stormwater Management Plan. Salt Lake County will consider opportunities to include stormwater treatment as part of park master planning and future redevelopment efforts. Future stormwater management BMPs will be designed consistent with the Utah DEQ [Guide to Low Impact Development in Utah](#). Planned improvements at Wheeler Farm are described in Section 4.2.2.1.

4.2.2.1 Planned Drainage Improvements at Wheeler Farm

The master plan for Wheeler Farm includes planned improvements to agriculture and livestock facilities located in the north and west parts of the park. Planned improvements include modifications to the site to prevent direct drainage of runoff from agriculture and livestock facilities to Little Cottonwood Creek. The Wheeler Farm master plan notes:

- The horse pasture areas will be regraded to provide proper drainage to a swale behind the animal pens.
- Runoff from the animals and pastures will be collected in a single swale.
- Runoff will be routed through a constructed wetland area and piped to a wetland biofilter area for treatment prior to discharging into Little Cottonwood Creek.

Drainage improvements and stormwater treatment BMPs will be constructed concurrent with overall Wheeler Farm improvements. At the time of SWPPP development, the project schedule has yet to be determined (see Table 4.4-1).

4.2.3 Restroom Facilities

Salt Lake County maintains restroom facilities at Wheeler Farm. Restroom facilities are generally open April through November and closed during the winter due to lack of heating, although Wheeler Farm has toilet facilities in the barn that remain open year round. Salt Lake County will continue to maintain restroom facilities to minimize *E. coli* loading from human sources.

4.3 BMP Prioritization

Sections 4.1 and 4.2 described existing BMPs and planned BMPs to address *E. coli* loading at Wheeler Farm. Not all BMPs are appropriate for every priority park site, including Wheeler Farm. Salt Lake County

has prioritized implementation of BMPs to maximize the impact on *E. coli* loading from existing staff and financial resources (see Table 4.3-1).

Table 4.3-1 Matrix of BMPs applicable to Wheeler Farm

Priority Park	Best Management Practice (Current and Planned)							
	General Education	Animal Feeding Signage	Pet Waste Signage	Pet Waste Collection	Habitat Modification	Vegetated Buffers	Stormwater Treatment	Restrooms
Wheeler Farm	X	X+	X	X+	O	O	X+	X

Notes:

X = current practice to be maintained

X+ = current practice to be enhanced or expanded in future

O = future activity to be considered for implementation at time of park development as resources allow

4.4 BMP Implementation

County staff will continue to implement the existing BMPs described in Sections 4.1 and 4.2 (listed with an “X” in Table 4.3-1). Table 4.4-1 summarizes the implementation of existing and planned BMPs. Information includes proposed location, BMP status, schedule, and estimated cost. Specific timelines have not been assigned to potential structural BMPs that may be implemented in coordination with park reconstruction (listed with an “O” in Table 4.3-1).

Table 4.4-1 Wheeler Farm BMP Implementation Schedule

Best Management Practice	Location ¹	Status	Schedule	Estimated Cost ²
General education	--	Continue existing	Ongoing	--
Animal feeding signage	Multiple	Maintain existing and expand ¹	February 2024 and ongoing	\$5k-\$10k
Leash law signage	Multiple	Maintain existing	Ongoing	--
No camping signage	Multiple	Maintain existing	Ongoing	--
Pet waste collection	Multiple	Maintain existing and expand ¹	February 2024 and ongoing	\$5k-\$10k
Expanded street sweeping	Impervious areas	Begin in 2024	Annually	--
Drainage improvements near animal pens/pasture	Animal pens/pasture	Planned	TBD ³	TBD ³

Notes:

(1) See planned BMP locations on figures included in Attachment A.

(2) Costs included in this table reflect costs in addition to existing staffing and operational costs.

(3) Improvements will be constructed with planned improvements to Wheeler Farm consistent with park master plan.

5 Inspection and Assessment

5.1 Routine and Annual Comprehensive Facility Inspections

County staff will perform monthly and annual inspections of the priority facilities described in this SWPPP. Inspection activities described herein are limited to those relevant to *E. coli* loading and associated BMPs. Inspection activities related to general stormwater management and otherwise required as part of Salt Lake County's MS4 stormwater permit are not included.

5.1.1 Monthly Visual Facility Inspection

County staff will perform monthly visual inspections of Wheeler Farm. County staff will record the location and qualitatively assess the significance of the following potential *E. coli* sources, if present:

- Evidence of fowl congregation and/or water access
- Evidence of unhousted populations
- Evidence of stormwater runoff, including:
 - Fuel storage area(s)
 - Equipment storage area(s)
- Evidence of excessive runoff from:
 - Livestock pens/pasture areas
 - Areas trafficked by livestock

County staff will note the presence and condition of BMPs addressing *E. coli* loading, including:

- Signage prohibiting camping
- Signage prohibiting off-leash pets
- Signage prohibiting feeding the animals
- Pet waste collection supplies and signage

County staff will inspect BMPs identified in figures included in Attachment A.

County staff will record visual inspections on the form(s) in Attachment B. County staff will follow standard operating procedures (SOPs) maintained outside of this SWPPP document, as applicable.

5.1.2 Annual Visual Inspection

County staff will perform annual visual inspections of Wheeler Farm during snowmelt or runoff conditions. County staff will characterize the color, odor, and condition of stormwater runoff consistent with the annual visual inspection form(s) included in Attachment A. County staff will record any site characteristics that may contribute to *E. coli* loading at the time of annual visual inspection.

5.1.3 Comprehensive Facility Inspections

County staff will perform comprehensive inspections of Wheeler Farm at least twice annually. Comprehensive inspections may be performed separate or coincident with a storm-event inspection and

any additional inspections required as part of Salt Lake County's MS4 stormwater permit, IDDE program, or other applicable regulatory requirements.

Comprehensive inspections will include the items included in routine inspections (see Section 5.1.1). In addition, County staff will note the following:

- Condition of shoreline buffers along creeks, ponds and wetlands throughout the park

County staff will record the results of the annual inspection using the visual inspection form and the comprehensive stormwater facility inspection form (as applicable) included in Attachment B. County staff will follow standard operating procedures (SOPs) maintained outside of this SWPPP document, as applicable.

5.2 Analytical Monitoring

Salt Lake County collects water quality data at several in-stream locations within the Jordan River watershed including locations upstream and downstream of Wheeler Farm. Water quality data is available from the Salt Lake County website at: [Data - Watershed | SLCo](#)

Salt Lake County's monitoring program includes the collection of *E. coli* data, typically at monthly intervals. County *E. coli* monitoring is part of a general water quality monitoring program, is not part of the stormwater program, and is above the requirements of the UPDES permit. In-stream monitoring data represent cumulative pollutant loading from upstream watersheds and do not provide resolution necessary to assess performance of BMPs at specific priority park sites.

Generally, Salt Lake County will continue to support DWQ and/or partner monitoring efforts and follow standard monitoring procedures, as applicable.

6 SWPPP Administration and Certification

Salt Lake County Parks will continue to administer this SWPPP, as amended, until otherwise notified by the Utah DWQ.

6.1 SWPPP Modifications

The Utah DWQ may notify Salt Lake County that the SWPPP does not meet one or more of the minimum requirements of Salt Lake County's UPDES stormwater permit. This notification will identify the provisions of the UPDES stormwater permit that are not met in the SWPPP and identify which sections of the SWPPP require modification in order to meet the minimum requirements. Salt Lake County will coordinate with Utah DWQ to make the required changes to the SWPPP, and a written certification will be submitted to the Utah DWQ.

Absent a direct notification from Utah DWQ, Salt Lake County will amend this SWPPP under the following conditions:

- there is a change in design, construction, operation, or maintenance of facilities at Wheeler Farm that has a significant effect on the potential for the discharge of *E. coli* to the waters of the state
- new structural BMPs are constructed at Wheeler Farm to promote the reduction of *E. coli* from stormwater runoff
- new or significantly expanded non-structural BMPs are constructed at Wheeler Farm to promote the reduction of *E. coli* from stormwater runoff

Salt Lake County will not amend the SWPPP to reflect changes in BMP implementation deemed to be minor (e.g., addition of new or expanded signage in parks where signage already exists).

6.2 Records Retention

Salt Lake County will retain records of all inspection information, copies of all reports required by the UPDES stormwater permit, and records of all data necessary to implement this SWPPP for a period of at least three years from the date of the sample, measurement, evaluation or inspection, or report. Records will be provided to the Utah DWQ upon request. This SWPPP will be retained and updated as required.

6.3 SWPPP Certification

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

Name:

Title:

Signature:

Date:

Attachments

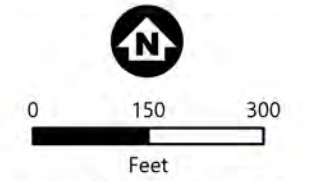
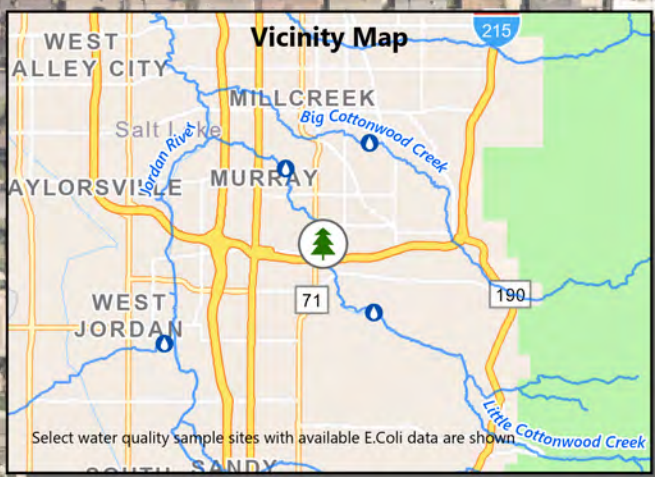
Attachment A – Site Maps/Figures

Attachment B – Inspection, Assessment, and Maintenance Records

Attachment A – Site Maps/Figures



- Park Parcel
 - Water Quality Sample Site
 - Proposed BMP
 - Visual Inspection Location
 - Stormwater Infrastructure (9)
 - BMP - Structural (2)
 - BMP - Nonpoint (6)
 - Miscellaneous (2)
 - Restroom
- Signage Type
- Pet waste (1)
 - Don't feed wildlife (4)
 - Regulatory (8)
 - Other (1)
- Waterway
- Canal
 - Ditch
 - Stream
 - Animal Pens



Imagery: NearMap (Aug. 2023)

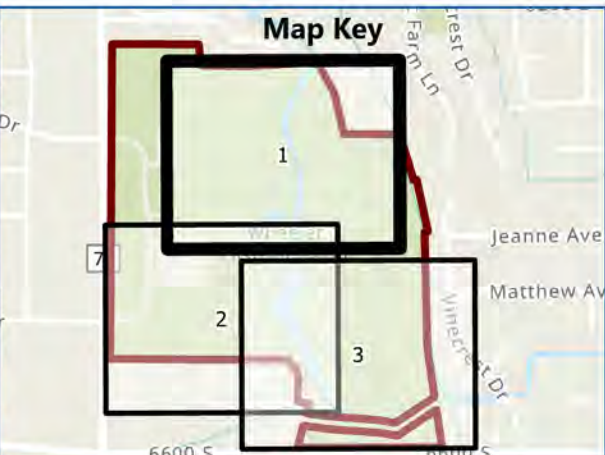
SITE OVERVIEW
 Wheeler Farm
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.0



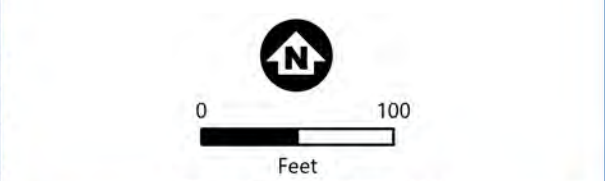
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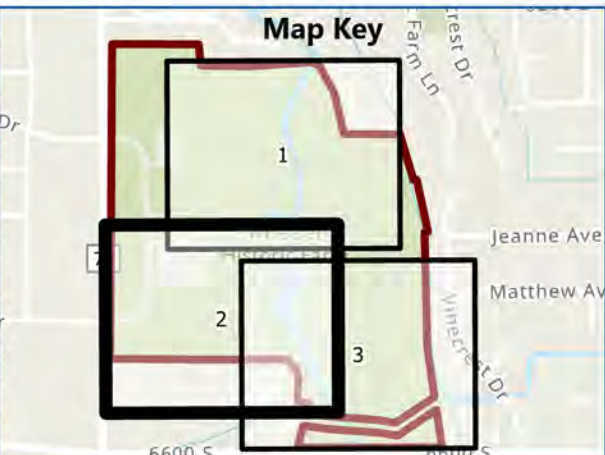
Map Inset - See Figure 4.4



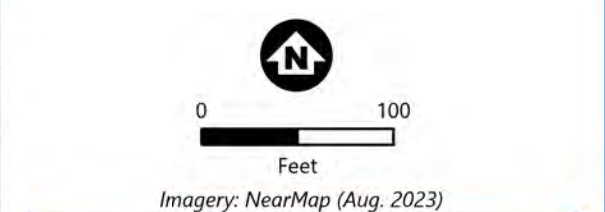
- Park Parcel
- Waterbody
- Watercourse
- Concrete/Asphalt
- Ditch
- Stream
- 10ft Contour
- 1ft Contour
- Flow Direction
- Drainage
- Delinetaion
- BMP - Nonpoint
- BMP - Structural
- Stormwater Infrastructure
- Miscellaneous
- Restroom
- Visual Inspection Location
- Proposed BMP
- Signage Type**
- Don't feed wildlife
- Regulatory
- Animal Pens



Imagery: NearMap (Aug. 2023)
SITE LAYOUT
Wheeler Farm
E.Coli SWPPP
Salt Lake County
FIGURE 1.1

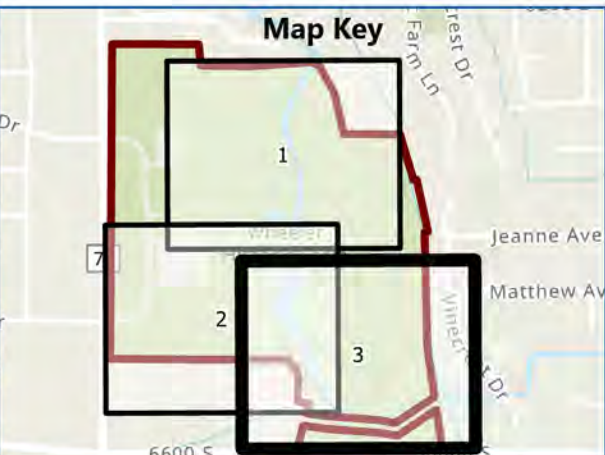


- | | |
|---------------------------|---------------------------|
| Park Parcel | BMP - Nonpoint |
| Waterbody | BMP - Structural |
| Watercourse | Stormwater Infrastructure |
| Concrete/Asphalt | Restroom |
| Canal | Proposed BMP |
| Stream | Signage Type |
| 10ft Contour | Regulatory |
| 1ft Contour | Other |
| Flow Direction | Animal Pens |
| Drainage Delimitation | |
| Water Quality Sample Site | |

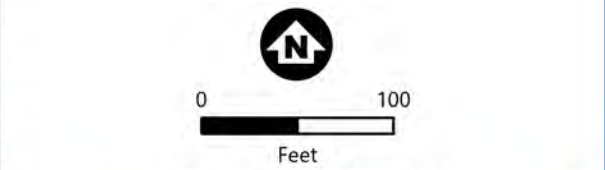


SITE LAYOUT
 Wheeler Farm
 E.Coli SWPPP
 Salt Lake County
FIGURE 1.2





Park Parcel	BMP - Structural
Watercourse	Stormwater Infrastructure
Concrete/Asphalt	Restroom
Canal	Proposed BMP
Ditch	Signage Type
Stream	Pet waste
10ft Contour	Don't feed wildlife
1ft Contour	Regulatory
Flow Direction	Other
Drainage Delimitation	Animal Pens
Water Quality Sample Site	
BMP - Nonpoint	



Imagery: NearMap (Aug. 2023)

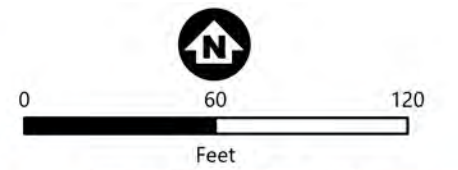
SITE LAYOUT
Wheeler Farm
E.Coli SWPPP
Salt Lake County

FIGURE 1.3





- Park Parcel
- Watercourse
- Stream
- 10ft Contour
- 1ft Contour
- Flow Direction
- Drainage Delinetaion
- Stormwater Infrastructure
- BMP - Nonpoint
- BMP - Structural
- Miscellaneous
- Restroom
- Visual Inspection Location
- Signage Type**
- Don't feed wildlife
- Regulatory
- Animal Pens



Imagery: NearMap (Aug. 2023)

"Animal Alley"
Wheeler Farm
E.Coli SWPPP
Salt Lake County
FIGURE 1.4



Floor Drain Inventory

Fine Arts	Rose	Mechical	Hot Water Drain	1	Visual Inspection	
Fine Arts	Rose	Mechical	Expansion Tanks	1	Visual Inspection	
Fine Arts	Abraham Hall	Basement	Mech. Room	4	Visual Inspection	
Fine Arts	Abraham Hall	Loading Dock		1	Visual Inspection	
Fine Arts	Abraham Hall	Green Hall	Mens& Womans RR	2	Visual Inspection	
Fine Arts	Abraham Hall	Guest	Bathroom	1	Visual Inspection	
Fine Arts	Abraham Hall	Conductors	Bathroom	1	Visual Inspection	
Fine Arts	Abraham Hall	Ticket Off	RR	2	Visual Inspection	
Fine Arts	Abraham Hall	Back Stage	Mens & Ladies	2	Visual Inspection	
Fine Arts	Abraham Hall	Mop Closet	Off Sym Lunch Rm	1	Visual Inspection	
Fine Arts	Abraham Hall	Mop Closet	Ticket Office Mens	1	Visual Inspection	
Fine Arts	Abraham Hall	1st Tier	RR	2	Visual Inspection	
Fine Arts	Abraham Hall	1st Tier	Kitchen	1	Visual Inspection	
Fine Arts	Abraham Hall	1st Tier	Kitchen RR	1	Visual Inspection	
Fine Arts	Abraham Hall	2nd Tier	RR	2	Visual Inspection	
Fine Arts	Abraham Hall	3rd Tier	RR	2	Visual Inspection	
Fine Arts	Capitol	4th	Mech. Room	1	Visual Inspection	
Fine Arts	Capitol	3rd	Men's Room	1	Visual Inspection	
Fine Arts	Capitol	3rd	Unisex	1	Visual Inspection	
Fine Arts	Capitol	3rd	Ladies Room	1	Visual Inspection	
Fine Arts	Capitol	3rd House	Men's Room	1	Visual Inspection	
Fine Arts	Capitol	3rd House	Ladies Room	1	Visual Inspection	
Fine Arts	Capitol	2nd	Men's Room	1	Visual Inspection	
Fine Arts	Capitol	2nd	Ladies Room	1	Visual Inspection	
Fine Arts	Capitol	2nd	Unisex	1	Visual Inspection	
Fine Arts	Capitol	2nd	Kitchen	1	Visual Inspection	
Fine Arts	Capitol	Mez.	Men's Room	1	Visual Inspection	
Fine Arts	Capitol	Mez.	Ladies Room	1	Visual Inspection	
Fine Arts	Capitol	Lobby	Men's Room	1	Visual Inspection	
Fine Arts	Capitol	Lobby	Ladies Room	1	Visual Inspection	
Fine Arts	Capitol	Basement	Mens West	1	Visual Inspection	
Fine Arts	Capitol	Basement	Ladies West	1	Visual Inspection	
Fine Arts	Capitol	Basement	Old Therapy Room	1	Visual Inspection	
Fine Arts	Capitol	Basement	Water Heater Rm.	1	Visual Inspection	
Fine Arts	Capitol	Basement	Laundry	1	Visual Inspection	
Fine Arts	Capitol	Basement	Unisex West	1	Visual Inspection	
Fine Arts	Capitol	Basement	Men's Lockers	2	Visual Inspection	
Fine Arts	Capitol	Basement	Women's Lockers	2	Visual Inspection	
Fine Arts	Capitol	Basement	Heat Pump Room	1	Visual Inspection	
Fine Arts	Capitol	Basement	Sink in Shop	1	Visual Inspection	

Agency	Building	Floor	Room	Count	Source	Verified	Comments
Aging Services	Columbus Center						
Aging Services	Draper Center				Observed directly	As-Built Plans	Storm drains through pond to little Willowcreek
Aging Services	Friendly Neighborhood Center		4		scanned	As-Built Plans	
Aging Services	Kearns Senior Center				Observed directly	As-Built Plans	Kitchen drain/trap West side
Aging Services	Liberty Center		P201, P401		Observed directly	As-Built Plans	Kitchen drain/trap North side
Aging Services	Magna Center				Observed directly	As-Built Plans	grade and ineffective
Aging Services	Midvale Center		P101, 102, 401		Observed directly	As-Built Plans	West and South sides. Kitchen drains through trap,
Aging Services	Mount Olympus Center		P1, P2		Observed directly	As-Built Plans	Kitchen drain/trap North side. No formal storm
Aging Services	Murray Heritage Senior Center					As-Built Plans	
Aging Services	River's Bend Northwest Center		P1.1, 2.1, 2.2, 2.2, 2.3,2.4		Observed directly	As-Built Plans	Kitchen drain/trap East side
Aging Services	Riverton Center				Observed directly	As-Built Plans	basement Mech rm
Aging Services	Sandy Center						
Aging Services	South Jordan Center						
Aging Services	Sunday Anderson Westside Center						
Aging Services	Taylorsville Center						

Aging Services	Tenth East Center				Observed directly		Building well above Grade
Aging Services	West Jordan Center		76,73			As-Built Plans	

Agency	Building	Floor	Room	Count	Source	Verified	Comments
Facilities Management	Government Center South	0	LL Parking	9	Visual Inspection		
Facilities Management	Government Center South	0	SL-200	25	Visual Inspection		
Facilities Management	Government Center South	0	SL-700	1	Visual Inspection		
Facilities Management	Government Center South	0	SL-709	2	Visual Inspection		
Facilities Management	Government Center South	0	SL-712	1	Visual Inspection		
Facilities Management	Government Center South	0	SL-810	1	Visual Inspection		
Facilities Management	Government Center South	0	SL-811	1	Visual Inspection		
Facilities Management	Government Center South	100	S1-115	5	Visual Inspection		Café
Facilities Management	Government Center South	100	S1-403	1	Visual Inspection		
Facilities Management	Government Center South	100	S1-406	1	Visual Inspection		
Facilities Management	Government Center South	100	S1-910	1	Visual Inspection		
Facilities Management	Government Center South	100	S1-920	2	Visual Inspection		
Facilities Management	Government Center South	100	S1-960	2	Visual Inspection		
Facilities Management	Government Center South	200	S2-326	1	Visual Inspection		
Facilities Management	Government Center South	200	S2-327	1	Visual Inspection		
Facilities Management	Government Center South	200	S2-411	1	Visual Inspection		
Facilities Management	Government Center South	200	S2-503	1	Visual Inspection		
Facilities Management	Government Center South	200	S2-504	1	Visual Inspection		
Facilities Management	Government Center South	200	S2-920	2	Visual Inspection		
Facilities Management	Government Center South	200	S2-960	2	Visual Inspection		
Facilities Management	Government Center South	300	S3-910	1	Visual Inspection		
Facilities Management	Government Center South	300	S3-920	2	Visual Inspection		
Facilities Management	Government Center South	300	S3-960	2	Visual Inspection		
Facilities Management	Government Center South	400	S4-930	4	Visual Inspection		
Facilities Management	Government Center South	400	S4-960	4	Visual Inspection		
Facilities Management	Government Center South	500	S5-320	2	Visual Inspection		
Facilities Management	Government Center North	0	NL Parking	14	Visual Inspection		
Facilities Management	Government Center North	0	NL-312	1	Visual Inspection		
Facilities Management	Government Center North	0	NL-313	1	Visual Inspection		
Facilities Management	Government Center North	0	NL-330	1	Visual Inspection		
Facilities Management	Government Center North	0	NL-331	1	Visual Inspection		
Facilities Management	Government Center North	0	NL602	4	Visual Inspection		
Facilities Management	Government Center North	100	N1-113	1	Visual Inspection		
Facilities Management	Government Center North	100	N1-114	1	Visual Inspection		
Facilities Management	Government Center North	100	N1-910	1	Visual Inspection		
Facilities Management	Government Center North	100	N1-920	2	Visual Inspection		
Facilities Management	Government Center North	100	N1-960	2	Visual Inspection		
Facilities Management	Government Center North	200	N2-109	1	Visual Inspection		
Facilities Management	Government Center North	200	N2-110	1	Visual Inspection		
Facilities Management	Government Center North	200	N2-920	2	Visual Inspection		
Facilities Management	Government Center North	200	N2-960	2	Visual Inspection		
Facilities Management	Government Center North	300	N3-910	1	Visual Inspection		
Facilities Management	Government Center North	300	N3-920	2	Visual Inspection		
Facilities Management	Government Center North	300	N3-960	2	Visual Inspection		
Facilities Management	Government Center North	400	N4-920	2	Visual Inspection		
Facilities Management	Government Center North	400	N4-960	2	Visual Inspection		
Facilities Management	Government Center North	500	N5-320	2	Visual Inspection		
Facilities Management	Government Center North	Roof	Roof	36	Visual Inspection		Roof Drains
Facilities Management	Government Center South	Roof	Roof	42	Visual Inspection		Roof Drains
Facilities Management	Government Center	SE Parking Lot	South End of Lot	4	Visual Inspection	As-Built Plans	
Facilities Management	Government Center	SW Parking Lot	Varies	12	Visual Inspection	As-Built Plans	
Facilities Management	Government Center	Parking Structure	Varies	42	Visual Inspection	As-Built Plans	

Agency	Building	Floor	Room	Count	Source	Verified	Comments
Fleet	Light Duty Shop	100	East Bay Entrances	7	Visual Inspection	As-Built Plans	
Fleet	Light Duty Shop	100	West Bay Entrances	6	Visual Inspection	As-Built Plans	
Fleet	Light Duty Shop	100	Steam Room	1	Visual Inspection	As-Built Plans	
Fleet	Heavy Duty Shop	100	Restroom	1	Visual Inspection	As-Built Plans	
Fleet	Heavy Duty Shop	100	East Bay	1	Visual Inspection	As-Built Plans	
Fleet	Heavy Duty Shop	100	West Bay	1	Visual Inspection	As-Built Plans	currently covered with steel
Fleet	New Heavy Duty Shop	100	North Bay Entrances	10	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop	100	South Bay Entrances	10	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop	100	Restrooms	2	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop	100	Lube Bay	2	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop	100	Compressor Room	2	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop	100	Center shop	2	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop Admin	100	Restrooms	4	Visual Inspection	As-Built Plans	
Fleet	New Heavy Duty Shop Admin	100	Janitor's closet	1	Visual Inspection	As-Built Plans	

Agency	Building	Location	Count	Source	Verified
Health Department	Environmental Health	Women Restro	2	Visual Insp	As-Built Plans
Health Department	Environmental Health	Men Restroom	3	Visual Insp	As-Built Plans
Health Department	Environmental Health	I/M Inspection	2	Visual Insp	As-Built Plans
Health Department	Rose Park	Restrooms	4	Visual Insp	As-Built Plans
Health Department	Rose Park	Janitor Closet	1	Visual Insp	As-Built Plans
Health Department	Southeast	Janitor Closet	1	Visual Insp	As-Built Plans
Health Department	Southeast	Women Restro	1	Visual Insp	As-Built Plans
Health Department	Southeast	Men Restroom	1	Visual Insp	As-Built Plans
Health Department	Southeast	Employee Rest	1	Visual Insp	As-Built Plans
Health Department	City	Basement	3	Visual Insp	As-Built Plans
Health Department	City	Restrooms	9	Visual Insp	As-Built Plans
Health Department	City	Janitor Closet	1	Visual Insp	As-Built Plans
Health Department	Ellis Shipp	Janitor Closet	1	Visual Insp	As-Built Plans
Health Department	Ellis Shipp	Men Restroom	2	Visual Insp	As-Built Plans
Health Department	Ellis Shipp	Women Restro	2	Visual Insp	As-Built Plans
Health Department	Ellis Shipp	Unisex Restroo	2	Visual Insp	As-Built Plans
Health Department	Ellis Shipp	Basement	5	Visual Insp	As-Built Plans
Health Department	South Main	Mechanical Ro	2	Visual Insp	As-Built Plans
Health Department	South Main	Restrooms	6	Visual Insp	As-Built Plans
Health Department	South Main	Janitor Closet	1	Visual Insp	As-Built Plans
Health Department	West Jordan	Breast Feeding	1	Visual Insp	As-Built Plans

Agency	Building	Floor	Room	Count	Source	Verified	Comments
Library Services	Alta						Leased Building
Library Services	Bingham Creek		Restrooms	4	Visual Inspection	As-Built Plans	
Library Services	Bingham Creek		Janitor Closet	1			
Library Services	Columbus						Leased Room
Library Services	Draper		RM 121-122-131-113-114		Visual Inspection	As-Built Plans	
Library Services	Herriman		Restrooms	3	Visual Inspection	As-Built Plans	
Library Services	Herriman		Mechanical Room	8	Visual Inspection	As-Built Plans	
Library Services	Holladay		Restrooms	2	Visual Inspection		
Library Services	Holladay		Mechanical Room	1	Visual Inspection		
Library Services	Hunter		Restrooms	5	Visual Inspection	As-Built Plans	
Library Services	Hunter		Mechanical Room	5	Visual Inspection	As-Built Plans	
Library Services	Kearns		Mechanical Room	1	Visual Inspection	As-Built Plans	
Library Services	Magna		Restrooms	3	Visual Inspection	As-Built Plans	
Library Services	Millcreek						Rec Center Main Tenant
Library Services	Riverton		Restrooms	5	Visual Inspection	As-Built Plans	
Library Services	Sandy		Restrooms	5	Visual Inspection	As-Built Plans	
Library Services	Sandy		Janitor Closet	2	Visual Inspection	As-Built Plans	

Library Services	Calvin Smith		Mechanical Room	1	Visual Inspection	As-Built Plans	
Library Services	South Jordan		Restrooms	4	Visual Inspection	As-Built Plans	
Library Services	South Jordan		Mechanical Room	3	Visual Inspection	As-Built Plans	
Library Services	Taylorsville		Restrooms	5	Visual Inspection	As-Built Plans	
Library Services	Ruth Vine Tyler		Connected to Sump Pump	1	Visual Inspection		
Library Services	West Vally		Restrooms	5	Visual Inspection	As-Built Plans	
Library Services	West Jordan		Restrooms	3	Visual Inspection	As-Built Plans	
Library Services	West Jordan		Mechanical Room	2	Visual Inspection	As-Built Plans	
Library Services	Whitmore		Restrooms	4	Visual Inspection	As-Built Plans	
Library Services	Whitmore		Mechanical Room	3	Visual Inspection	As-Built Plans	

Agency	Building	Location	Location Detail	Count	Source	Verified	Drains
Parks & Recreation	Park Restroom	Big Bear	930 E 9695 S,Onyx Ln	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Cottonwood R	1300 E 4300 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Cottonwood R	1300 E 4300 S	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Cottonwood R	1300 E 4300 S	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Closet	Cottonwood R	1300 E 4300 S	1	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Big Cott East I-	1500 E 4500 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Big Cott East I-	1500 E 4500 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Bruce Field	4290 W 4865 S	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Butler	7500 S 2700 E	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Canyon Rim - E	3250 E 3100 S, Grace St	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Canyon Rim - W	3250 E 3100 S, Grace St	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Copperton	8731 W 10305 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Cougar	4800 W 6400 S, Cougar LN	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Creekside	1600 E 4800 S, M/H Rd	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	David Gourley	4300 W 5015 S	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Dimple Dell Re	1300 E 10400 S, Mt Jordan	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Dimple Dell Re	1300 E 10400 S, Mt Jordan	No Service			
Parks & Recreation	Park Restroom	Evergreen	2230 E 3425 S		As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Flight Park	Point of the Mountain	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Granite Park	2700 E 10000 S	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Harmony Park	3700 S Main	6	Roto-Rooter	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Hillsdale	3200 W 3200 S, Tess	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Hunter Park	3600 S 6000 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Hunter - Baseb	3600 S 6000 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Hunter - Conce	3600 S 6000 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Jordan River Pa	2320 S 10000 W	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Jordan River Tr	1050 W 3900 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Jordan River Tr	1700 S 1400 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Jordan River Tr	1100 W 3300 S	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Jordan River Tr	14600 S 1050 W	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Little Cottonwo	1700 E 7300 S,Wlhw Crk Rd	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Lodestone	6200 W 6200 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Magna-Copper	8941 W 2600 S	7	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Magna-Copper	8941 W 2600 S	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Magna-Copper	8941 W 2600 S	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Millrace	5400 S 1150 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Mountain Man	5050 S 5000 W, Heath	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Murray Athleti	5177 S State	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Olympus Hills	4500 S 3200 E, Stratton	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Oquirrh - Baseb	5800 S 4800 W, Prkwd sid	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Pleasant Green	3250 S 8400 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Redwood Rec C	3100 S Redwood Rd	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Redwood Rec C	3100 S Redwood Rd	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Riverview	5840 S 700 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Scott Avenue	800 E 3475 S	6	As Built	Visual Inspection	Sewer

Parks & Recreation	Park Restroom	So Cottonwood	6351 S 900 E	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	South Mountain	657 E 14300 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Southridge - Pa	5175 S 4015 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Southridge - W	5175 S 4015 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Southwest Reg	2700 W 14300 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Southwest Reg	2700 W 14300 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	1		Plumber snake visu	Sewer
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	0			
Parks & Recreation	Park Restroom	Sugar House - #	1600 E 2100 S	4		Plumber snake visu	Sewer
Parks & Recreation	Park Restroom	Tanner Park	2700 E 2760 S, Heritage W	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Taylorville Par	4721 S Redwood Rd	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Union Park	7360 S 700 E	5	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Valley Center	700 W 4000 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Valley Regional	5100 S 2700 W	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Valley Regional	5100 S 2700 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Valley Regional	5100 S 2700 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Closet	Valley Regional	5100 S 2700 W	1	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park	4950 S 1950 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park - Sof	4950 S 1950 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park - Sof	4950 S 1950 W	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park - Bas	4950 S 1950 W	4	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park - Bas	4950 S 1950 W	3	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Vista Park - Bas	4950 S 1950 W	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Welby-BMX	9780 S 5200 W				Septic Tank
Parks & Recreation	Park Restroom	Western Spring	12600 S 4570 W	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Wheatdon Farm	310 E 13800 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Restroom	Woodstock	1051 E 5860 S	6	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Ops	33rd Shop	3383 South 300 East	8	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Ops	45th Shop	4500 South Main Street	2	As Built	Visual Inspection	Sewer
Parks & Recreation	Park Ops	West Jordan	6332 S. Airport Road	29	As Built	Visual Inspection	Sewer

Agency	Construction Year Area	Floor	Count	Source	Verified	Comments
Salt Palace Convention Ce	1984 - Hall 1	1	9	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 1 Restroom	1	4	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 1 Coffee Stand	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 2	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 3	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 4	1	29	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 4 Restroom	1	4	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Hall 4 Kitchen	1	11	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - East Fan Room	3	8	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - Center Fan Room	3	6	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - West Fan Room	3	7	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - AV2 Restroom	2	5	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - AV3 Restroom	2	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1984 - AV3 Storage	2	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Exhibit Hall A	1	59	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Hall A Restroom	1	7	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Hall A Concession	1	6	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Exhibit Hall B	1	30	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Hall B Restroom	1	5	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Exhibit Hall C	1	67	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Hall C Restroom	1	7	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Hall C Concession	1	6	Visual Insp	As-Built Plans	Floor Drain

Salt Palace Convention Ce	1994 - Main Plant	1	32	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Main Plant	1	1	Visual Insp	As-Built Plans	Drain Pit
Salt Palace Convention Ce	1994 - Main Plant	1	1	Visual Insp	As-Built Plans	Lift Station
Salt Palace Convention Ce	1994 - BOH 150/151	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - BOH 150/151	1	1	Visual Insp	As-Built Plans	Sand/Oil Separator
Salt Palace Convention Ce	1994 - BOH 250/251	2	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - BOH Ballroom	1	5	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Kitchen	1	25	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - AV1	1	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Green Room	1	5	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - UFS Restroom	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - VSL	2	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Exec Restroom	3	3	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Outside gift Shop East	Street	2	Visual Insp	As-Built Plans	Deck Drain
Salt Palace Convention Ce	1994 - North of VSL	Street	3	Visual Insp	As-Built Plans	Deck Drain
Salt Palace Convention Ce	1994 - North of 252/253	2	3	Visual Insp	As-Built Plans	Deck Drain
Salt Palace Convention Ce	1994 - Outside Main Tower	Street	6	Visual Insp	As-Built Plans	Deck Drain
Salt Palace Convention Ce	1995 - Upper Security Restroom	2	7	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - North Ballroom Restroom	1	6	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Grease Trap room	1	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Fan Mezz	4	8	As-Built Plans	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - Lower Security restroom	1	3	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - 254 UFS	2	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - AH-28 Fanroom	2	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1994 - AH-29 Fanroom	1	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Exhibit Hall D	1	68	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Hall D Restroom	1	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Hall D Concession	1	4	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Hall D Custodian	1	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Exhibit Hall E	1	86	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Hall E Restroom	1	5	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - Hall E Concession	1	8	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - South Ballroom Restroom	1	6	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - South Parking P-1	P-1	17	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - South Parking P-2	P-2	24	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - South Parking P-3	P-3	24	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - South Parking P-3	P-3	1	Visual Insp	As-Built Plans	Sand/Oil Separator
Salt Palace Convention Ce	1999 - South Parking P-3	P-3	1	Visual Insp	As-Built Plans	Lift Station
Salt Palace Convention Ce	1999 - P-1 Restrooms	P-1	1	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	1999 - P-1 Storage	P-1	8	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5	1	141	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5 Lobby Restrooms	Street	2	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5 P-1	P-1	21	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5 P-2	P-2	24	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5 plant	P-2	7	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5	P-2	1	Visual Insp	As-Built Plans	Lift Station
Salt Palace Convention Ce	2005 - Hall 5	P-2	1	Visual Insp	As-Built Plans	Sand/Oil Separator
Salt Palace Convention Ce	2005 - Hall 5 Restrooms	1	9	Visual Insp	As-Built Plans	Floor Drain
Salt Palace Convention Ce	2005 - Hall 5 dock	1	1	Visual Insp	As-Built Plans	Sand/Oil Separator
Salt Palace Convention Ce	2005 - South Hall E outside	1	4	Visual Insp	As-Built Plans	Deck Drains
Salt Palace Convention Ce	1984 - Exhibit Halls	Roof	12	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1984 - Above North Lobby	Roof	10	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1984 - Above Fanroom H1	Roof	4	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1984 - Above Fanroom H2/3	Roof	4	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1984 - Above AV3 Hall	Roof	10	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Exhibit Halls	Roof	56	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1995 - Exhibit Halls Dock	Roof	16	Visual Insp	As-Built Plans	Roof Drains

Salt Palace Convention Ce	1994 - Ballroom	Roof	32	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - North Foyer Roof	Roof	16	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Cooling Tower area	Roof	4	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Main Tower	Roof	36	As-Built Pla	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - VSL Tower Lower	Roof	16	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - VSL Tower Top	Roof	4	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Outside Fan Mezz	Roof	32	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Fan Mezz Roof	Roof	10	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - Outside Exec. Office	Roof	10	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1994 - North Hall A	Roof	22	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - Exhibit Halls	Roof	24	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - Exhibit Halls Dock	Roof	14	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - Ballroom	Roof	8	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - South Foyer	Roof	38	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - South plaza	South Plaza	6	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1999 - South tower	South Plaza	2			
Salt Palace Convention Ce	2005 - Exhibit Halls	Roof	20	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	2005 - Hall 4 extension	Roof	2	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	2005 - West Lobby	Roof	4	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	2005 - Dock Cover Hall 5	Roof	6	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	2005 - 355 Roof	Roof	18	Visual Insp	As-Built Plans	Roof Drains
Salt Palace Convention Ce	1984	Back dock Hall 2	2	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	1984	Back dock Hall 2	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1984	West Under Hal	1	ual Inspct	As-Built Plans	Pump Station
Salt Palace Convention Ce	1994	UFS Dock	7	ual Inspct	As-Built Plans	Open Grate
Salt Palace Convention Ce	1994	Back dock Hall B	2	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	1994	Back dock Hall A	4	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	1999	Jurassic	2	ual Inspct	As-Built Plans	Open Grate
Salt Palace Convention Ce	1999	South Plaza	4	ual Inspct	As-Built Plans	Open Grate
Salt Palace Convention Ce	1999	outh Bus loadin	2	ual Inspct	As-Built Plans	Open Grate
Salt Palace Convention Ce	1999	Back dock South	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1999	Back dock Hall E	2	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1999	Back dock Hall D	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1999	Back dock South G	2	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	1999	outh end Hall 4	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1999	outh dock Hall 3	3	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	1999	outh dock Hall 3	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	1999	outh dock Hall 3	1	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	tside 155 East s	4	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	side NW Corner	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	2005	tside 155 West	3	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	tside North Ha	2	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	de NW Corner	1	ual Inspct	As-Built Plans	Catch Box
Salt Palace Convention Ce	2005	side SW Corner	1	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	apanese Gard	2	ual Inspct	As-Built Plans	Drain Grate
Salt Palace Convention Ce	2005	outh Garage En	1	ual Inspct	As-Built Plans	Drain Grate

Agency	Building	Location	Count	Source
Sheriff's Office	Oxbow Jail	Jail Support	51	Visual Inspection
Sheriff's Office	Oxbow Jail	Support Penth	5	Visual Inspection
Sheriff's Office	Oxbow Jail	Pods Penthou	3	Visual Inspection
Sheriff's Office	Oxbow Jail	Health Services	2	Visual Inspection
Sheriff's Office	Oxbow Jail	Administration	8	Visual Inspection
Sheriff's Office	Oxbow Jail	Processing	12	Visual Inspection
Sheriff's Office	Oxbow Jail	A Pod	53	Visual Inspection
Sheriff's Office	Oxbow Jail	B pod	53	Visual Inspection
Sheriff's Office	Oxbow Jail	C Pod	53	Visual Inspection

Sheriff's Office	Metro Jail	ODR	5	Visual Inspection
Sheriff's Office	Metro Jail	Maintenance	1	Visual Inspection
Sheriff's Office	Metro Jail	Kitchen	28	Visual Inspection
Sheriff's Office	Metro Jail	Kitchen Boiler	7	Visual Inspection
Sheriff's Office	Metro Jail	Warehouse	5	Visual Inspection

Agency	Building	Floor	Count	Source	Verified	Comments
Solid Waste	Transfer Station	Tipping Floor	2	Visual Insp	As-Built Plans	Drain to holding tank - then to sewer.
Solid Waste	Landfill	Wash Bay	1	Visual Inspection		Sump
Solid Waste	Landfill	Shop	2	Visual Inspection		Sump
Solid Waste	Landfill	HHW	1	Visual Inspection		Sump

Agency	Building	Floor	Room	Count	Source	Verified
PW Operations	PW Admin Building	0	Mechanical room	5	Visual Inspection	As-Built Plans
PW Operations	PW Admin Building	100	Restrooms	6	Visual Inspection	As-Built Plans
PW Operations	PW Admin Building	100	Restrooms	2	Visual Inspection	As-Built Plans
PW Operations	Truck Wash	100	Wash Bays	3	Visual Inspection	As-Built Plans
PW Operations	Truck Wash	100	3 Vector Dumps	15	Visual Inspection	As-Built Plans
PW Operations	Crew Room Building	100	Restrooms	2	Visual Inspection	As-Built Plans
PW Operations	Crew Room Building	100	Janitor's closet	1	Visual Inspection	As-Built Plans
PW Operations	Crew Room Building	100	Body Shop Bays	2	Visual Inspection	As-Built Plans
PW Operations	Body Shop	100	Paint Shop Bay	1	Visual Inspection	As-Built Plans
PW Operations	Paint Shop	100	Paint Shop	1	Visual Inspection	As-Built Plans
PW Operations	Warehouse	100	Warehouse	1	Visual Inspection	As-Built Plans
PW Operations	Concrete Lab	100	Lab	1	Visual Inspection	As-Built Plans

Agency	Building	Floor	Room	Count	Source	Verified
Mountain America Expo C	Expo Center	1	Concession Stand 1	6	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 2	6	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 3	5	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 4	7	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 5	7	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 6	1	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Concession Stand 7	1	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Kitchen	8	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Service area 1	4	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Service area 2	2	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Service area 3	2	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	1	Service area 4	2	Visual Inspection	Dye Test
Mountain America Expo C	Expo Center	Sub	Basement	7	Visual Inspection	As-Built Plans

Agency	Building	Floor	Room	Count	Source	Verified	Comments
Youth Services	Warehouse	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	kitchen	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	staff bath	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	B 125	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Girls Group Home	0	laundry	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	136	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	staff bath	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	kitchen	1	Visual Inspection	As-Built Plans	sewer

Youth Services	Boys Group Home	0	laundry	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Boys Group Home	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Juvenile Receiving Center	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Juvenile Receiving Center	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Juvenile Receiving Center	0	bathroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	C215	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	C105	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Admin & Counseling	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	restroom				sewer
Youth Services	Christmas Box House Res.	0	restroom A	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	restroom B	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	restroom C	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	restroom D	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	nursury	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	kitchen	3	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Res.	0	mechanical	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	restroom	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	mechanical	1	Visual Inspection	As-Built Plans	sewer
Youth Services	Christmas Box House Admin	0	pump room	1	Visual Inspection	As-Built Plans	sewer

Agency	Building	Floor	Room	Count	Source	Verified
Records and Archives	Wadsworth	100	Restrooms	2	Visual Inspection	As-Built Plans
Records and Archives	Wadsworth	Roof	Roof	9	Visual Inspection	As-Built Plans
Records and Archives	Wadsworth	North landscape		1	Visual Inspection	As-Built Plans

Monthly Visual Inspection Reports



Monthly Visual Inspection Form

Facility: _____

Date and Time: _____

Stormwater Issues/Notes	Corrective Action Taken

Inspector Name and Title: _____

Signature: _____

Semi-Annual Comprehensive Inspection Reports



Stormwater Inspection Form

Facility: _____

Date and Time: _____

Weather Conditions: _____

Nearest Water Body: _____

Inspection Type: Semi Annual

Item Description To Be Inspected	Yes	No	N/A	Corrective Action/Comments
Are there any signs of spills or discharges of pollutants to storm drains or waterways? (Deposits/stains?)				
Is each storm drain inlet and/or catch basin clean and free of debris, accumulations of sediment, and signs of contamination?				
If installed, are BMP's in good condition? (Ponds, snouts, oil/water separators, etc.)				
Should BMP's be added at other locations to prevent pollutants from migrating to the storm drain?				
Are all oil/water separators and sand traps operating in accordance with manufacturer's recommendations?				
Are there adequate means to prevent a discharge to storm water outfalls? (Drip pans, spill kits, etc.)				
Is there evidence of spills or leaks around outdoor drums or containers?				

Annual Visual Observation Reports



Annual Visual Monitoring Form

Facility: _____

Date and Time: _____

Weather Conditions: _____

Sample Location: _____

Examinations shall be made of samples collected within the first 30 minutes (or soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

Date of Current Storm Event:	Duration:	Total Precipitation: (Inches)	Days Since Previous Storm Event:
Color (circle one)			
Black	Light	Dark Grey	Medium Grey
Tan	Dark Brown	Yellow	Medium Brown
Light Grey	Green	Other (describe):	
Color Intensity (circle one)			
Very Intense/Prominent	Moderately Perceptible	Hardly Perceptible	
Comments:			
Odor (circle all that apply)			
Diesel	Gasoline	Petroleum	Solvent
Chlorine	Rotten Egg	Sulfur	No Odor
Musty	Sewage	Noxious	Other (describe):
Solids			
Are floating solids present? If yes, describe.			
Are suspended solids present? If yes, describe.			
Are settled solids present? If yes, describe.			
Solids			
Is an oil sheen visible? If yes, describe.			
Foam			
Is foam present? If yes, describe.			